

2-2010

# Accessing Organizational Resources and Pursuing Value Through International Promotional Alliances

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**ACCESSING ORGANIZATIONAL RESOURCES AND PURSUING VALUE  
THROUGH INTERNATIONAL PROMOTIONAL ALLIANCES**

A Dissertation Presented

by

JOE B. COBBS

The Graduate School of the  
University of Massachusetts Amherst

February, 2010

Isenberg School of Management

Department of Sport Management

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## **DEDICATION**

This work is dedicated to the family and friends that have made my efforts possible. Specifically, my wife, Emily, who supported me throughout the years of progress and persisted with me when unanticipated challenges arose; my parents, Ted and Kay, who instilled in me the values of education and hard work; my grandparents, who shaped my vision of a truly successful life journey through their examples; and my friends, who opened their homes graciously during our many travels back 'home' and during periods of transition. Without the caring and selflessness of these individuals, I certainly would not be who or where I am today.

## **ACKNOWLEDGMENTS**

The faculty serving on my committee have undoubtedly strengthened this dissertation significantly through their responsive feedback, assistance, and constructive challenges throughout the process. It has been a pleasure to serve as a doctoral candidate under their guidance and instruction. Specifically, I must acknowledge the chair of my committee, Dr. Jay Gladden, for his dedication to my academic maturation from the time I arrived on campus in Amherst several years ago. Even when he took on greater responsibility for the Isenberg academic community and then ascended into a new role as Dean, he never wavered from his commitment to my production of this culminating work. He set an example as an advisor that I hope to follow throughout my own career as a scholar. Also deserving of acknowledgement regarding this dissertation are several of my fellow PhD students who I have been privileged to work with over the last few years. Individually, David Tyler and Mark Groza offered valuable assistance in managing the data and clarifying various elements of the studies included here. Dr. Steven Pruitt was also helpful in his willingness to share his expertise on the event study literature. Finally, the support of the faculty and staff in both the departments of Sport Management and Marketing at UMass has been tremendous. Their immediate acceptance of me as a welcomed colleague encouraged my growth as a scholar and contributor to our chosen discipline.

## **ABSTRACT**

### **ACCESSING ORGANIZATIONAL RESOURCES AND PURSUING VALUE THROUGH INTERNATIONAL PROMOTIONAL ALLIANCES**

FEBRUARY 2010

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Accessing and exploiting organizational resources plays an integral role in not only a firm's propensity to achieve a competitive advantage, but also its mere survival in a competitive environment (Ulrich & Barney, 1984). One of the most common means of resource acquisition for both large administrative firms and smaller entrepreneurial enterprises is interorganizational alliances (Ireland, Hitt, & Vaidyanath, 2002). Utilizing the resource-based view of the firm within a strategic alliance framework, this dissertation examines a particular type of interorganizational exchange relationship permeating the marketing discipline. The promotional alliance is defined within this research as a strategic alliance based on resource exchange between a promoting enterprise and a firm seeking to fulfill promotion-based objectives through an ongoing collaboration with the enterprise.

Each of the two sides of the promotional alliance relationship served as a focus for one of the two studies presented within this work. In the first study, a longitudinal

survival model was employed to investigate the dependency of a promotional enterprise on external resource acquisition via alliances with promotion-seeking firms. Also at issue were the heterogeneity of resources accessed and the dynamics of the institutional forces regulating such alliances. Alliances with sponsoring firms offering financial and performance-based resources, as opposed to operational resources, were found to have a significant influence on the survival of sponsored enterprises. However, these dependencies were subject to changes in institutional support and the potential for diminishing returns.

The second study approached promotional alliances from the perspective of the firms seeking promotion. Relying on the theory of efficient capital markets (Fama, 1970), an event study analysis was undertaken to determine the impact of internationally prominent promotional alliance announcements on the equity value of the sponsoring firms, which theoretically reflects investors' expectations of future cash flows. Contrary to prior research, the initiation of these alliances demonstrated a negative impact on shareholder value. Several alliance, firm, and promoting partner characteristics were hypothesized to influence alliance outcomes to varying degrees within the cross-sectional sample of promotion-seeking firms. Surprisingly, only the magnitude of the sponsoring firm's alliance investment and the nationality congruence within the alliance were influential in predicting investors' reaction to such alliances.

Each study was embedded within the institutional context of Formula One (F1) motor racing and focused on the promotional alliances involving corporate partners (sponsoring firms) and their affiliated racing teams. In this context, the racing teams acted as the promoting enterprises charged with providing the marketing platform to meet



their sponsoring firms' objectives. With annual races on four or more continents; a global television audience rivaled only by the Olympics' opening ceremony, FIFA World Cup finals, and the NFL's Super Bowl; direct competition between promoting teams; and sponsoring firms hailing from fifteen different nations and over twenty diverse industry sectors; F1 provided an ideal setting for the evaluation of interorganizational alliances' impact on the survival of promoting enterprises and a promotion-seeking firm's value implications.

To compliment and strengthen the applied contribution of both studies, the analyzed results were subjected to a discussion with industry experts representing both sides of the promotional alliance relationship (Lane & Jacobson, 1995). Not only did this closing analysis reinforce the relevance of the research offered here, but it also presented a practitioner-focused examination of the industry challenges inherent in the theoretical tenets underlying such research.

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# CHAPTER 1

## THEORETICAL FRAMEWORK

### 1.1 Introduction

Interorganizational alliances based on a promotional resource exchange forge the central theme of the research featured in this dissertation. In an effort to survive and thrive in a competitive environment, organizations often attempt to access and exploit various resources through strategic alliances with other enterprises (Ireland, Hitt, & Vaidyanath, 2002). When examining marketing resources, such alliances often take the form of a promotional relationship where one enterprise provides access to a particular audience and the promotional services to reach that audience in exchange for desired resources offered by a partnering organization that wishes to engage the specified audience. This characterization of a promotional alliance is frequently manifested through a commercial sponsorship arrangement that involves on one side a promoting enterprise such as a community festival, concert, sports contest, media broadcast, art show or other event that reliably attracts a desirable audience. Collaborating in this arrangement with the promoting enterprise is a commercial organization on the other side that seeks the promotional affiliation and services available through sponsoring such an enterprise.

Each of the two sides of the alliance relationship serve as a focus for one of the two studies presented within this work. The first study examines the exchange from the perspective of the promoting enterprise; while the second study looks at the relationship from the viewpoint of the sponsoring firm. Prior to tackling the details of these studies, this dissertation outlines an overarching framework in Chapter One that unites the two



studies by specifying a theoretical foundation for interorganizational promotional alliances. The constructed theoretical argument contributes to the literature by advancing the conception of interorganizational relationships based on promotion toward a strategic bilateral perspective that has taken root in industry practice but has been lacking in scholarly research. To achieve this aim, the research foundations of strategic alliances are integrated here with commercial sponsorship theory. With the exception of two recent works (Farrelly & Quester, 2005a, 2005b), these two streams of research have developed almost entirely independently of one another despite considerable overlap in their purpose, structure, management, and evaluation. Each of these elements is discussed in turn later in this first chapter.

Chapter Two introduces the institutional context of the empirical studies undertaken in Chapters Three and Four. Each study draws on promotional alliances involving corporate partners (sponsoring firms) and their affiliated teams in Formula One (F1) motor racing. In this investigative context, the racing teams act as the promoting enterprises charged with providing the marketing platform to meet their sponsoring firm's objectives while also seeking to access and leverage the resources offered by these affiliating firms. Chapter Two establishes the context as an attractive setting for both Chapter Three's evaluation of the impact of alliance resources on the survival of promoting enterprises, and Chapter Four's examination of promotion-seeking firms' pursuit of value through such alliances. The basis of this contextual assertion is the pervasive corporate involvement and diverse resource exchange in F1 as characterized in Chapter Two along with the massive appeal F1 boasts with a global audience. The international nature of this context also presents an important contribution given the

escalating globalization of business and communication, and the dearth of cross-market research aimed at evaluating standardized international promotional platforms.

## **1.2 Research Questions**

Market relationships have become increasingly complex as technological advances have enabled ubiquitous global interaction among and between organizations and consumers. Over a quarter century ago, Levitt (1983) described the globalization of markets and since that time, the continually increasing onslaught of available consumer information uninhibited by geographic boundaries has forced businesses to further evolve their competitive strategies. One popular tactic employed by firms to meet the challenges of the modern marketplace is to engage other organizations in partnerships aimed at combining resources toward the creation of a competitive advantage (Das & Teng, 2000; Turnbull, Ford, & Cunningham, 1996). The growth in organizational research focused on strategic alliances and business networks has reflected this trend toward interorganizational relationships (Anderson, Hakansson, & Johanson, 1994; Barringer & Harrison, 2000). However, the investigation of organizational partnerships with a distinct promotional agenda has not kept pace with the study of technological and product-based alliances. The purpose of this research agenda is to advance the understanding of promotional alliances on an international scale by first explicating the survival implications of an enterprise's promotion-based alliance network and second, revealing whether these interorganizational relationships add value to the promotion-seeking firm, and if so, under what conditions.

The cross-disciplinary theoretical foundations that inform this investigation are drawn primarily from research on strategic alliances, interorganizational networks, promotional sponsorship, and organizational ecology. These themes are integrated by the two overarching research questions:

- How does an entrepreneurial organization's access to resources through promotional alliances influence its survival over time in a highly competitive environment?
- Do international promotional alliances add value to the firm, and if so, what characteristics of the interorganizational relationship influence value realization?

The empirical contribution of this research emanates from two studies that correspond to the questions posed. The first study, presented in Chapter Three, investigates the dynamic contribution of promotion-based alliances to the survival of competing teams in Formula 1 motor racing from 1967<sup>1</sup> to 2008. The macro contribution of this study arises from the novel perspective it offers in regards to how accessing resources through interorganizational alliances affects a promotion-based enterprise's propensity to survive. The second study, presented in Chapter Four, scrutinizes the impact of promotional alliance announcements by sponsoring firms on their financial value. By undertaking a cross-market evaluation of a standardized international promotional platform, this second study contributes a market-based empirical test of the integrated theories of commercial sponsorship and strategic alliances. Together, these two studies supply an international, cross-sectional examination of the influence of interorganizational alliances on both the promoting enterprise and its sponsoring firms

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<sup>1</sup> Team survival data in this study begins in 1950, though promotional alliances were prohibited until 1967.

seeking promotion. To conclude this dissertation, Chapter Five engages industry experts on both sides of the promotional alliance for a qualitative interpretation and discussion of each study's results and implications.

### **1.3 Promotional Alliances**

The term “promotional alliances” is invoked throughout this research to characterize the interorganizational relationships under investigation in this context. Before moving forward, it is important to understand what constitutes a promotional alliance and in what situations such alliances can be considered market-based ties. The promotional alliance concept is theoretically grounded in the marketing and strategic alliance literature and describes an alliance focused on achieving primarily promotional objectives for one or both parties in an exchange relationship. These promotional objectives may include direct sales opportunities, image enhancement, publicity, sales promotion platforms, or other marketing initiatives often classified within the promotion “P” of McCarthy’s traditional four P’s of marketing (1960), or considered as Kotler’s five elements of the marketing communication mix (i.e. advertising, sales promotion, public relations, personal selling, and direct marketing) (2003). When a firm establishes a relationship with another organization with the aim of achieving such objectives, a promotional alliance takes shape. For example, since 1995, Shell has utilized their renewed partnership with the Ferrari Formula One racing team to meet promotional objectives of creating awareness for Shell’s premium products, sustaining their position as a technology leader, solidifying key stakeholder relationships via event hospitality, and encouraging purchase through themed point-of-sale promotions (Verity, 2002).

Strategic alliance research has become increasingly popular in the last two decades as evidenced by a myriad of definitions offered to describe this broad interorganizational phenomenon (Das & Teng, 2000; Eisenhardt & Schoonhoven, 1996; Gulati, 1999; Saxton, 1997; Varadarajan & Cunningham, 1995). In seeking to synthesize these definitions, two elements consistently arise: cooperative relationships and resource exchange. Given these commonalities, the specific notion of a promotional alliance extends from the conceptualization of a strategic alliance as a “cooperative relationship driven by a logic of strategic resource needs and social resource opportunities” (Eisenhardt & Schoonhoven, 1996, p. 137). In the case of promotional alliances, the strategic resource need is one of access to various promotional tools and capabilities, and the social resource opportunity facilitating the relationship continues to be the social position, network, or connections of a firm’s decision makers operating within the market.

Advertising alliances (Samu, Krishnan, & Smith, 1999), cause-related marketing partnerships (Lafferty, Goldsmith, & Hult, 2004), endorsements (McCracken, 1989), joint branding (Lebar et al., 2005), licensed extensions (Bass, 2004), and commercial sponsorship (Meenaghan, 2001) are all common examples of the promotional alliance concept. However, not all interorganizational promotional relationships are necessarily market-based alliances. To the contrary, some scholars have taken a narrow view of the market in asserting that strategic alliances are aimed at avoiding market exchange instead of creating or enhancing market exchange (Baker, Faulkner, & Fisher, 1998). While this assertion may well be accurate for a broad perspective of strategic alliances that includes joint ventures and equity-based alliances (Das & Teng, 2000), the research agenda

undertaken here relies directly on Baker et al.'s interpretation of the market as an “institutionalized mechanism...which facilitates exchange” (1998, p. 148) and argues that promotional alliances represent market-based ties inasmuch as they are created, operate, and are terminated within such institutionalized mechanisms for exchange. In other words, distinct markets (institutionalized mechanisms) exist for promotional relationships where a set of organizations (promoters) possess valuable promotional resources that are offered to other firms in exchange for various desired considerations or resources. Such arrangements are typically structured by a contract specifying the resources to be exchanged, separate parties involved, and duration of the relationship. In contrast to this characterization are promotional relationships based on equity agreements or the creation of a joint venture organization, which do indeed undermine market ties and fall outside the scope of a pure market-based alliance as primarily examined here. However, occasionally these equity arrangements arise out of an alliance that was originally void of equity considerations, and as such, these relationships can inform one avenue of evolutionary alliance dynamics. In the absence of an equity stake, a promotional alliance in the context of this research is formally defined as a strategic alliance based on resource exchange between a promoting enterprise (promoter<sup>2</sup>) and a firm seeking promotional considerations based on an ongoing affiliation with the promoter.

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<sup>2</sup> Promoter is referred to throughout this research in reference to the organization or entity within the alliance that either specializes in promotional capabilities (e.g. advertising agencies) or is able to harness significant promotional resources, such as media coverage, targeted audience involvement, identification, or loyalty (e.g. celebrities, entertainment entities, non-profit causes, or sports events and teams), that are sought by affiliating firms. It should be noted that in some cases, such as licensed extensions, the promoter may be an iconic brand that acts to legitimize the partnering firm's product; whereas in other contexts, the same iconic brand may be the partnering firm with a sports event that acts as the promoter in harnessing media attention and audience involvement for the promotion of the iconic brand.

### **1.3.1 Resource-based View of Interorganizational Alliances**

Several theories have been called upon to account for the formation of interorganizational alliances, including game theory, the strategic behavior model, social exchange theory, power-dependency theory, and the strategic decision making model (Das & Teng, 2000). Until recently, the most popular theoretical approach to studying alliances was transaction cost economics, which holds that alliances form to enable a firm to minimize the sum of its production and transaction costs (Barringer & Harrison, 2000). However, this approach has several shortcomings when considered in the context of promotional alliances, where the exchange relationship is based on the utilization of promotional resources to reach a targeted audience. The drawbacks of a transaction cost approach in this instance include the inability to account for organizational learning, creation of legitimacy, and temporal considerations (Eisenhardt & Schoonhoven, 1996). Each of these shortcomings is magnified in the case of promotional alliances where, for example, organizational learning around promotional leverage techniques, creation of legitimacy for the target consumer, and multi-year contracts that raise a temporal element could all be considered commonplace.

To compensate for these concerns, the recent movement toward the resource-based view (RBV) as a theoretical framework for the examination of interorganizational alliances is adopted in this research (Das & Teng, 2000; Eisenhardt & Schoonhoven, 1996; Gulati, 1999; Varadarajan & Cunningham, 1995). Instead of taking the perspective of cost minimization, the RBV looks to value maximization (Das & Teng, 2000). The attractiveness of the RBV lies in its explanatory power that supports both needs and opportunities for alliance formation, as well as its framework for evaluating alliance outcomes based on the production of a sustainable competitive advantage (Eisenhardt &

Schoonhoven, 1996; Varadarajan & Cunningham, 1995). In other words, viewing a promotional alliance as an interorganizational relationship based on promotional resource leverage and exchange in order to realize a competitive advantage subsumes dimensions of purpose, structure, and management, while also offering a theoretical outcome assessment tool.

The purpose of the alliance can be described as the creation and enhancement of firm resources through combination with another organization's resources in order to realize optimal, strategic returns (Varadarajan & Cunningham, 1995). The structure of an interorganizational alliance is based on the individual resources offered, market conditions, and the specific outcomes desired by each partner (Das & Teng, 2000). Meanwhile, the management of an alliance works toward achieving relational success factors, such as trust, commitment, and collaborative communication (Sarkar, Echambadi, Cavusgil, & Aulakh, 2001), that encourage the realization of the purpose of the relationship. Finally, the outcome will theoretically be judged by whether the alliance, as a relationship resource, has become the subject of a value creating strategy that is rare, imperfectly imitable, and supported by both organizations, and as a result, realizes a sustainable competitive advantage (Barney, 1991). Therefore by adopting the RBV, promotional alliances can be dissected from several dimensions regardless of the industry or type of alliance. Each of these dimensions (purpose, structure, managerial factors, and outcomes) are explored in greater detail below following a relevant example from the field and an introduction to the promotional mechanism of commercial sponsorship, which is utilized for the two empirical studies undertaken here.



When the Renault Formula 1 racing team announced its renewed technical and promotional alliance with European innovation consulting firm, Altran, the team's managing director spoke to the purpose of the alliance from Renault's perspective by exclaiming, "Altran gives us access to expertise in extremely specialized areas that we do not possess within the company, and which are crucial for the development of our F1 engines" (Renault, 2004). In other words, by combining its expertise in motor racing with Altran's innovation capabilities, the Renault team aspired to race past its competitors. Strategically, Altran hoped its involvement with the Renault team would differentiate it from competitors through the sharpening of its skills in a high-profile environment and the alignment of its brand with the promotional resources of a racing enterprise that boasts an international audience (Altran, 2008). An annual commercial sponsorship that spanned the Formula 1 racing calendar served as the initial structure of the Altran-Renault alliance, which was eventually managed toward the development of a multi-year cooperative engineering academy between the two organizations (Renault, 2008). The emergence and maintenance of such a collaborative program suggests the existence of the relational success factors of managerial trust and commitment within the alliance. While a full RBV analysis of the outcomes of this anecdotal example extends beyond its simple purpose here of establishing a relevant promotional alliance example, it appears at a cursory level that this particular relationship resource has at least received ongoing support by both organizations, which in combination with value creation, rareness, and inimitability suggests it could theoretically be the source of a competitive advantage (Barney, 1995).

### **1.3.2 Commercial Sponsorship**

Commercial sponsorship represents a popular condition of the promotional alliance relationship, as demonstrated by the preceding example. Sponsorship has been widely characterized in the research literature as “the provision of assistance either financial or in-kind to an activity by a commercial organization for the purpose of achieving commercial objectives” (Meenaghan, 1983). This particular type of alliance offers an interesting platform for promotional alliance research for several reasons. First, investments in commercial sponsorship as a marketing communications tool have expanded rapidly in the last two decades, reaching an estimated worldwide expenditure of US\$37.7 billion in 2007 (IEG, 2006), and capturing nearly a 20 percent share of overall marketing budgets (IEG, 2008). Meanwhile, scholarly research on the topic has recognized the perceived potential for a sponsorship alliance to differentiate and add financial value to a brand while serving as a central firm resource leveraged by a range of other promotional tools (Clifflea & Motion, 2005; Cornwell, Roy, & Steinard, 2001). Despite such versatility as a promotional platform, commercial sponsorship, like many of its promotional mix counterparts, still lacks widely-accepted objective measures of accountability (Harvey, 2001). Further, scholars have only recently begun to explore the relational aspects of sponsorship’s interorganizational ties, and little to no knowledge is available in the literature to suggest how such ties may evolve over time and the implications to each alliance partner (Cornwell, 2008; Farrelly & Quester, 2005a). Yet, because commercial sponsorship has become an institutionalized support mechanism ubiquitous throughout the sports, entertainment, arts, and cultural events in modern society, engagement in this type of promotional alliance spans a myriad of industries,

organizations, activities, and individuals. Therefore, commercial sponsorship offers alliance researchers a degree of generalizability across both firms and promoters.

Finally, the promotional nature of sponsorship typically requires that the organization or activity receiving the provision of assistance (promoter) have some degree of popularity or potential for publicizing the relationship. As a result, data on alliances between promoters and sponsoring organizations can often be obtained or verified to some degree through public sources. Given these reasons and the potential contribution to the broader promotional alliance context, commercial sponsorship serves as the platform for the empirical research conducted in the two studies that follow in Chapters Three and Four.

#### **1.3.2.1 Sponsorship as a Promotion-based Strategic Alliance**

Until recently, academic research on strategic alliances and commercial sponsorship has evolved rather independently despite striking similarities in their central tenants and a convergence in industry practice (Farrelly & Quester, 2005b). In 2005, the Chief Executive Officer (CEO) of the Women's Tennis Association (WTA) described their title sponsorship with Sony Ericsson as "a strategic alliance well beyond writing us a big check and well beyond receiving your typical sponsor benefits" ("One-on-one," 2005, p. 34). In another instance, the president of Walt Disney World Resort announced a ten-year "strategic alliance" with Hanesbrands, which features a stadium naming rights sponsorship agreement, by proclaiming, "our alliance with Hanesbrands is a natural given they are a leader in apparel and like us, look for strategic, innovative ways to extend their brand into communities throughout the world." Similarly, the Hanesbrands CEO

declared, “our alliance with Walt Disney Parks & Resorts, truly one of the world’s greatest brands, is a perfect fit to maximize the brand strength and equity of both organizations” (Walt Disney World Public Affairs, 2007, p.1). Strategic brand objectives, which are often cited as rationales for engaging in sponsorship (Cornwell, Roy et al., 2001; Gwinner & Eaton, 1999; Thjømmøe, Olson, & Bronn, 2002), were presented by both executives in the latter example as the basis for the formed alliance.

Such quotes from the practitioner viewpoint offer some initial illustrations of the growing industry movement to conceptualize these interorganizational promotional relationships beyond the traditional narrow label of commercial sponsorship and toward a broader perception as strategic alliances. This perspective has become so prevalent that the National Basketball Association’s Sacramento Kings have titled their vice president responsible for commercial sponsorships as the “Vice President for Strategic Alliance Sales” (“Mastalir no stranger,” 2006). Yet, research to date, with a single exception (Farrelly & Quester, 2005a), has failed to explore the implications and potential of this confluence of sponsorship and strategic alliances despite several admissions of the need for an expanded investigative framework of the interorganizational relationships inherent in modern sponsorship practice (Cornwell, 2008; Olkkonen, 2001; Ruth & Simonin, 2003; Walliser, 2003). Accordingly, in a recent report on the impact of scholarly research, the Association to Advance Collegiate Schools of Business (AACSB) recommended stronger academic engagement with practice to improve both applied and basic research (AACSB International, 2008). To perpetuate the integration of these research streams toward a more comprehensive reflection of industry practice, Table A.1 provides an overview of the purposes, structure, relational success factors, and evaluation

measures highlighted by strategic alliance scholars, and their counterparts studying commercial sponsorship, which is argued here to be simply a specific case of the broader interorganizational phenomenon of promotion-based alliances.

Stark similarities between the strategic alliance and commercial sponsorship lines of research emerge from a review of Table A.1. Not only is the term “alliance” used by some researchers in defining sponsorship (Farrelly & Quester, 2005a), but the central concept of an interorganizational exchange relationship based on satisfying competitive resource needs seems to pervade the themes explored by each stream. By adopting an integrated approach, the studies presented in this paper demonstrate the potential incremental contribution achieved by aligning appropriate literature bases to reflect contemporary trends in industry practice.

#### **[TABLE A.1]**

##### **1.3.2.1.1 Purpose**

Much of the existing research on promotional alliances, and specifically commercial sponsorship, has focused on the purpose of gaining access to brand awareness, image, and attitude-shaping resources through exchange with a promoting organization or entity (promoter). Traditionally, these promotional resources are exchanged primarily for financial resources offered by the partnering firm (Cornwell & Maignan, 1998). For example, in the case of licensed brand extensions, a product producer acts as a licensee that seeks to affiliate their product with a recognized brand, owned by the licensor. In this way, the licensee is able to access the promotional resources of the licensor’s brand awareness, image, and customer loyalty (Hoeffler &

Keller, 2003). For making these resources available to the licensee, the licensor is compensated with a royalty fee or percentage of the licensee's product revenues (Bass, 2004). Similar arrangements in purpose and structure are found in cause-brand alliances, endorsements, and commercial sponsorship.

By identifying desired traits and then recognizing symbols, charitable causes, events, celebrities, or even other brands that embody these desired traits, marketing managers can attempt to align these symbols with their brand (Choi & Rifton, 2007; Lafferty et al., 2004; McCracken, 1989). In the case of sports, attributes such as health, young, energetic, fast, vibrant, and masculine are often inherent in the symbols and icons that produce the spectacle (Meenaghan & Shipley, 1999). A marketing manager may therefore choose to control and encourage brand associations with these attributes through the use of promotional resources, such as sponsorship and athlete endorsement, with the goal of facilitating an image transfer impression with the targeted audience (Gwinner & Eaton, 1999; McCracken, 1989; Smith, 2004). As with licensed brand extensions, the entity contributing the desired image is typically compensated with a monetary sponsorship or endorsement fee.

Although brand awareness, image, and consumer attitude outcomes constitute a majority of the research evaluating promotional alliances, several scholars have recognized other objectives for participating in promotional alliances (Bucklin & Sengupta, 1993; Copeland, Frisby, & McCarville, 1996; O'Hagan & Harvey, 2000; Thjømmøe et al., 2002). Seven categories beyond awareness and image enhancement emerge across this line of research: relationship building, community relations and support, skill enhancement, resource efficiency, market penetration, sales, and personal

interest (Bucklin & Sengupta, 1993; Meenaghan, 1983; Meenaghan, 2005; Varadarajan & Cunningham, 1995). Along with the diversity in objectives, promotional alliances have also been aimed at reaching a diverse audience. Studies that have surveyed sponsorship managers have consistently included stakeholder groups such as employees, shareholders, suppliers, and other potential business partners as target audiences (Clifflea & Motion, 2005; Copeland et al., 1996; Crowley, 1991), yet researchers have, for the most part, neglected to empirically investigate the impact of these alliances on audiences beyond mass consumers (Cornwell & Maignan, 1998). The second study offered within this paper, joins a small but growing body of research on the shareholder impact of promotional alliance announcements.

#### **1.3.2.1.2 Structure**

The basic structure of traditional promotional alliances can be characterized as a unilateral contract, where the promotion-seeking firm offers cash as a financial resource in exchange for the right to access the promoter's capabilities and audience, and affiliate with the promoter's brand (Cornwell & Maignan, 1998). Given this historical conceptualization of promotional alliance relationships, a unilateral contract alliance structure seems appropriate (Das & Teng, 2000). However, this traditional view calls into question the strategic nature of such an alliance. In order for a resource to be considered strategic, it must enable the possessor to achieve a competitive advantage (Varadarajan & Cunningham, 1995). To do so according to the RBV, the resource must create value while being scarce, inimitable, and without direct substitutes (Barney, 1991). Yet, it seems unlikely that a property-based resource acquired for simple financial

appropriations could be scarce or inimitable in its own right. What stops competing firms from purchasing the same affiliation resource? Even if the alliance is of an exclusive nature, meaning direct competitors are barred from receiving identical association rights, surely other alliance opportunities exist in a diverse market that can deliver access to an almost identical promotional property resource. For instance, home improvement retail competitors Home Depot and Lowes both serve as primary commercial sponsors of different high-profile NASCAR race teams, often finding their logo-plaid cars side-by-side on the track during a race. This rival pairing is not alone in its dual affiliation to the sports promoter NASCAR. After driving to victory in a NASCAR race title-sponsored by Pepsi, driver Jamie McMurray proceeded to the winner's circle to chug his sponsor's signature beverage, Coca-Cola Classic, in front of the myriad of photographers and camera crews ("Thirst Quencher," 2007). This phenomenon of direct corporate rivals facing off in the same promotional arena has been suggested to dilute brand differentiation, thereby leading to decreased resource effectiveness and brand parity (Cornwell, Weeks, & Roy, 2005).

Given this typical characterization of commercial sponsorship as simply a right to affiliate with a certain promotional property, and these examples from the field, it seems difficult to conceive of such promotional alliances as creating a sustainable competitive advantage when structured as a unilateral agreement. Despite this potential strategic shortcoming, some scholars have evoked the RBV to argue that promotional alliances are in fact capable of attaining a sustainable competitive advantage when managed appropriately and treated as a bilateral agreement (Amis, Pant, & Slack, 1997; Das & Teng, 2000; Fahy, Farrelly, & Quester, 2004). Other interorganizational scholars have



enhanced this assertion by pointing to several relational factors that contribute to the successful realization of an alliance's strategic aspirations (Bucklin & Sengupta, 1993; Hughes & Weiss, 2007; Hutt, Stafford, Walker, & Reingen, 2000; Saxton, 1997; Varadarajan & Cunningham, 1995).

#### **1.3.2.1.3 Management Success Factors**

Instead of conceptualizing promotional resources as property rights to be exchanged in a unilateral transaction, the emergence of contemporary research on interorganizational alliance management success factors encourages the consideration of the knowledge-based facets of promotional resources that are optimized through relational exchange (Chadwick & Thwaites, 2006; Fahy et al., 2004; Sarkar, Echambadi, Cavusgil et al., 2001). Returning to the categories of objectives for promotional alliances, knowledge-based capabilities are found in the ideas of leveraging image associations, relationship building, skill enhancement, resource efficiency, market penetration, and even sales. Unlike a unilateral transaction, where the firm seeking promotional resources trades cash for the right to affiliate with the promoter as a property and that single exchange constitutes the relationship, a bilateral agreement is based on the ongoing co-production of promotional knowledge-based resources that require each partner to contribute to the cooperative relationship (Das & Teng, 2000; Madhok & Tallman, 1998). For example, in their contrasting case studies of two firms engaged in commercial sponsorship activities, Amis et al. (1997) pointed out how, in one case, the voluntary commitment of incremental resources over time to the promotional alliance by both parties produced a valuable sponsorship resource for the firm that was rare,

imperfectly imitable, and established limits to competition, thereby fostering a competitive advantage. Meanwhile, the firm profiled in the contrasting case approached their sponsorship initiatives with a transactional orientation lacking focus or a coherent long-term strategy for developing their promotional resources. As a result, this firm's property-based alliances with sports organizations and athlete endorsers were disparate and presumably easy to replicate by any willing competitor. The relational conditions of commitment and collaborative communication that seemingly differentiated these two promotional situations are a subset of the success factors for interorganizational alliances identified by scholars.

The importance of trust, commitment, and compatibility between alliance partners headlines the managerial considerations empirically shown to contribute to positive alliance outcomes such as longevity, partner satisfaction, and perceived effectiveness (Bucklin & Sengupta, 1993; Farrelly & Quester, 2003b; Hutt et al., 2000; Sarkar, Echambadi, Cavusgil et al., 2001). Trust in an alliance situation is built through reciprocal communication and mutual understanding, often resulting in shared decision making (Kale, Singh, & Perlmutter, 2000; Ring & van de Ven, 1994). Trust can become the most important aspect of an alliance, culminating in an identity-based bonding (Hutt et al., 2000). In a promotional alliance, trust has been shown to contribute directly to relational commitment, which is characterized as "a willingness by the parties involved in the sponsorship dyad to make short-term investments with the expectation of realizing long-term benefits from the relationship" (Farrelly & Quester, 2003a; Morgan & Hunt, 1994). Commitment takes the form of leveraging activities in a promotional context where alliance members summon resources beyond those called for in the agreement to

promote the affiliation or provoke capabilities that are likely to positively influence desired alliance outcomes (Farrelly & Quester, 2003a). By measuring consumer awareness and attitude toward firms sponsoring an art festival, Quester and Thompson (2001) empirically demonstrated the positive outcomes of leveraging a promotional alliance through various mass media channels.

Beyond the emphasis on trust and commitment in the literature, compatibility remains a third prominent success factor when considering the management of interorganizational relationships. Several studies of promotional alliances have sought to measure the congruence, fit, or match-up effect between a promotion-seeking firm and a promoter by taking an image-based approach (Gladden & Wolfe, 2001; Gwinner & Eaton, 1999; McDaniel, 1999; Speed & Thompson, 2000). However, the idea of congruence as related to the interorganizational alliance relationship extends beyond each organization's image. If two alliance partners are compatible, that does not mean they are identical. Instead, partners should compliment each other by demonstrating a coherent strategic and cultural fit (Sarkar, Echambadi, Cavusgil et al., 2001).

The foundational rationale for interorganizational alliances is to meet strategic resource needs (Eisenhardt & Schoonhoven, 1996), therefore, each party should be able to stipulate how the resources exchanged within the alliance assists them in reaching a sustainable advantage over their competitors (Farrelly, Quester, & Greyser, 2005). Otherwise, the alliance lacks a strategic fit and the long-term prospects for the relationship are questionable. If the alliance has the potential for generating strategic resources for each party, common ground in organizational culture and operating philosophies can enhance understanding and foster a willingness to cooperate (Hutt et al.,

2000; Saxton, 1997). Farrelly and Quester (2003a) approached this idea by employing a measurement of the alliance members' market orientation, which was examined as the market intelligence generation and responsiveness activities coordinated by each member. Their research called attention to the importance of collaborative communication and showed a positive correlation between partners' market orientation and the trust and commitment of their promotional alliance. Despite this integrated emphasis on trust, commitment, and compatibility in the relational success factors of promotional alliances, more work is needed to accurately connect these relationship characteristics to strategic outcome measures (Farrelly & Quester, 2005a).

#### **1.3.2.1.4 Evaluation**

To date, the literature on promotional alliances has yet to settle on a definitive evaluation measure of the strategic outcomes of such alliances. Though there seems to be a level of agreement on the importance of the theoretical qualities of scarcity, inimitability, and imperfect substitution in evaluating competitive resources, researchers have relied primarily on longevity or survey measures of partner perceptions as practical measures of alliance success (Bucklin & Sengupta, 1993; T. B. Cornwell, Roy et al., 2001; Farrelly & Quester, 2003b; Saxton, 1997). While the measurement of alliance outcomes is complicated by the diversity in their objectives (Gulati, 1998), the proprietary nature of marketing plans is suggested by Cornwell and Maignan (1998) as a potential reason for the lack of evaluative research in sponsorship strategy. However, this dilemma may be more accurately explained by the causal ambiguity that often accompanies a convergence of resources that interact to generate an advantaged position

(Fahy et al., 2004). In such a situation, the relative contribution of each resource can be difficult to discern. For instance, engaging in leveraging activities around a sponsorship affiliation has been demonstrated to increase its effectiveness (Quester & Thompson, 2001), but it remains difficult to determine whether the strength of the relational alliance, the marketing skills and capabilities of one or both of the partners, the target audiences' predisposition, or the additional resources called upon to leverage the alliance were the substantial contributors to the sponsorship's overall effectiveness (Cornwell et al., 2005). Complicating this causal ambiguity further, is the fact that promotional alliances do not operate in isolation. To the contrary, most firms engage in multiple promotional relationships simultaneously and therefore interact within a network of promotional alliances that add a layer of social complexity to the potential inimitability of such relationships (Cornwell, 2008; Olkkonen, 2001; Ruth & Simonin, 2003).

### **1.3.3. Beyond the Dyadic Relationship to a Network Perspective**

Business networks have been defined as “a set of two or more connected business relationships in which each exchange relation is between business firms that are conceptualized as collective actors” (Anderson et al., 1994, p. 2). From this perspective, a group of firms connected to a particular promotional entity might be characterized as “collective actors” based on specifying the network boundary as contingent upon a specific resource exchange (Rowley, 1997). For example, public events have been examined from a broad network perspective where the various businesses engaged in funding, producing, publicizing, and carrying out the operations of the event are all

conceptualized within the event network, which through collective action enabled the survival and success of the event (Erickson & Kushner, 1999).

As with a singular alliance, the foundation of the interaction of firms in a business network is the resources exchanged with other members of the network. In their review of two decades of interorganizational research, Turnbull, Ford, and Cunningham (1996) categorized the resources offered and received amongst businesses in a network as financial, network oriented, and skills. Financial resources may not be inimitable or rare, but they do impact an organization's capacity to acquire new resources or leverage a partner's resources. A network oriented resource emanates from an organization's position within the network and the resource and informational benefits that correspond to such a position. For instance, a promotional organization such as Disney's Pixar Animation Studios may have access to a desirable consumer market through their theatre and licensing distribution network, which Disney's corporate partners would like to engage. By offering promotional avenues such as product placement, Disney is able to exchange the advantages of their network position as an organizational resource (Porsche Cars North America, Inc., 2006).

The last category of resources raised in Turnbull et al.'s (1996) review was the skills possessed by firms in the network. These skills can be decomposed into the three competencies of product, process, and marketing. Product capabilities refer to the propensity to design a product or service, and a process competency is demonstrated by the ability to produce the product. Marketing capabilities reference the capacity for analyzing the demands of the market and collecting the resources necessary to influence and deliver a target audience to other firms. For a variety of information and

entertainment-oriented promoters, these skills act in tandem to produce a central resource to be offered to potential business network members.

For instance, promoters operating in the action sports entertainment segment have recognized the demand for extreme sports products from a consumer audience that is attractive to many corporate marketers. Utilizing their product and process skills, these promoters bring together talented athletes, media outlets, and event coordinators to manufacture events and television productions that engage the Generation Y audience (Bennett, Henson, & Zhang, 2003). In doing so, the promoter materializes their skills into a marketing resource to offer to potential corporate network partners, such as MasterCard, Slim Jim, and Mountain Dew, who desire to reach the Generation Y market (Lefton, 2006a).

At a basic level, most of the information and entertainment entities our society enjoys are built on the business model of providing either an information or entertainment product that is in demand by a critical mass of consumers. These information and entertainment organizations, such as television stations, newspapers, websites, traveling shows, and sports properties, then act as promoters for firms that desire to reach the promoters' audience with a marketing message (Meenaghan, 1991). By leveraging their skill in delivering an audience desirable to firms seeking promotion, promoters can access resources through exchange relationships to enable their continued operation and expansion (Erickson & Kushner, 1999).

## **1.4 Conclusion**

This chapter has set a broad theoretical framework for the upcoming chapters by grounding the concept of promotional alliances in the marketing foundations of McCarthy (1960) and Kotler (2003) and formally defining it as a subset of strategic alliances based on resource exchange between a promoting enterprise and a firm seeking promotional considerations through an ongoing affiliation with the promoter. Commercial sponsorship was characterized as a pervasive condition of promotional alliances that offers a rich setting for investigating the two organizational sides to such an alliance. While sponsorship industry practice has shown a willingness to embrace at least the lexicon of alliances, scholarly research to date has neglected to integrate these knowledge streams. By utilizing the resource-based view of the firm to examine the dimensions of purpose, structure, management, and evaluation of promotional alliances, and specific cases of corporate sponsorship, a theoretical contribution was made to this end. With the broad theoretical framework of promotional alliances established, Study One in Chapter Three takes a more detailed look at the promoter side of these alliances; while Study Two in Chapter Four ventures into the considerations of the sponsoring firm. But first, Chapter Two sets the stage for the subsequent studies by introducing the investigative context through a description of the magnitude of corporate involvement and depth of resource exchange inherent in the international spectacle that is Formula One motor racing.



## CHAPTER 2

### INVESTIGATIVE CONTEXT: FORMULA ONE RACING

#### 2.1 Corporate Involvement

The sporting context of Formula One (F1) motor racing presents a relevant and interesting arena for the dynamic investigation of promotional alliances on an international scale. Forty-one of Interbrand's Top 100 global brands were currently, or had been involved in the commercial sponsorship of F1 racing in 2008 (Best global brands, 2008). With annual promotional alliance commitments reaching as high as US\$100 million in non-equity arrangements, and equity agreements sharply escalating from that figure, commercial involvement with a Formula One team does not come cheap (Sylv & Reid, 2008b).

The magnitude of corporate financial support coupled with the functional and technical commitments often included in such alliances, enable a majority of the competing F1 teams to operate with annual budgets in excess of US\$300 million, which is close to ten fold greater than the cost of fielding an entry into the NASCAR Sprint Cup Series, the most popular US racing series (Smith, 2008). Such staggering annual budgets in F1 create a strong dependence on corporate partnerships to underwrite team operations. A typical F1 racing team generates over 70 percent of its operating budget from corporate relationships (Sylv & Reid, 2008a). In fact, the recent deteriorating global economic conditions and the uncertain survival of one F1 team formerly underwritten by Honda Motors have led the sport's governing body to collectively engage teams in an effort to reduce their operational costs by as much as 30 percent ("F1 costs to be cut by 30 percent," 2008).

## **2.2 International Spectacle**

Around the globe, the popularity of F1 as a television spectacle is rivaled only by the NFL Super Bowl, the football World Cup finals, and the Olympic Games, the last two of which occur only every four years (Edgecliffe-Johnson, 2008). The annual F1 event schedule includes close to twenty races that, until 2009<sup>3</sup>, reached every continent on the planet except Antarctica in the span of eight months. Under the current sporting regulations, up to twelve teams, each fielding two drivers, can compete for the world championship. While national origins play a prominent role in the series (origin flags are frequently displayed on car and television graphics, and on the podium during the playing of both the winning team's and driver's national anthems following each race), drivers are free to contract with any team regardless of the driver's or team's claimed nationality. The 2007 season, the last season included in the data examined for these studies, saw drivers from 12 countries compete as part of the 11 teams that contested the championship. Apart from their drivers' origins, seven different countries were represented by the 11 teams. Table A.2 summarizes the team and driver nationalities competing in F1 in 2007.

### **[TABLE A.2]**

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<sup>3</sup> After replacing the United States Grand Prix in Indianapolis in 2008 and dropping the Canadian Grand Prix in Montreal for the 2009 schedule, F1 will not race in North America in 2009 for the first time since F1 formally organized in 1950.

### **2.3 Resource Exchange**

The international reach and popularity of F1 makes the activity an attractive promotional platform for multinational firms (Beck-Burridge & Walton, 2001). Yet beyond the awareness and image dimensions of an F1 team affiliation, firms and their promoting teams recognize several other resources that such an alliance can provide to each partner in the exchange relationship. Although several of the highest profile F1 commercial sponsorships do involve a considerable monetary commitment, many of these promotional alliances also serve as credentialing platforms for the sponsoring firm's products, services, and capabilities. Unlike most other entertainment and sports activities, motor racing provides a competitive public forum for the development and testing of a wide range of technologies and components (Jenkins & Floyd, 2001). As a result, many of the alliance agreements between F1 teams and their sponsoring firms contractually specify an exchange of resources that extends beyond the traditional unilateral property-based arrangement and provides for the ongoing contribution of knowledge-based resources toward the manifestation of a cooperative relationship (Hotten, 2000; Sylt & Reid, 2008b). In other words, when the sponsoring firm produces functionally compatible resources for the competition environment, that firm is capable of contributing to the actual performance of their alliance team partner on the race track. For example, upon announcing a promotional and technological alliance with an F1 team, the CEO of Swiss technology company Oerlikon stated that "...together with Red Bull (the F1 Team), we will systematically analyze our technology portfolios and launch appropriate projects. The goal is to boost the performance of the Red Bull Racing fireballs (race cars) even further with new, innovative components" (Oerlikon, 2007).

While the alliance between a commercial sponsor and their promoting team composes the focal exchange relationship for this investigation, networks of other corporate relationships are also important to note within this promotional context. The Paddock Club, F1's exclusive hospitality area for each race weekend, presents business-to-business (B2B) networking opportunities on a grand international scale. One team's commercial alliance director claims to have driven half a *billion* US dollars worth of business between his team's partners in just five years (Canning, 2007). This robust assessment of the networking potential within this environment was further substantiated by the chief marketing officer for computer manufacturer Lenovo. Shortly after his firm aligned with the Williams F1 team as a corporate and technology partner in a five-year agreement reported at \$190 million (Lefton, 2007), he admitted: "One of the interesting things about F1 is all the other sponsors. Already in the short period that we've been a member of this community, the conversation has already started on how can we do some co-marketing with other players" (Jones, 2007).

Given the intense direct competition of F1 teams coupled with escalating operational costs, it seems imperative that these enterprises exploit their diverse range of promotional resources through exchange relationships with corporate partners seeking such resources. On the other side, many of the firms interested in the promotional services offered by F1 teams may possess heterogeneous resources of their own that are complementary to the competitive environment of F1 racing. The study presented in the next chapter examines the promoting team side of promotional alliances, and to what degree these enterprises rely on this type of interorganizational exchange to access different resources to facilitate their survival.

## **CHAPTER 3**

### **STUDY 1: ACCESSING ORGANIZATIONAL RESOURCES THROUGH PROMOTIONAL ALLIANCES**

Utilizing the resourced-based view, Chapter One built a theoretical framework for a subset of strategic alliances based on promotional resource exchange. This conceptualization of promotional alliances served as an integrating force between the foundations of commercial sponsorship and strategic alliances. The two organizations engaged in this promotional exchange relationship were described in general as the promoter and the promotion-seeking firm, or in the specific context of F1 racing introduced in Chapter Two, they are represented by a promoting team and sponsoring firm. This chapter dives deeper into the necessity of resource access and exchange from the promoting team's perspective as an entrepreneurial enterprise in a competitive environment. The standpoint of the promoter in such relationships has largely been ignored by previous research. However, here the theories of organizational ecology and resource dependency are called upon to supplement the broader promotional alliance framework and inform an investigation of how the promotional resource exchange impacts the promoting enterprise's propensity to survive.

#### **3.1 Research Question**

While the popularity of the resourced-based view has focused attention on the contribution of firm resources to a sustained competitive advantage (Barney, 1991; Wernerfelt, 1984), the mere sustainability of operations concerns many entrepreneurial enterprises. Ulrich and Barney (1984) acknowledged this reality when they integrated

resource dependency and population ecology theory to suggest that firms must efficiently engage in an acquisition of resources to survive over the long term. This study focuses on interorganizational alliances as one of the most common methods for accessing the resources necessary for firm survival (Ireland et al., 2002).

In a competitive environment, new ventures must identify and access resources in a manner efficient enough to sustain operations while organizational learning accumulates through experience (Levitt & March, 1988). Although resources play a vital role in both the larger administrative and smaller entrepreneurial cultures, often the ability of the entrepreneurial firm to control resources depends increasingly on accessing such resources via relationships with other organizations (Stevenson & Gumpert, 1985). Transaction cost economics suggests that without the accumulated capital and internal operational systems of larger administrative firms, younger organizations in a dynamic environment might be less inclined to commit financial capital to secure ownership control of all, or even a majority of their required resources (Williamson, 1981). Instead, these organizations are more likely to incur the external market costs necessary to meet their resource needs. Often strategic and social dynamics lead such enterprises to form interorganizational alliances as a quasi-market mechanism that allows entrepreneurial firms to compete efficiently in a rapidly changing environment, while also leveraging their own core capabilities as bartering chips in the exchange relationship (Eisenhardt & Schoonhoven, 1996).

From an organizational learning perspective, entrepreneurial firms can compensate for their own lack of experience by aligning with experienced others for resource collaboration (Levitt & March, 1988). Not only are firms able to appropriate a

degree of their partners' experience, but once engaged in multiple interorganizational relationships, firms develop their own alliance formation capabilities and network resources, thereby increasing the likelihood of future alliance engagement (Gulati, 1999). Furthermore, establishing a network of interorganizational exchange relationships can also increase the attractiveness of an otherwise unknown enterprise when such alliances are viewed as inter-firm endorsements (Stuart, Hoang, & Hybels, 1999). In total, the deliberate composition of an alliance network for resource access and exchange can positively influence the early performance of entrepreneurial organizations (Baum, Calabrese, & Silverman, 2000). However, resource dependency theory suggests that interorganizational relations can lead to undesirable dependence and constraints (Pfeffer & Nowak, 1976). In other words, relying on external organizations to access vital resources also entails certain hazards, such as relationship exploitation, resource redundancy, and conflicting objectives, which can all contribute to underperformance (Das & Teng, 1996).

The following study seeks to advance and further clarify the theoretical link between organizational resources and the survival of entrepreneurial enterprises engaged in head-to-head competition. Utilizing 40 years of data on the alliances between Formula One (F1) racing teams and their supporting corporate partners, F1 teams are examined as entrepreneurial organizations that access various categories of resources via their corporate alliances in order to facilitate performance and maintain operations on an international scale. Explicitly, the overarching research question addressed in this study is as follows:

- How does an entrepreneurial organization's access to resources through interorganizational alliances influence its survival over time in a highly competitive environment?

### **3.2 Survival of an Entrepreneurial Enterprise**

The survival of organizations in a competitive marketplace depends on a myriad of factors that can be broadly categorized as human capital, organizational characteristics, and environmental conditions (Brüderl, Preisendörfer, & Ziegler, 1992). Although human capital in the form of the individual traits of the founder received much of the early attention from scholars studying entrepreneurial organizations (e.g. Bates, 1990; Shaver & Scott, 1991), this psychological perspective eventually yielded to the necessity of considering factors beyond the individual level of analysis when considering the performance of new ventures (Thornton, 1999). The theories of resource dependency and organizational ecology gained traction in entrepreneurial research as the investigative emphasis expanded to organizational characteristics and the institutional conditions of the environment (Audretsch, 1991; Audretsch & Mahmood, 1995; Ulrich & Barney, 1984).

Viewing organizations within a population ecology framework highlights the roles of competition and environmental selection in the determination of firm survival. This macro perspective proposes that individual organizations do not possess an unbounded capacity to adapt to their environment because they are subject to inertial pressures resulting from their capital investments, normative history, and political and informational connections and constraints (Hannan & Freeman, 1977). When competition exists for scarce resources, ecological theory suggests that organizations best



suited to acquire necessary resources will survive. Therefore, the pressures of inertia in a stable environment seemingly benefit experienced organizations with established resources. Conversely, inertia in a rapidly changing environment can become a liability as other firms enjoying greater freedom are quicker to adapt to the new conditions and access the appropriate resource requirements (Miller & Shamsie, 1996). In this way, the concepts of environmental selection and organizational adaptation are complementary. The environment requires its inhabitants (organizations) to rely on certain resources for survival. As the environment changes, the relationship between survival and specific resources may also change. As a result, the inhabitants are forced to recognize and adapt to such changes, within the boundaries of their individual constraints, to ensure their continued health and survival.

Exchange theorists have pointed out that relationships between organizations enable access to resources outside the traditional constraints of the firm (Levine & White, 1961). Often such relationships take the form of a strategic alliance between firms (Ireland et al., 2002). While the rationales for strategic alliance formation have been described in various ways (see the 'Purpose' section of Table A.1), a vast majority of these justifications, if not all, can be summarized generally as attempts to realize synergistic value-creation from the pooling of firms' complementary resources (Das & Teng, 2000; Madhok & Tallman, 1998). Strategic alliances are attractive mechanisms for accessing desired resources outside the boundaries of the firm because they allow partners to realize the benefits of resources without the full commitment required of ownership. Further, and perhaps more importantly, strategic alliances facilitate access to not only the core resources offered by the partner, but also the accumulated knowledge

and experience of that partner in leveraging such a resource (Hitt, Dacin, Levitas, Arregle, & Borza, 2000). Meanwhile, by offering their own expertise and tradable resources as part of the interorganizational exchange inherent in strategic alliances, each partner potentially extracts incremental value from their own resource inventory. Consequently, strategic alliances are viewed as a viable means by which organizations navigate their environment and maintain survival (Baum et al., 2000).

Resource dependency theory (Pfeffer & Nowak, 1976), however, would suggest that interorganizational resource exchange is not without its drawbacks. Relying on entities outside the firm for access to vital resources fosters dependency and initiates another set of constraints on the firm. Interorganizational exchanges are not devoid of power dynamics, and resource dependency implies the ceding of a degree of power to an alliance partner (Cook, 1977; Emerson, 1962). Within this perspective, firms are generally hypothesized to avoid such interdependence; yet in reality, the demands of adapting to a dynamic environment typically result in a pragmatic balancing of dependency and efficiency that necessitates a certain level of interorganizational exchange to ensure survival (Baker, 1990; Ulrich & Barney, 1984).

Beyond the drawback of dependence, alliances are also subject to several other organizational risks and constraints such as high behavioral uncertainty, management complexities, unintentional proprietary knowledge transfer, culture clash, and the loss of decision autonomy (Barringer & Harrison, 2000; Gomes-Casseres, 1996; Parkhe, 1993). Despite the potential hazards, the seduction of accessible resources via interorganizational alliances has proven to be irresistible to the degree that dense networks of alliances have proliferated and extended interorganizational research beyond

the dyadic level (Gulati, 1998). Alliance networks have been shown to impact profitability based on their structure (Bae & Gargiulo, 2004), positively influence innovation (Ahuja, 2000), precipitate further organizational alliance involvement (Gulati, 1999), and even facilitate corporate crime (Baker & Faulkner, 1993). In an entrepreneurial setting, the early performance of startup organizations has been linked to alliance network composition (Baum et al., 2000), which in turn can be viewed as a confluence of strategic resource needs and social opportunities (Eisenhardt & Schoonhoven, 1996).

### 3.3 Theoretical Model & Hypotheses

The following research project suggests that organizational survival depends, to some degree, on leveraging internal resources in the marketplace to facilitate strategic alliances with other firms in order to access the full resources necessary for adequate organizational competition. The following theoretical model stipulates the factors related to organizational dissolution as considered in this study and detailed in the sections that follow.

$$\text{Survival}_{\text{promoter}} = f(\text{Experience}_{\text{partner}}, \text{Resources}_{\text{performance}}, \text{Resources}_{\text{financial}}, \text{Resources}_{\text{operational}}, [\text{Era}_{\text{historic}} * \text{Resources}_{\text{financial}}], \text{Embeddedness}_{\text{promoter}}, \text{Performance}_{\text{promoter}}) \quad (1)$$

In the subsequent theoretical descriptions of hypotheses, the variables influencing survival are arranged within three categories. The first involves a characteristic of the sponsoring partner, characterized as a corporate firm seeking to fulfill promotional objectives through an alliance with the entrepreneurial promoting enterprise (promoter). The hypothesized relevant characteristic of these corporate partners is their experience in

the promotional context. The second category of hypotheses revolves around the relationship between the promoting enterprise and their sponsoring partners. These five propositions entail the type of resources exchanged, the institutional era of exchange, and the embeddedness of the promoter in the contextual global network of alliances. The final delineation of variables describes the past performance of the promoter itself. Each of these considerations is theoretically linked to the survival of the entrepreneurial promoter within its particular institutional context of competition. This outcome is described in the next section prior to the stipulation of hypotheses.

### **3.3.1 Survival of the Promoter [Team]**

The mortality of an entrepreneurial enterprise creates a fascinating investigative outcome relevant to a range of research disciplines, including economics (Audretsch & Mahmood, 1995), psychology (Shaver & Scott, 1991), sociology (Thornton, 1999), and management theorists (Baum et al., 2000). By focusing on dimensions of interorganizational alliances based in promotional resource exchange, this study advances the research that has taken a resource-based approach to investigating the survival of organizations (Alvarez & Busenitz, 2001; Bergmann Lichtenstein & Brush, 2001; Sheppard, 1995; Starr & MacMillan, 1990). Specifically, entrepreneurial enterprises with a business model based in promotional service act as the focus of this investigation.

For their continued operation, promotion-based organizations rely on one of two business models. Either the promoting enterprise directly attracts an audience that is desirable to a set of firms, who consequently seek affiliation as a promotional platform, or the enterprise acts as an expert intermediary by providing a coordinating service to

match firms seeking a promotional platform with an entity that attracts their targeted audience. Festivals, concerts, traveling shows, and spectator sports organizations serve as examples of the former and are analogous to the sample of promotion-based enterprises used in this investigation. Advertising and other marketing communication-focused agencies fit the description of the latter, intermediary type of promotion-coordinating enterprise.

To survive, both types of promotional service organizations must maintain access to the necessary resources to compete in their dynamic industry environment. Otherwise, the organization will be forced into one of two conditions: dissolution or sale (Freeman, Carroll, & Hannan, 1983). Dissolution occurs when the enterprise ceases to exist as an operating organization. Sale arises when another enterprise subsumes ownership and control in exchange for providing the resources the former organization failed to acquire in the competitive marketplace. In the case of a sale, the original organization continues to operate but under new ownership control, and often with a revised resource situation. It is the more dramatic outcome of enterprise dissolution that serves as the focal condition in this longitudinal research, though consideration is given to the propensity of enterprise sale to affect this terminal outcome.

### **3.3.2 Sponsoring Partner Characteristic**

Resource dependency, organizational ecology, and organizational learning theories suggest several factors that could plausibly be considered as influential in an entrepreneurial enterprise's survival. As mentioned above, these factors are categorized into three domains labeled as a characteristic of the promotion-seeking (or sponsoring)

partners, characteristics of the alliance relationship between the promotion-seeking partners and the promoting enterprise, and finally, characteristics of the promoting enterprise (promoter) itself. The first area addresses the experience of the sponsoring partners in the promotional context at hand. The entrepreneurial enterprises under scrutiny in this study rely on a promotion-based business model that hinges on direct affiliation with a network of corporate alliance partners. These partners act as sponsoring firms who are seeking to achieve promotional objectives based on this affiliation (Meenaghan, 1983), but their experience may be of particular interest to the promoting enterprise.

#### **3.3.2.1 Experience**

At their outset, entrepreneurial enterprises often must overcome what Freeman et al. (1983) term the liability of newness. In other words, there is an age dependence to the mortality of organizations, which suggests that experience contributes to survival. While new ventures can not artificially contrive their own organizational experience apart from the restrictions of time, organizational learning theory proposes that the knowledge benefits of experience can diffuse between organizations via three primary methods (Levitt & March, 1988). First, a central organization such as a trade association might broadcast best practices for an industry to its community of affiliated organizations. Second, direct contact between organizations through an alliance, personnel transfer, or interlocking directorates can diffuse routines, strategies, or other knowledge between enterprises. Finally, experience-based information may be collected and disseminated within a small group, which then broadcasts the knowledge to a larger organizational

population. This last two-stage process can occur through educational institutions or via industry consultants and inter-firm trainers.

Where an entrepreneurial enterprise looks to interorganizational alliances to access resources, the enterprise positions itself to take advantage of the second method of knowledge diffusion described above. A promotion-based organization creates an avenue for continuing direct contact with their sponsoring firms by establishing an ongoing collaborative relationship based on achieving the firms' promotional objectives (Farrelly, Quester, & Mavondo, 2003). As contact between the organizations intensifies, routines develop that can be conducive to knowledge accumulation and organizational learning (Zollo, Reuer, & Singh, 2003). While both parties in an alliance may realize learning effects, the effects are not necessarily symmetrical. The less experienced partner maintains a greater learning potential as related to the competitive context than their more experienced partner (Hamel, 1991; Hitt et al., 2000). In an entrepreneurial context, this implies that new ventures would be wise to seek out alliances with firms that have accumulated experience in the venture's competitive environment. Doing so may result in a knowledge accumulation through organizational learning that could help to compensate for the venture's own lack of experience. As a result, the following hypothesis is offered:

H1: The experience of an enterprise's corporate alliance network is negatively related to the hazard of dissolution.

### **3.3.3 Alliance Relationship**

The second classification of hypotheses encompasses characteristics of the relational exchange inherent to a promotion-based alliance. A central premise in this study is that accessing resources through a network of exchange relationships with sponsoring firms is a primary method by which a promoting enterprise competes and maintains survival. Varadarajan and Cunningham (1995, p. 283) describe a strategic alliance as “a manifestation of interorganizational cooperative strategies, entail(ing) the pooling of skills and resources by the alliance partners, in order to achieve one or more goals linked to the strategic objectives of the operating firms.” Here, the relationship between the sponsoring firms and the promoting enterprise is thus characterized as a strategic alliance based on the promotional objectives of the sponsoring firm and the promotional capabilities and resources of the promoting enterprise. Yet as it concerns the performance and survival of an entrepreneurial enterprise, not all resource alliances are perceived to be equal (Bergmann Lichtenstein & Brush, 2001), and their longitudinal value from an ecological perspective is contingent on environmental change or stability (Miller & Shamsie, 1996). In other words, the resources accessed through a particular alliance relationship may be valuable when the partnership is initiated, but changes in the institutional environment might later make the same resources obsolete or of lesser competitive value. The next set of alliance-related hypotheses begins with three propositions focused on the heterogeneity of the resources, followed by a look at the dynamic institutional context that frames interorganizational alliances, and a consideration of the impact of network embeddedness on the survival of promotional enterprises.



### **3.3.3.1 Resource Heterogeneity**

A primary assumption of the resource-based view of the firm is the heterogeneous distribution of resources across firms (Barney, 1991). In stipulating that not all resources available to a firm represent identical rent-earning potential, Grant (1991) identified six general categories of resources: financial, physical, human, technological, reputation, and organizational. These designations have been modified to pertain to various applications, such as Morgan and Hunt's (1999) specification of additional categories of legal, relational, and informational resources in conceptualizing the contribution of cooperative relationships to marketing strategy.

In empirical contexts emphasizing resource exchange, researchers have routinely reduced the categorization to designations such as technical versus nontechnical (Chan, Kensinger, Keown, & Martin, 1997), marketing versus research (Anand & Khanna, 2000), and technological versus marketing (Das, Sen, & Sengupta, 1998). However, each of these resource categories tends to describe the actual resource and not necessarily the resource or alliance's potential contribution to the firm in relation to its competitive environment. For example, the high technology firm Oerlikon describes the resources it contributes to its alliance with the Red Bull F1 racing team as "immediate access to around 1,500 scientists and engineers who develop innovations of tomorrow" (Oerlikon, 2007). While this undoubtedly describes a technology resource, the potential for this resource to influence the Red Bull team's survival is markedly different from the magnitude of impact such a resource might have on another promotion-based enterprise's survival, such as a traveling figure skating exhibition. Technology innovation serves as a major basis of competition in the environment of a Formula One team, while technology

resources would most likely be peripheral to an ice show's battle for competitive position in the marketplace.

Even within specific industry sectors, such as Formula One racing, resources can be heterogeneous in both their distribution and potential contribution to organizational competition. In F1, resources are heterogeneously distributed among enterprises based largely on a team's ability to access needed resources through their alliances with sponsoring firms. Yet certain alliance resources appear to offer a more direct contribution to a team's environmental competition. This can be seen anecdotally by the descriptions of two different alliances by managers of the Renault F1 Team. In the case of their partnership with ING, the financial services firm, the team manager simply stated that "ING is a brand that fits perfectly with the Renault F1 Team's image. Both companies are dynamic organizations seeking to enhance their global brand awareness" ("ING confirms," 2006). Whereas, when characterizing their team's alliance with 3D Systems, a Renault team manager was much more specific regarding the competitive contribution of their new partner's resources: "In order to improve the competitiveness of the Mild Seven Benetton Formula 1 team [now Renault] and maximize the return on investment of our new wind tunnel, we have recently moved to a double shift system in our Aerodynamic Department. We felt that increasing our reliance on 3D Systems' stereolithography technology was the most cost-effective solution that also maintained the high quality we require for our experimental work" ("3D Systems," 2000). These two quotes originating from the same F1 team imply differences in the direct competitive contribution of various alliance resources.

In their empirical examination of the deployment of firm resources, Slotegraaf et al. (2003) moved closer to a contribution-based perspective when specifying the differential effectiveness of various resources, but their delineation as financial, technological, and marketing resources remained descriptive of the resource itself and not necessarily its ultimate utilization. Brush et al. (2001, p. 67) tackled the issue of resource distinction by proposing that firm resources be “characterized by their application to the productive process, ranging from utilitarian to instrumental.” Under their classification, utilitarian resources were applied directly to production, while instrumental resources were utilized in a more flexible fashion to gain access to other resources. Meanwhile, other researchers have approached resource application by characterizing the resource exchange within an alliance relationship based on a comparison of each partners’ industry or operational context. This perspective is based on complementarity (Chung, Singh, & Lee, 2000; Sarkar, Echambadi, Cavusgil et al., 2001), or strategic relatedness (Tsai, 2000), and implies not only that resources are heterogeneously distributed across firms and industries, but also encompasses the former idea that the resources retain a strategic dimension relating to their potential utilization. By categorizing resources based on their potential strategic contribution to an enterprise, some consideration is thereby given to the surrounding competitive and institutional context.

With the central concern of this study being the mortality of promotional enterprises, the resources accessed by organizations through strategic alliances in this investigation are classified by their potential role in the functioning of such an enterprise. Therefore, the complementarity between alliance partners is adopted as the appropriate basis for delineating diverse resources accessed through an enterprise’s collection of

interorganizational relationships. Sarkar, Echambadli, Cavusgil, et al. (2001, p. 360) conceptualize resource complementarity within an alliance as a symmetry consisting of “unique and valuable resources available to achieve strategic objectives,” and thus enhance “competitive viability.” This consideration of competitiveness implies a proper emphasis on the institutional context of resource utilization, therein suggesting that certain resources may be more or less relevant to an enterprise’s survival based on the competition faced in a specific environment. To that end, three resource distinctions are proposed within this study, all of which are hypothesized to be negatively related to a promoting enterprise’s dissolution in varying magnitudes depending on the complementarity to the institutional context. In other words, the better an acquired resource fits the competitive context, the more likely that resource contributes to enterprise survival.

#### **3.3.3.1.1 Exchange of Performance-based Resources**

The first resource designation, labeled as performance-based, relies directly on the complementarity within an alliance from the competitive perspective of the promoting enterprise. In the examples given in the previous section, the Red Bull and Renault F1 racing teams were the promoting enterprises that aligned with the promotion-seeking firms Oerlikon, ING, and 3D Systems. Both Oerlikon’s and 3D Systems’ resources as high technology firms were implied in the quotes to complement the teams’ performance in their competitive environment. Accessing complementary resources to enhance performance is a foundation of alliance formation (Chung et al., 2000; Das & Teng, 2000). Yet, organizational performance remains decisively interwoven with competition

among rivals (Hannan & Freeman, 1977; Porter, 1991). Thus, an alliance partner that shares an industry with, or operates in an industry strongly related to that of the focal enterprise, such as high technology and Formula One racing, is likely to be better equipped to offer strategic resources to combat rivals by directly impacting enterprise performance (Varadarajan & Cunningham, 1995).

In practice, resources relating directly to the production process have been found to be more salient to entrepreneurs leading new ventures, who tend to seek out such resources through interorganizational partnerships in congruent industries (Bergmann Lichtenstein & Brush, 2001). As a result, resources exchanged within such congruent alliances are expected to directly influence an enterprise's performance in head-to-head competition and are hypothesized to facilitate survival.

H2: An enterprise's access to performance-based resources is negatively related to the hazard of dissolution.

### **3.3.3.1.2 Exchange of Financial Resources**

Financial or monetary resources represent the most ubiquitous designation of firm resource categorizations (e.g. Barney, 1995; Grant, 1991; Morgan & Hunt, 1999), which is less than surprising given their versatility. Financial resources possess not only an intrinsic transformative nature, but can also symbolize the ultimate aim of an enterprise to many individuals, that being to increase financial wealth or basically, "make money." Indeed, this condition is so vital to an entrepreneurial enterprise that it entails one of the two essential tests of a viable business model, namely the numbers qualification (versus the narrative test) (Magretta, 2002).

Beyond simply creating monetary wealth, financial resources provide an organization with flexibility because their quality of liquidity enables these resources to be quickly exchanged for another resource deemed at the time to be vital to the enterprise. Yet, Barney points out financial resources are often not rare and are therefore unlikely to solely generate a sustainable competitive advantage (1991). While accessing financial resources remains imperative to entrepreneurial survival, some research has shown that in the early stages of enterprise development, financial resources, though relevant, are not as salient to the entrepreneur as those resources relating directly to performance (Bergmann Lichtenstein & Brush, 2001; Brush et al., 2001).

This assertion aligns with the organizational learning perspective that suggests entrepreneurial enterprises can compensate for their liability of newness by gaining relevant industry knowledge through alliances with established firms (as suggested in H1) (Freeman et al., 1983; Hamel, 1991). However, as their own competitive experience accumulates over time, the necessity of accessing performance-based resources versus the flexibility of financial-based resources may diminish (Bergmann Lichtenstein & Brush, 2001). Therefore, financial resources are hypothesized to contribute to an enterprise's continued existence, but not be as vital as performance-based resources early in the organization's life. Instead, alliances offering financial resources are hypothesized to increase in importance as an enterprise's experience accumulates and resource liquidity is more useful.

H3: (a) An enterprise's access to financial resources is negatively related to the hazard of dissolution, but initially at a lower intensity level than performance-

based resources. (b) However, as an enterprise ages, the negative relationship between dissolution and financial resources intensifies.

### **3.3.3.1.3 Exchange of Operational Resources**

Resources contributing to the ongoing operation of an enterprise, but not strictly monetary or straightforwardly influencing the enterprise's direct competition with rivals are labeled here as operational resources. This category can be conceptualized as analogous to commodity goods and services necessary for the continued functioning of an organization and instrumental to accessing further resources (Brush et al., 2001). For most enterprises such resources might include office equipment, internet access, certain basic employee services, and other administrative capabilities. This type of resource is typically not the primary basis for competition within an industry and tends to be easier to access given their near universal utilization. As a result, operational resources are not particularly rare, and similar to financial resources, are therefore unlikely to be a source of competitive advantage (Barney, 1991). However, these resources also lack the flexibility and liquidity of pure financial resources. Hence, operational resources are considered to contribute to organizational survival, but be less impactful than either performance or financial-based resources in predicting the dissolution of entrepreneurial enterprises.

H4: An enterprise's access to operational resources is negatively related to the hazard of dissolution, but at a lower intensity than performance or financial resources.

### **3.3.3.2 Institutional Dynamics**

Promotion-based interorganizational alliances represent a primary means by which the promotional service enterprises within this study access resources. While some authors have viewed alliances as circumventing market exchanges (Baker et al., 1998), a perspective of the market as a “social institution which facilitates exchange” (Coase, 1988, p. 8) implies that in certain context, such as business-to-business services, alliances act within the market as the institutional mechanism by which interorganizational exchange takes place. In these cases, the market takes on a coordinating function that facilitates alliance formation for the efficient delivery of such services. For example, popular spectator sports attract large audiences that are often desirable targets for promotional messages. As a means of maintaining their operations, sports teams and leagues have developed the institutional mechanism of commercial sponsorship to enable the formation of promotional alliances with corporations seeking to reach their audience. The basic aim of these alliances is to meet the sponsoring corporations’ commercial objectives through an exchange of the team’s promotional service for certain resources provided by the sponsoring firms which the teams deem necessary for competition within their sporting industry (Farrelly & Quester, 2005a; Meenaghan, 1983). With the existence of numerous sports teams and leagues, and a multitude of firms seeking to communicate their message to an audience attracted to sports, the commercial sponsorship market acts as the means of coordinating these alliance relationships.



Over time, a market becomes institutionalized through phases of emergence, stability, and potentially crisis (Fligstein, 1996). As the market develops, dynamic forces such as regulatory change and the evolution of the norms of exchange can impact the composition, longevity, and even the likelihood of alliance formation in a particular institutional context (Baker et al., 1998). In the case of commercial sponsorship in spectator sports, a relaxing of the regulations by the institutional body (the league or governing organization) regarding the permissibility of corporate logos on player uniforms would open up another promotional platform for the teams to leverage as a resource in corporate alliance exchange relationships. Conversely, the rise of anti-tobacco legislation around the globe led Formula One's regulatory body to ban its teams from visible tobacco promotion at institutional events after the 2006 season. This institutional regulation was enacted despite the monetary resource contribution of over US\$250 million by tobacco brands annually to F1's teams (Sylv, 2006). Certainly, this type of institutional change would have considerable impact on the resources accessed by these promotion-based teams via their alliances with sponsoring firms.

In their analysis of the Hollywood film industry, Miller and Shamsie (1996) demonstrated how the dynamic institutional environment of the mid-twentieth century impacted the fluctuating value of different resources. They suggested that property-based resources were more influential in stable periods, while knowledge-based resources were desirable in times of change. A similar hypothesis based on a dramatic change in institutional support is proposed here, where a definitive shift in the control of financial resources flowing from the regulatory institution created two distinct eras. In an earlier era (pre-1996 in this case), entrepreneurial enterprises received a substantial flow of

financial resources directly from the regulatory governing body to help sustain operations. When a new institutional governing agreement was imposed between the regulatory body and the participating enterprises, a new era was introduced in which enterprises lost direct control over this revenue stream. In other words, the promoting enterprises in this study (F1 teams) could no longer rely on the consistency of financial resource allocation from the governing body based solely on their institutional (F1) involvement. As a result, enterprises attempting to survive within this institution are hypothesized to have become more reliant on promotional alliances for access to the financial resources necessary for survival. Conceptually, this dynamic is represented by an interaction of the institutional era and the number of alliances based on financial resource exchange [ $Era_{\text{historic}} * Resources_{\text{financial}}$ ], where survival is expected to depend increasing on alliances offering financial resources when institutional support wanes. Explicitly, the following hypothesis is offered in relation to the dynamics of institutional regulation and governance.

H5: Increased uncertainty in the institutional provision for a necessary resource will intensify the survival dependence on external alliances as a means of accessing that particular resource.

### **3.3.3.3 Promoter [Team] Embeddedness in Alliance Network**

Business networks are characterized as “a set of two or more connected business relationships in which each exchange relation is between business firms that are conceptualized as collective actors” (Anderson et al., 1994, p. 2). Labeling a group, or portfolio, of sponsoring firms connected through promotional service alliances as

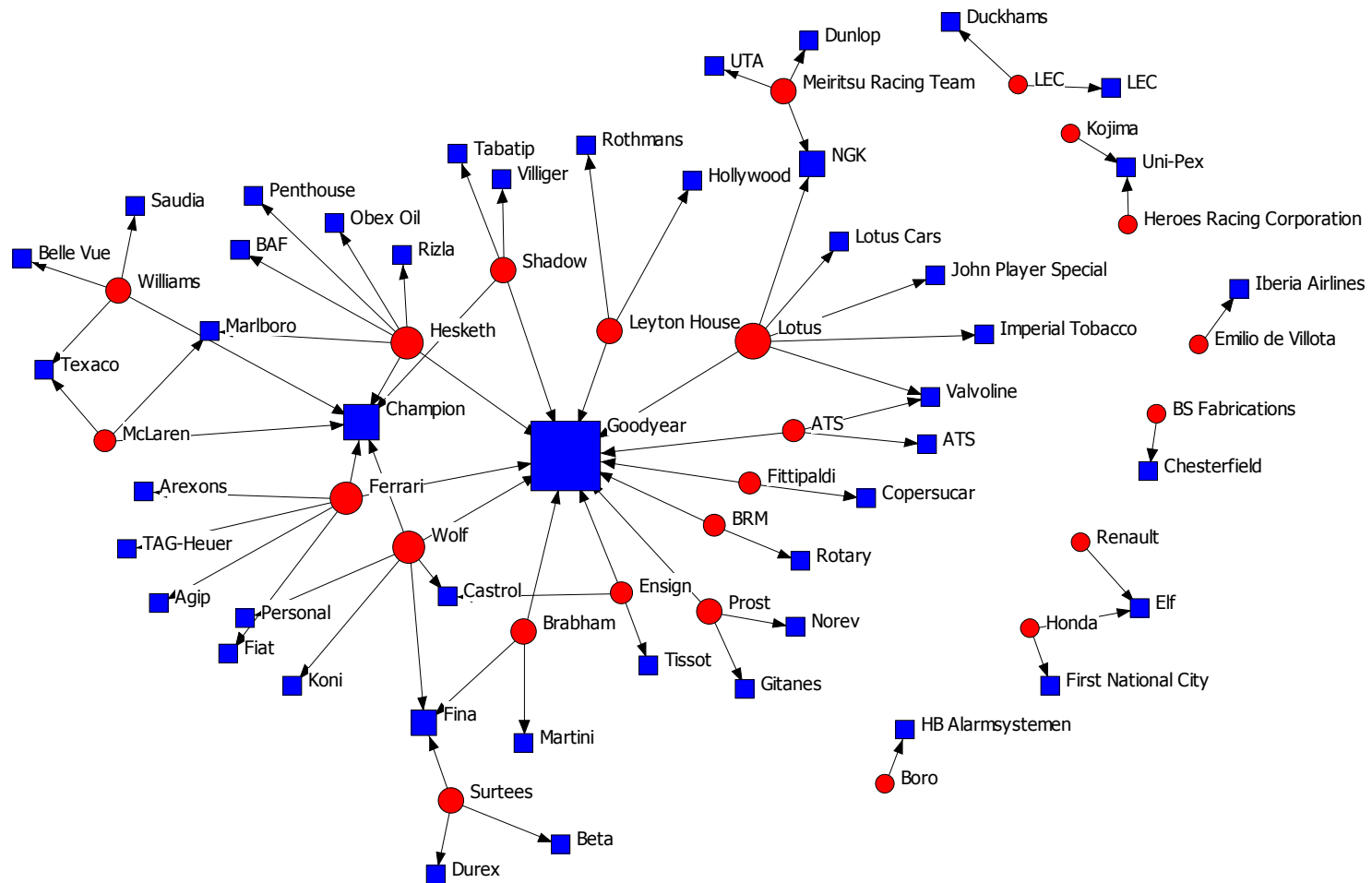
“collective actors” is contingent upon setting the network boundary as engagement in a particular institutionalized resource exchange (promotional service) (Rowley, 1997). For example, a collection of firms engaged in sponsorship alliances with motor racing teams represents a promotional network centered upon the sponsorship relationship as the focal resource exchange within the regulatory institution of motor racing (Cornwell & Maignan, 1998). In such an example, each corporate actor in the network has been granted the various promotional rights and services, and hospitality privileges of an official team partner in exchange for financial resources and often technological and logistical expertise that facilitate the performance and continued operation of the team. If sponsorship of a racing team is considered as analogous to membership in a club, a two-mode affiliation network has conceivably formed where each member (sponsoring firm) of the business network shares at least one affiliation with a focal set of actors (racing teams). A graphical representation of the business network involving sponsoring firms and promoting teams in F1 in a particular sample year is presented in Figure 3.1

The structural embeddedness of an actor in a business network refers to the actor’s position in the network architecture of exchange relationships and the connectedness of such a position (Uzzi, 1997). More embedded actors are generally more connected within the defined network. The concept of embeddedness in an interfirm network implies both constraints and opportunities (Gulati, Nohria, & Zaheer, 2000), and each can operate to encourage survival of an entrepreneurial enterprise to some degree. Constraints manifest themselves as group norms, expectations, or contractual obligations, which might be viewed as barriers to exit in addition to the social ties and status implications inherent in network positions that would be forfeited upon

enterprise dissolution. Stuart et al. (1999) conceptualize a young enterprise's network position as consisting of a collection of status-oriented organizational endorsements, which they demonstrate are influential in the enterprise's ability to access additional resources. From this perspective, network embeddedness shifts to an opportunity where a web of alliances is perceived by potential partners as a signal of the enterprise's viability.

Theoretically, a signaling effect of network embeddedness, while important to note, is most likely cursory to the opportunities of information flow and organizational learning arising from a dense network position. Sarkar, Echambadi, and Harrison (2001) show the positive effect on market performance of an enterprise's alliance proactiveness. This effect is magnified for smaller organizations and demonstrates Gulati's (1999) argument that network position itself is a firm resource because it creates an avenue for information flow and a means for organizational learning in regards to alliance formation and utilization. Although Uzzi (1997) points out a potential threshold to the efficiencies of embeddedness and the hazards of insulation, the weight of the theory regarding the magnitude of network embeddedness leans toward a negative relationship with organization dissolution.

H6: The network embeddedness of an entrepreneurial enterprise is negatively related to the hazard of dissolution.



**Figure 3.1: Formula One 2-mode business network of promoting teams (circles) and sponsoring firms (squares) in 1977. Node size indicates the magnitude of embeddedness as measured by betweenness centrality.**

### **3.3.4 Promoter [Team] Characteristics**

Thus far in investigating the survival of promotion-based entrepreneurial enterprises, consideration has been given to the experience of their alliance partners and several characteristics of the enterprises' alliance relationships. Yet when reflecting on organization survival, certainly some factors of the enterprise itself might be considered paramount to its ultimate fate (Audretsch & Mahmood, 1995). One of these factors is the enterprise's own experience, or age. Age dependence in regard to organizational survival has been documented in the literature as a liability of newness (Freeman et al., 1983). Not surprisingly, the older an enterprise becomes, thereby enabling it to learn from experience (Levitt & March, 1988), the less likely the enterprise is to dissolve. Through the utilization of a time-based hazard model, age dependence is captured within the event history methodology employed in this study's analysis, which is discussed in the method and variable sections below (3.4 and 3.5.1 respectively). First however, one other important facet of the enterprise itself must be considered, resulting in the last hypothesis.

#### **3.3.4.1 Performance**

The ability of an enterprise to compete for scarce resources versus the rivals in its environment is a basic test of survival in organizational ecology (Hannan & Freeman, 1977). Competition may come in the form of sales, alliance formations, certifications, ratings, distribution, or even head-to-head product tests. For both new and established ventures, performance in such competitions weighs heavily in the process of legitimization, the formation of status hierarchies, and the building of reputation (Rao, 1994). In this way, performance may impact access to resources both directly and

indirectly. Superior sales performance, ratings, and achievement in head-to-head competitions directly generate financial and organizational resources, which can also be employed to acquire further resources. Additionally, *ceteris paribus*, potential interorganizational alliance partners theoretically desire to align with prestigious others (Stuart, 1998), indicating that generating prestige through superior performance might create additional alliance opportunities to access even further resources. In these ways, enterprise performance seems highly probable to impact survival.

H7: The competitive performance of an entrepreneurial enterprise is negatively related to the hazard of dissolution.

### **3.4 Methodology: Event History Analysis**

The event history methodology has gained traction in several disciplines as a means of analyzing longitudinal data concerned with an event's occurrence within a population. In clinical studies, the time until the onset of a condition, relapse, and recovery, and the individual or environmental factors that affect such durations are all of particular interest to researchers (Willett & Singer, 1993). In these cases, the event may be smoking and scientists are interested in different cessation methods. As a result, they want to track the time until relapse for former smokers who quit by employing various cessation techniques, while controlling for other relevant characteristics. However, in samples suitable for such an investigation, some subjects may not have experienced the focal event (relapse) and are therefore, right-censored in the dataset. Removing these cases or assigning the occurrence of the event to the last data collection period will negatively bias the estimate because some sample subjects continue to avoid relapse.

Event history analysis, also commonly referred to as survival analysis, was developed to properly analyze such scenarios (Cox, 1972).

Given the current research question regarding promotion-based enterprise survival, the event history method offers an appropriate technique for approaching such a longitudinal question. To proceed, several considerations are necessary to evaluate the suitability of this methodological tool. First, change is being assessed over time, which can be either continuous or discrete depending on the event. Since the institutional context of this investigation (Formula 1 motor racing) operates in yearly seasons, time in this investigation is designated at discrete intervals based on annual enterprise survival.

Second, the possible changes in condition of the subjects conceptually represent the dependent variable and must be delineated. This can also be thought of as the occurrence of an event. Analogous to individual patient survival in clinical research, the potential outcome conditions in any given time period of the enterprises studied here are only two-fold: operational (alive) or nonoperational (dead). While theoretically this may be more difficult to discern when applied to organizations (Freeman et al., 1983), the context here allows for a determination based on whether an enterprise (team) competed in a public competition (motorsports race) in a particular season or not<sup>4</sup>. A binary survival variable acts as the actual dependant variable and the hazard rate specifies the likelihood of a change in condition occurring at a certain time, given the subject's existence to that point.

Third, the hazard function plays a critical role in modeling event history data and is based on the chronological shape of the hazard rate. Parametric models assume a

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<sup>4</sup> This does not imply that a team scored points in a season; only that the enterprise fielded a race car in an F1-sanctioned race during the season.



specified shape of the hazard function and the effect of covariates, while nonparametric models make no such assumptions. However, nonparametric models are very limited in their ability to consider multiple groups, identified by the covariates, and lack multivariate controls. Fortunately, semiparametric models have been developed to relax the assumption of a predetermined shape of the hazard function while still maintaining multivariate controls. Yet, proportionality in the hazard rates between groups must be assumed in semiparametric models. Since the shape of the hazard function is typically unknown prior to analysis but several independent variables are often hypothesized to affect the function, semiparametric models have become popular in event history analysis and will be employed in this study. Finally, the existence of time dependant covariates must be considered so as to specify an appropriate model that also allows for time dependence variation in the independent variables. For example, predictor variables such as access to specific resources and alliance network embeddedness will change between time periods and these changes are thought to influence the enterprise's propensity to survive (Audretsch & Mahmood, 1995).

Event history analysis has been utilized by several organizational researchers to study a variety of outcome events. Broadly, these studies can be categorized as either tracking the survival of the organization itself, as is done in this study, or moving the level of event analysis to that of organizational relationships. Research in the latter stream has examined the factors influencing the time until formal connections arise between new and existing business units (Tsai, 2000), instability in joint venture arrangements (Blodgett, 1992; Park & Russo, 1996), and the dynamics of advertising agency – client relationships (Baker et al., 1998). Meanwhile, event history work

focusing on organizational survival has tended to focus on one of three covariate levels: the institutional environment (Audretsch, 1991), the firm itself (Audretsch & Mahmood, 1995; Freeman et al., 1983; Rao, 1994), or characteristics of its founder (Brüderl et al., 1992). Typically, these studies have also incorporated control variables from one, but usually not both, of the other two aforementioned levels.

### **3.5 Empirical Data**

Adopting Hannan and Freeman's (1977) ecological systems approach to appropriately defining the population of organizations to be studied begins by defining the organizational form and then the system boundary. This study defines the organization as a motor racing team competing within the system boundary of Formula One (F1). By setting the system boundary based on a particular industry, cross-industry discrepancies are negated and the variance between enterprises and their particular strategies for navigating a common institutional environment are emphasized (Miller & Shamsie, 1996; Rao, 1994).

In lamenting the lack of empirical organizational survival research, Audretsch and Mahmood (1995) identified three measurement issues that have traditionally impeded progress: 1) the lack of longitudinal data compilations with discrete startup and closure information; 2) the challenge of determining observations in close enough time intervals on a consistent basis (i.e. census data tends to be too chronologically sparse); and, 3) data must be available at the organizational level, as opposed to aggregated at the industry level. F1 racing teams provide several research advantages in their representation of entrepreneurial enterprises that enable these challenges to be overcome.

First, teams have a discrete point of market entry and exit which is well documented and defined by their race participation. Unlike North American sports leagues that operate as closed leagues, the institution of F1 allows for an annual flow of new team entrants and former team dissolutions<sup>5</sup>. Second, each team operates as an independent organization that must harness and utilize resources to produce a product that directly competes against the other products in the industry (Collings, 2004). Motor racing encompasses a rigorous testing environment for both automotive and technological product development, thereby encouraging a diverse resource exchange inclusive of both property and knowledge-based resources that flow between the teams and their sponsoring firms (Jenkins & Floyd, 2001). Third, each F1 team must produce their core product, the race car, within the regulations set forth by the governing body, the Fédération Internationale de l'Automobile (FIA), similar to how an entrepreneurial construction enterprise would be subject to building codes or a new food producer must comply with governmental food regulations. Then in F1, organizational performance in competition is captured objectively by race results. Finally, the interorganizational alliances each team establishes to access resources are publicly touted and praised for their contribution to the teams' continued survival and competitive success (Hotten, 2000). One team alliance manager described this by stating "our commercial proposition is founded on the principle of community and the clear expectation that our partners will enjoy being with each other and working together for their mutual benefit, as well as ours" (Sylt & Reid, 2008b).

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<sup>5</sup> Although regulations exist to theoretically restrict the number of teams at any one point, these restrictions are typically modified when a new entrant satisfactorily demonstrates to the Fédération Internationale de l'Automobile (FIA), the governing body for F1, that the venture has secured adequate resources to compete.

As a result of F1's historical worldwide popularity and the characteristics described above, data on F1 team existence and alliances with sponsoring firms was feasible to compile for the period from 1950 to 2007<sup>6</sup>, which represents the historical life of the organized institution of Formula One racing. The foundation of the data was acquired from the online database ChicaneF1, which is widely recognized to be the most comprehensive source of historical team and sponsoring firm alliance statistics available (Davies & Lawrence, n.d.). Next, the data was cross-checked with recent data the author obtained from an internal F1 team source to verify reliability (*Black book Formula One*, 2007). Further, historical F1 texts containing pictures of various teams' race cars were consulted in an attempt to match visible corporate partner logos on the vehicles with alliances compiled in the data (Donaldson, 2002; Schlegelmilch & Lehbrink, 2004). These cross-verification efforts supported the general reliability of the ChicaneF1 team-sponsor data and served to clear up ambiguities where present<sup>7</sup>. Corresponding historical team performance data was compiled via the official Formula One website (Formula One Administration Ltd., n.d.). The resulting data consisted of 124 separate F1 team enterprises<sup>8</sup>, 776 team years<sup>9</sup>, 1,077 sponsoring firms, and 5,054 team-sponsor alliance years.

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<sup>6</sup> Sponsoring firm alliance data begins in 1967 as promotional corporate alliances prior to that time were disallowed by F1 regulations.

<sup>7</sup> While such ambiguities were few and far between considering the breadth of the dataset, a few situations arose such as team names in the ChicaneF1 dataset that needed to be matched with variations in names in the Formula 1 results database, or listings of teams in one dataset and not the other because of a lack of points scored in a particular season or a lack of any sponsoring firm alliances for a given team in a particular season. Each of these data cleaning issues was addressed individually by the author in collaboration with another researcher in order to remove the possibility of sole judgment bias.

<sup>8</sup> In addressing team sales (represented by name changes), this collection of 124 team enterprises recognizes the organization as continuing to exist as a consistent enterprise when the name changes. In other words, when the Tyrell F1 team became BAR in 1999 and then later became Honda F1 in 2006, the enterprise is counted as one organization in this reporting of 124 team enterprises. This data treatment is based on the fact that most team sales (name changes), while involving some organizational modifications as would be expected, do not result in complete staff and enterprise changes and commercial alliances and

### 3.5.1 Variables

In this study of promotion-based enterprise survival, the dependent variable is the hazard of dissolution of the enterprise in each given year of existence (Audretsch & Mahmood, 1995). The dataset is both cross-sectional and longitudinal with annual intervals. Essentially, the event history method generates an age-based hazard function for the sample of enterprises that represents the chronological probability of team failure, given that the team has not yet dissolved. The hazard probability for a team at a given age (team years of experience) is equal to the proportion of the teams at risk at that level of experience which incur dissolution (Willett & Singer, 1993). The hazard function accounts for both censored and non-censored cases in computing probabilities, which is vital to the analysis given that enterprises still in existence have yet to experience dissolution and are therefore right-censored in the dataset. The probabilities of dissolution, or hazard rates, are then predicted by the independent variables that have been grouped here as sponsoring firm, alliance relationship, and promoting team characteristics. Table A.3 presents basic descriptive statistics for each variable.

Experience in the F1 context was the characteristic of the sponsoring firms hypothesized to influence promoting team dissolution. This variable (SprExp) was represented by a summation of the years of experience as a sponsoring firm in Formula 1 for all partners in a team's alliance network. Therefore, if a team was engaged in five promotional alliance relationships, and each of their five sponsoring firms had been

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even previous season team results (for the purposes of grid and pit positioning) are typically transferred as a condition of the sale.

<sup>9</sup> Of the total 776 team years, 576 occurred after 1967 when the institutional regulations first permitted the promotion of corporate alliances. This latter timeframe serves as the context of the investigation here.

involved in F1 in ten previous years, whether with that team or another team, the team would claim 50 years of sponsoring firm experience in their alliance network.

The characteristics of the alliance relationships involved five hypotheses. The first three addressed the type of resource exchange between alliance partners based on the complementarity of the sponsoring firm's industry<sup>10</sup> to the promoting team's competitive environment (Sarkar, Echambadi, Cavusgil et al., 2001). These designations were undertaken by the independent classification of two researchers after extensive review of the press announcements of over a hundred alliances, an examination of the firm resources literature referenced in the hypotheses outlined above, and the co-development and agreement on a resource classification framework that defined three contribution-based categories: performance (SprPer), financial (SprFin), and operational (SprOps). The inter-coder reliability was 89 percent, and conflicts were subsequently reconciled through discussion and further clarification of the classification descriptions, as well as a review of alliance announcements within the relevant industry under evaluation.

To test the second part of the hypothesis relating to alliances based on financial resources (H3b), a team experience (TmExp) variable is compiled that reflects the number of years a team has competed in F1 entering the season of record. This variable is interacted with SprFin to determine if, as hypothesized, the number of financial alliances increases in importance for enterprise survival as the team gains experience.

The hypothesis relating to institutional dynamics was tested through a binary variable (Era1996) designating two distinct eras defined by a shift in the institutional

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<sup>10</sup> Given the historical nature of the dataset, a primary industry classification for the sponsoring firm was only feasible for 91.75 percent of the team-sponsor alliance years in the raw dataset. For example, even after consulting various sources, no solid determination could be made as to what precise sponsoring firm "LBT" referenced in relationship to the 1982 March racing team. As a result, the analysis and data descriptions are inclusive of solely the sponsoring firm data with verifiable industry designations.

environment. F1 racing operates under an agreement, called the Concorde Agreement, between the governing body (FIA) and the competing teams. Following the 1995 season, the FIA, which asserts ownership over the commercial rights to the institution of F1 (primarily global television and media rights), transferred those commercial rights from the association of competing teams to a separate company, Formula One Promotions and Administration, which previously had leased the rights from the team association. Essentially, this move relinquished the team's direct financial stake in the commercialization of F1 (Collings, 2004). As a result, the teams lost control over a considerable financial resource, thereby increasing their uncertainty in the institutional support for this resource. To capture these separate eras, a binary variable distinguishes between the past era (pre-1996) and the modern era (1996 – 2007) (Miller & Shamsie, 1996), and the institutional dynamics hypothesis predicts that teams will become more aggressive in pursuing financial resources via their own alliances in the modern era, given the teams' increased uncertainty regarding institutional financial support.

Lastly within the grouping of alliance relationship hypotheses, enterprise embeddedness in the network of F1 team-sponsor alliances takes the form of betweenness centrality (Btwn) for 2-mode data as calculated in UCInet 6 (Borgatti, Everett, & Freeman, 2002). Betweenness centrality measures the proportion of all paths between pairs of other network members that include the specified team (de Nooy, Mrvar, and Batagelj, 2005). A high measure of betweenness centrality means that a team is literally situated between many of the other actors in the network of F1 sponsorship and therefore reflects both greater embeddedness (Rowley, 1997) and the brokerage capabilities of a team's network position. The betweenness centrality of a team appropriately signifies its

relative control over the resources exchanged via the network's interorganizational alliances, as well as its potential for communication and learning within the broader institutional network (Freeman, 1979).

The final hypothesis addresses a facet of the promoting enterprise itself. The performance of the team is represented both recently and historically. Recent success is operationalized through a rolling average of the points earned by a team over the previous five years (Av5yrPts). Historical success is derived by an aggregation of the drivers' championships (CumDrv) won by a team up until a given season. Drivers' championship was chosen to represent historical success because the drivers' championship, as opposed to the team championship, has traditionally been celebrated to a greater degree by the media, fans, and even teams. Though the institution of F1 officially originated in 1950 with the awarding of a drivers' championship, a team championship did not exist until 1958. Further evidence of the ongoing priority given to the drivers' championship is seen in the numbering of each team's cars for a season, which is determined by their top driver's finish in the previous season's drivers' championship. Commenting on the importance of earning the number one (reserved for the drivers' champion) for his team's car after barely missing it the previous season despite winning the team championship, Ferrari President Luca di Montezemolo stated that "he'll [current drivers' champion] have the number 1 on his car next season, but he can rest assured of one thing: we'll be doing our very best to put it back on a Ferrari" (Elizalde, 2008). For these reasons, the drivers' championship is designated as a better historical indicator of a team's achieved performance within this particular institutional context.



Finally, the number of times in which a team has been sold is included as an additional covariate relating to the characteristics of a team. This variable is not associated with a specific hypothesis because no clear direction is apparent in the limited literature on the topic. Freeman et al. (1983) proposes absorption into a larger conglomerate as the most likely counter to dissolution when contemplating the potential fates apart from status-quo survival for entrepreneurial organizations. In doing so, they correctly point out that unlike ultimate dissolution, the merger or acquisition of an enterprise can occur for a multitude of reasons. From a resource dependency perspective, these rationales might include reducing reliance on external resource providers, decreasing competitive interdependence, and diversifying to lessen the intensity of any single dependency (Pfeffer, 1972).

However, absorption or merger only considers an enterprise joining a larger organization, but in some cases, an enterprise such as an F1 racing team might be spun out of a larger organization. Therefore, the sale of an enterprise may indicate conflicting signals regarding resource access. Either greater resources are available with the accompanying constraints of a larger organization's hierarchy, or conversely, less hierarchical resources can be accessed but a greater operational freedom is enjoyed (Ahuja, 2000; Gargiulo & Benassi, 2000). Yet despite the ambiguous range of possibilities, it seems intuitive that changes in ownership would influence enterprise survival so it is controlled for in this study. Changes in the majority ownership of each enterprise are designated by a running total that specifies the number of times in which the team's name changed up until a given year. While it is certainly feasible that a team could be sold and not change its name, if anecdotal evidence from the last decade is a

reliable indicator, this suggestion would describe a rare deviation from what seems to be a steadfast institutional norm.

Following the descriptive statistics in Table A.3 is the correlation matrix of Table A.4. Unsurprisingly given the large sample size, almost all correlations are statistically significant. However, when examining the variance inflation factors (VIF), no variable reaches a level greater than ten, which is typically considered the threshold value for serious multi-collinearity (Hair et al., 1995; Marquardt, 1970; O'Brien, 2007)<sup>11</sup>.

Nevertheless, several reduced models and alternate variable specifications were analyzed in addition to the primary model and these steps are discussed in the results section below where applied.

**[TABLE A.3]**

**[TABLE A.4]**

### 3.6 Results

Cox proportional hazards regression is utilized to fit the model to the event history data in this study (Cox, 1972). Cox regression is semi-parametric and therefore makes no assumptions of the shape of a baseline hazard function, which is the probability that dissolution will occur after any given duration. Although hazard (dissolution) rates are assumed to be proportional between groups (signified by levels of the covariates)<sup>12</sup>, this technique is preferred because of its ability to model both time dependant and

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<sup>11</sup> VIF statistics ranged from 1.074 to 7.349 (CumDrv). Even though VIF values less than 10 indicated inconsequential collinearity (Hair et al., 1995; O'Brien, 2007), several alternate models were analyzed that isolated, excluded, and transformed variables that were correlated above 0.70 (Van den Poel & Lariviere, 2004). Coefficient values and model significance did not change substantially between models compared to the primary specification. Therefore, estimates within the primary model were judged to be generally robust to collinearity concerns. Models isolating a single independent variable otherwise correlated with other predictors are discussed where appropriate in the hypotheses results (H1 and H6).

<sup>12</sup> This proportionality assumption is relaxed when any independent variable is interacted with time, such as the analysis of eras (i.e. the era1996 variable in this study).

continuous covariates, such as an F1 team's points scored. Across multiple seasons, a team will score different quantities of points based on race results. Therefore, the magnitude of a points variable will vary by season (time). Similarly, the variables indicating a team's number of performance, financial, and operational sponsors, as well as the network embeddedness and cumulative drivers' championships will vary from season to season. Through the use of a counter variable in units of time, Cox regression assumes the rate of dissolution increases with time, depending on the model's independent variables (Tsai, 2000).

The empirical model proposed in this study predicts the dissolution of enterprises that rely on exchanging promotional resources for either performance, financial, or operational resources. Comprehensively, the model performed at a highly significant level when compared to a constant-only model (-2LL ratio test,  $X^2_{13} = 79.4$ ,  $p < .0001$ ). This indicates that one or more of the model's hypothesized variables significantly predict the hazard of dissolution for promotional enterprises. The primary model's estimated parameters and applicable statistics are displayed as Model 1 in Table A.5.

**[TABLE A.5]**

The first hypothesis predicted that the aggregated experience of a team's corporate alliance network in the competitive context of F1 motor racing would be negatively related to the dissolution of the team. This effect was not substantiated in the primary model. Although significant in the hypothesized direction in a model isolating experience without any other predictors ( $\beta = -.027$ ,  $p < .01$ ), the apparent effect of the aligned partners' experience was seemingly nullified by other correlated variables in the

more complete model. Several alternative measurements of the experience within a team's corporate alliance network, such as the average experience per sponsoring firm and the specific experience with the team instead of the broader institution of F1 motor racing, were also substituted within the model to reduce collinearity. However, each variable displayed a similar pattern of significance in isolation but non-significance in the more complete model specification. Transformations of correlated variables (SprPer, SprFin, SprOps), discussed in more detail later, also did not alter this pattern.

Hypothesis Two was the first of three hypotheses that examined the effects of alliances offering different types of resources to the promoting enterprise. As generally predicted in H2 and H3, access to both performance ( $\beta = -0.541$ ) and financial resources ( $\beta = -0.628$ ) negatively impacted enterprise dissolution to a significant degree ( $p < .05$ ). For each additional performance-based partner a team was aligned with, the team's odds of dissolution the following season reduced by almost 42 percent (or a factor of 0.582)<sup>13</sup>. For financial alliances, it was hypothesized that a negative relationship to team dissolution would exist initially at a less intense level than that of performance-based alliances (H3a), but would intensify as the team gained experience (H3b). While the odds of dissolution declined by over 46 percent when a financial alliance was added (thereby supporting the main effect of H3), the effect did not significantly change as the team aged. Also, according to the magnitude of the coefficients, the main effect of alliances based on financial resources actually appears to be slightly more influential to

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<sup>13</sup> In the Cox regression model, the anti-log of the variable's coefficient produces the hazard ratio, which is the dissolution rate for an enterprise with one more unit of the variable in comparison to the dissolution rate for another enterprise without that additional variable unit. As it concerns performance-based alliances, the anti-log of the estimated coefficient ( $e^{-0.541}$ ) produces a ratio of 0.582, which indicates that a one unit increase in performance-based alliances yields a 41.8% reduction in the odds of the team dissolving in the following season.

survival than that of performance-based alliances (-0.628 to -0.541). However, the impact of financial resources (H3a) must be interpreted in the context of a significant interaction effect with institutional era (H5).

Recall that a major change in the teams' control over institutional revenues (i.e. the global media contracts for F1 racing) occurred with a new governance agreement in 1996. As a result, it was hypothesized that this change in the institutional environment would make teams increasingly dependent for their survival on promotional alliances offering financial resources. The interaction of the dichotomous variable indicating the more recent era (i.e. uncertainty in institutional support via financial resources) and the variable quantifying a team's financial alliances did significantly predict team dissolution, but in the opposite direction hypothesized ( $\beta = 1.023$ ,  $p < .05$ ). Essentially, promotional alliances offering access to financial resources became less influential to a team's survival after the change in the institutional governing agreement in 1996. In fact, the magnitude of the interaction coefficient indicates that teams after 1995 increase their odds of dissolution in the subsequent year by over 48 percent with each additional financial alliance<sup>14</sup>. Upon closer examination, this counterintuitive reverse effect of financial alliances after 1995 may highlight a limitation of the study. Although the number of alliances offering access to different resources is quantified, the magnitude of the resources exchanged within each alliance is not known. Therefore it is possible that the disparity in the magnitude of resources exchanged within various financial alliances increased after 1995 so that certain alliances offered access to a greater quantity of

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<sup>14</sup> This calculation is based on the combined impact of the main financial alliance term and its interaction term. Specifically the coefficients are summed ( $-0.628 + 1.023 = 0.395$ ) and anti-logged to calculate the hazard ratio ( $e^{0.395} = 1.484$ ), which is the proportional hazard of dissolution for a team after 1995 with one more financial alliance compared to a team without that additional alliance.

financial resources than other alliances within the same category. If this was true after 1995, a team may have accessed US\$50 million annually from just one financial alliance, while other teams may have been dependent on five alliances providing US\$10 million each to access equivalent financial resources. This restriction to the data is acknowledged in the overview of limitations in Chapter Six. Also, a competing explanation of diminishing returns to the number of alliance relationships is explored further in the following discussion section.

The final category of resources accessed through promotional alliances was labeled as operational resources. These alliances were characterized as consisting of the exchange of commodity goods and services that were necessary for the continued functioning of the organization but not instrumental in an enterprise's performance versus the competition; nor were these alliances based solely on the flexibility of financial resources. Nevertheless, alliances offering access to operational resources were hypothesized to support enterprise survival, but at a lower intensity than other alliance designations (H4). The findings did not support a relationship between enterprise survival and operational alliances ( $\beta = 0.324$ ,  $p > .10$ ). Given that alliances offering either performance or financial resources were significant contributors to survival, operational resources do appear to have comparatively less affect on enterprise continuity.

The sixth hypothesis postulated that the network embeddedness of an entrepreneurial enterprise would be negatively related to the hazard of dissolution faced by the enterprise. This expectation was theoretically grounded in the conception of network embeddedness as both a collection of status-oriented organizational

endorsements (Stuart et al., 1999) and an avenue for information flow and organizational learning (Gulati, 1999). When analyzed within the primary empirical model, the measure of network betweenness that operationalized embeddedness was not significantly related to enterprise dissolution. However, like the measure of the experience of an enterprise's promotional partners (H1), network betweenness was a statistically significant negative predictor of dissolution when analyzed in isolation ( $\beta = -8.733$ ,  $p < .01$ ). This finding suggests that the model's multicollinearity may be an issue when analyzing this particular hypothesis. A second measure of network embeddedness, degree centrality, was subsequently substituted into the model, but results were similar. Analysis after transformations of several correlated variables (SprPer, SprFin, SprOps) revealed the same pattern. Conceptually, this implies that the benefits to survival of a network of organizational endorsements are captured within the other measures of alliance resource relationships.

The final hypothesis (H7) suggested that the competitive performance of the entrepreneurial enterprise would negatively impact its dissolution. In the study, performance was operationalized both in the short term (five-year rolling average of team points scored) and in the longer-term context of the institutional environment (cumulative drivers' championships). Both representations of enterprise performance were found to be significant deterrents to enterprise dissolution (Av5YrPts:  $\beta = -0.067$ ; CumDrv:  $\beta = -0.855$ ,  $p < .05$ ). Specifically, for each drivers' championship accumulated, the odds of dissolution reduced by 57.5 percent (or a factor of 0.425). Interestingly, the effect of points scored over the previous five seasons intensified in importance after the previously discussed institutional change in 1996 (interaction term significant at  $\alpha = .05$ ). Prior to

the change, each one-point rise in the five-year average reduced a team's odds of dissolution by just 6.5 percent. After the adoption of the new Concorde Agreement between the governing body (FIA) and competing F1 teams, a one point rise in the five-year average of team points scored reduced a team's odds of dissolution by almost 87 percent.<sup>15</sup> While the change in magnitude of the effect is surprising, the general finding as hypothesized is hardly unexpected and might be thought of as a control variable in this study. When conceptualized in this manner, the comprehensive findings across hypotheses indicate that alliances offering access to certain resources contribute to the survival of promotional enterprises even when controlling for the enterprises' competitive performance.

Finally, a control variable representing the sale of an enterprise was also included in the primary model. As previously discussed, this variable may also be considered in some cases as a substitution for the dependent variable of dissolution (Freeman et al., 1983). This dichotomous control variable indicating a change in majority ownership of the enterprise was not significantly related to an enterprise's subsequent dissolution.<sup>16</sup> Table A.6 summarizes the results of each of the main hypotheses of this study as operationalized in the primary model.

**[TABLE A.6]**

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<sup>15</sup> This interaction effect is calculated by anti-logging the aggregated coefficients of the Av5yrPts term and its associated interaction with binary variable era1996, which is coded as one after 1995. The resulting statistic is the hazard ratio for a unit of a team's average points scored after 1995. Specifically, this is calculated as  $e^{(-0.067 - 1.959)} = 0.132$ . This resulting hazard ratio is interpreted as a team with one more average point scored over the previous five seasons enjoys a probably of dissolution the following season that is reduced by a factor of 0.13174 compared to a team without the additional average point.

<sup>16</sup> Considering the recent anecdotal effect in F1 motor racing (Honda and BMW announcing their withdrawal from F1) of the global economic downturn that arose after the last year of data collection in this study, a second control variable was compiled that quantified the annual World GDP growth rate since 1970. The primary model was run with the inclusion of this additional macroeconomic control variable, but no change was observed in the model's significance or estimates and the World GDP growth term was non-significant ( $\beta = -0.017, p > .10$ ).



Given the evidence that a degree of multicollinearity does exist in the primary model, the main variables representing access to specific resources through the quantification of the number of promotional alliances of a certain type were transformed into two different measurement applications. In one specification, the variables for alliances offering performance, financial, and operational resources were dichotomized so that if a team had one or more alliances of a certain type, the corresponding variable was recorded as a one, and zero otherwise. The estimates generated from this alteration of the primary model are displayed by Model 2 in Table A.5. An examination of these statistics shows that the major terms of the primary model remain marginally significant ( $p < .10$ ) despite the loss of data by dichotomizing several variables. Meanwhile, the interaction of financial alliances and institutional era loses significance, which is not surprising given that the term is now an interaction of two dummy variables without the dimension of magnitude. The only term gaining (marginal) significance is the team experience main effect that is only included in the model because of its hypothesized interaction with financial alliances (H3), which remains non-significant. As a whole, this revised model emphasizes the importance for team survival of possessing at least one performance and one financial alliance in addition to competitive achievement (team points and drivers' championships).

In a second specification of the variables representing the three types of alliances, the number of alliances of each type (original variables) were divided by the total number of alliances of that type in that particular season of F1. This reformulation of the alliance variables had the effect of standardizing alliance "shares" across seasons within the institutional context of F1. In doing so, a team with five performance-based promotional

alliances in a season with 25 total performance-based alliances among all F1 teams in that season was statistically equivalent to a team with 15 performance-based promotional alliances in a different season that boasted 75 total performance-based alliances in F1. In both instances, the example team enjoyed a 20 share of the performance-based promotional alliances in F1 motor racing for that particular season. Model 3 in Table A.5 shows this model application, which excludes variables accounting for era because of the standardization by season. As in the other specifications, alliances offering performance and financial resources were significantly related to enterprise survival along with competitive performance (points scored) ( $p < .05$ ). No other variables gain statistical significance in this reformulated model.

Between the models, it becomes clear that three main factors are influential in the survival of the promoting enterprises studied here. Interorganizational alliances that offer an entrepreneurial enterprise either performance or financial resources exhibit a significant negative relationship to the enterprise's dissolution in every application of the model. This contribution to survival is incremental to the significant effect of the enterprise's performance in competition. Some evidence is also uncovered to suggest that the relationships to enterprise dissolution change between institutional eras. These findings are further explored in the following discussion section.

### **3.7 Discussion**

This study began by focusing on the perspective of an entrepreneurial enterprise with a business model based on promoting an alliance partner to an audience attracted by the enterprise. The primary research question asked how the access to resources through these promotional alliances influenced the survival of the entrepreneurial enterprise in a

highly competitive environment. To address this question, teams competing in Formula One auto racing over the previous forty years were studied as entrepreneurial enterprises that rely on their alliances with sponsoring firms to access different types of organizational resources. The alliances were categorized according to the available resources' potential contribution to the promoting enterprise in relation to its competitive environment (F1 racing). Segmenting alliance resources in this fashion reflected this study's theoretical foundation in organizational ecology, which emphasizes the roles of both competition and environmental selection in the determination of enterprise survival (Hannan & Freeman, 1977; Ulrich & Barney, 1984). This alliance resource characterization is also consistent with recent advancements of the resource-based view in marketing research, where theory suggests the "fit between marketing resources and the context in which those resources are deployed affects firm performance" (Auh & Menguc, 2009, p. 757). Specifically, three types of promotional alliances were delineated. While promotional services were offered by the entrepreneurial enterprise to the sponsoring firm in each case, the reciprocal resources accessed by the promoting enterprise via the sponsoring firm were labeled as either performance, financial, or operational resources according to their competitive potential in the relevant institutional environment.

The results of the study demonstrated that not all alliances are equal in their contribution to the survival of entrepreneurial enterprises. As predicted in Hypotheses Two and Three, alliances based on performance and financial resources were significant contributors to enterprise survival. However, instead of contributing to survival at a lower intensity than the other two resource types (as hypothesized in H4), operational

resources were not related to enterprise dissolution in any of three variable specifications. Though non-significant as a hypothesis test, this result does confirm the expected lower priority of operational resources.

Theoretically, alliances based on performance resources were deemed most vital to the promotional enterprise's initial survival, but alliances offering financial resources were hypothesized to grow in importance as an enterprise gained experience (H3b). This conceptualization was based on the theory that the versatility of financial resources would be more useful to enterprises that have accumulated knowledge through organizational experience (Freeman et al., 1983; Bergmann Lichtenstein & Brush, 2001). Although this theory was not supported through a relationship to organizational dissolution, it remains possible that the return on financial resources is indeed enhanced as an organization matures, but that survival is not predicated on realizing this enhanced return.

Alternatively, a reframing of this theoretical shift in resource emphasis with enterprise age might focus instead on a decline in the prominence of performance-based alliances as an enterprise accumulates its own experience. Just as organizational learning theory suggests that entrepreneurial enterprises might better utilize flexible resources with the knowledge that comes from experience (Levitt & March, 1988), it also implies that an enterprise may be less reliant on external sources for a competitive performance advantage. Instead, as a maturing enterprise internalizes the know-how of competition within its environment, it can become increasingly self-reliant in regards to performance expertise. If this conceptualization is accurate, an entrepreneurial enterprise's dependence on alliances offering performance-based resources to stave off dissolution should diminish with competitive experience. To test this reframing of dynamic resource

reliance, an interaction term was formed between a team's number of performance alliances (SprPer) and its accumulated years of experience in F1 entering a given season (TmExp). If the number of performance alliances became less important to enterprise dissolution as an enterprise gained experience, a positive coefficient on the interaction term would be expected (i.e. this type of alliance becomes less negatively related to dissolution with increasing experience). Indeed, Model 4 in Table A.5 shows this to be the case.<sup>17</sup> For each season of experience gained by the F1 team, the marginal contribution to odds of survival of an additional performance-based alliance is reduced by about 2 percent.<sup>18</sup> Though a somewhat small effect, its impact is magnified when considering the median years of team experience was six and the maximum was forty, while the median number of promotional alliances offering a team performance resources was three, but with a maximum of 29.

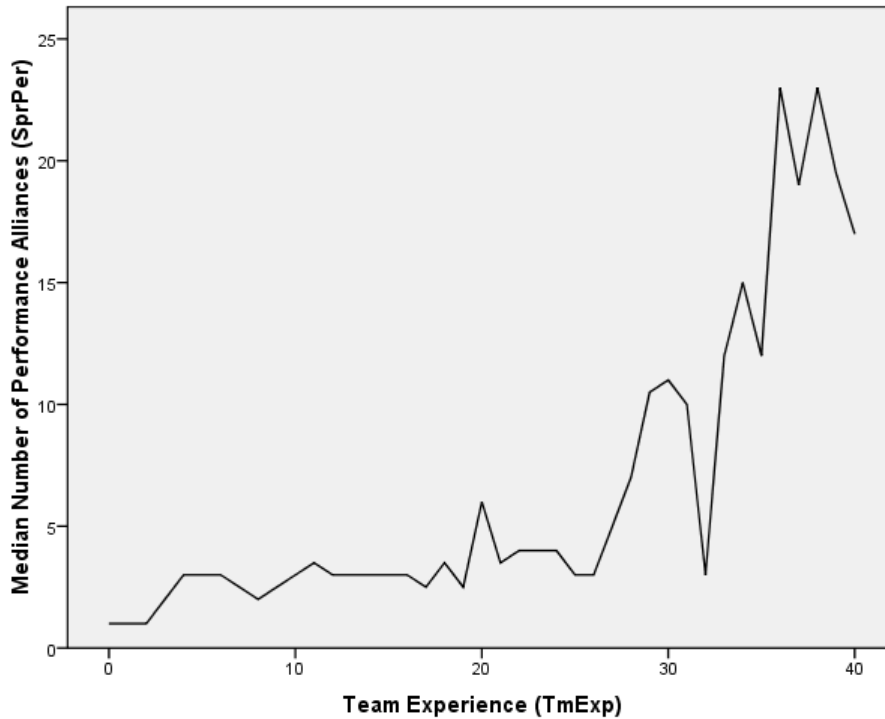
Graphing the relationship between team experience and performance alliances (Figure 3.1) showed that despite the implied greater contribution of performance resources to survival early in the life of the enterprise, it is actually at higher levels of experience that teams compile more performance-based alliances. With this in mind, it is tempting to dismiss the significant interaction effect as a result of the skewed distribution of high levels of performance alliances at teams with accumulated experience. In other words, team experience may facilitate both survival and the accumulation of performance-based alliances. However, given that the lower-order effect of team experience is controlled for in Model 4, it appears more likely that performance resources

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<sup>17</sup> At this discussion stage of analysis, several repeatedly non-significant variables periphery to the research question were removed from the model.

<sup>18</sup> This interaction effect can also be interpreted as an increase in the marginal odds of dissolution by a factor of 1.021, which is equal to the anti-log of the interaction term coefficient ( $e^{0.021}$ ).

offer diminishing returns to enterprise survival. To explore this possibility further, a quadratic specification of the number of alliances offering each resource type can be evaluated.



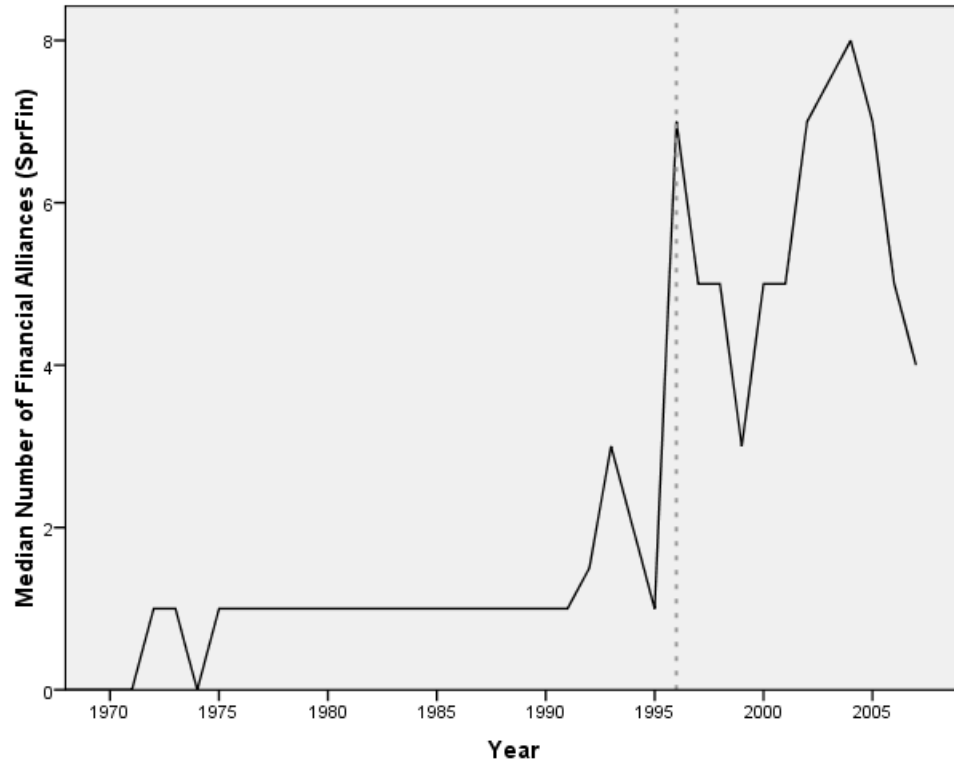
**Figure 3.2:** Graph of the median number of team alliances offering performance-based resources by the years of accumulated team experience.

Before embarking on a model that considers quadratic alliance terms, recall that alliances based on financial resources did interact significantly with the institutional era to suggest that after 1995, additional financially-based alliances contributed to the odds of enterprise dissolution; whereas, these alliances negatively impacted the odds of dissolution prior to 1996. This effect was counter to the hypothesized direction (H5), where it was suggested that the waning institutional provision for financial resources after 1995 would lead to a greater survival dependency on interorganizational alliances to access this resource type. On the surface, it seems counterintuitive to find that alliances

offering financial resources would contribute to dissolution of an entrepreneurial enterprise. However, if there is an organizational cost to managing alliance relationships and these relationships also generated diminishing returns to the propensity to survive, too many alliances may conceivably be detrimental to an enterprise's continuity (Rothaermel & Deeds, 2006). Deeds and Hill (1996) uncovered this effect of diminishing returns to strategic alliances when investigating rates of new product development. They described the phenomenon as arising "because the effectiveness with which the firm can select and manage alliance partners is likely to be negatively related to the number of alliances the firm is managing" (p. 42). Therefore, employing quadratic terms to investigate the possibility of diminishing returns to each type of alliance appears warranted.

Yet, in the case of alliances based on financial resources, this positive relationship to enterprise dissolution occurs only after 1995. To potentially explain this condition, consider the inherent correlation between enterprise experience and the more modern era of 1996 to 2007. Just by the lockstep nature of experience and a bounded institutional timeframe, enterprises existing at a later time (modern era) would inherently be prone to the possibility of greater accumulated experience. Therefore, if the same positive relationship between the number of performance alliances and the years of team experience (Figure 3.1) also existed for financial alliances, a greater magnitude of financial alliances would proliferate in the modern era and perhaps reach the point of diminishing returns; whereas previous to 1996, the same curvilinear relationship may have been possible, but lower quantities of promotional alliances based on financial resources failed to activate any diminishing returns effect. Figure 3.2 substantiates this

suggested relationship by showing the rise in the median number of alliances based on financial resources over the years of F1 competition.



**Figure 3.3:** Graph of the median number of team alliances offering financial resources over time with a dotted line designating the start of the modern era in 1996.

To explore the evidence for diminishing returns to survival for alliances offering various types of resources, a fifth model was constructed in Table A.5. Since greater numbers of alliances occur in the modern era, it was suggested that the era binary variable might have actually been capturing the effect of diminishing returns in previous models. As a result, the era variable and its interactions were removed from Model 5, which now included a separate quadratic term for each of the three alliance categories to



represent diminishing returns. If such an effect existed, a positive coefficient on the quadratic terms would be expected, signifying that as the number of promotional alliances offering the specified type of resource reached a certain level, incremental alliances of that type would positively influence the odds of enterprise dissolution.

As in previous models, the model inclusive of quadratic terms maintained the main effects of the number of performance and financial alliances as significant negative influencers of the odds of dissolution ( $H_0: \beta = 0, p < .05$ ). In addition, the quadratic terms representing the diminishing returns of both resource types were at least marginally significant in the positive direction ( $H_0: \beta = 0, p < .10$ ). Neither the main effect nor quadratic term for operational alliances was significant. This interesting result provides support for the argument that alliances offering access to performance or financial resources contribute to entrepreneurial survival but are not unlimited in their capacity to ward off dissolution. At a certain threshold, adding incremental promotional alliances may actually encourage enterprise dissolution, thereby suggesting an inverted U-shape relationship.

Given the limited number of promotional alliances per team before 1996, it may be informative to examine if the primary model's estimations remain consistent when only the data from the years before 1996 are analyzed. This restricted perspective is displayed in the sixth and final model of Table A.5. Little changes between the estimations and their significance in the primary model (Model 1) and in the model considering only the seasons before 1996 (Model 6). Alliances enabling access to performance and financial resources, in addition to achieved performance (points scored), negatively impact the likelihood of team dissolution. This consistent message across

specifications underlines the contribution of this study of entrepreneurial enterprises that access varying types of resources through promotional alliances.

By analyzing over four decades of interorganizational alliances between Formula One teams and their corporate partners, this study has taken the perspective of entrepreneurial enterprises that engage in alliances by offering promotional services to sponsoring firms in exchange for various other resources. The relationship between this exchange process and the promoting enterprise's propensity to survive was explicated, and certain resources were identified as more crucial than others. These findings offer empirical evidence to support heterogeneous contributions of firm resources (Grant, 1991) and the broadening scope of the resource-based view in marketing, which simultaneously considers enterprise resources and their deployment in a dynamic institutional context (Auh & Benguc, 2009). Future research questions are raised by the indication of diminishing returns to alliance resources that surfaced after an institutional change in 1996 precipitated a major rise in alliance engagement. These research implications, future directions, and the limitations of this study in tandem with the next study are explored in greater detail in the last two chapters of this dissertation. First, the following chapter migrates to the perspective of the sponsoring firm. The second study of this line of research examines how the characteristics of these promotional alliances influence the market value of the aligning firm.

## **CHAPTER 4**

### **STUDY 2: PURSUING VALUE VIA INTERNATIONAL PROMOTIONAL ALLIANCES**

This chapter moves away from the focus of the previous chapter on the promoting enterprise and instead concentrates on the firm seeking promotion through an alliance relationship. Unlike the promoter side of the alliance, which is largely overlooked, scholars have taken an interest in sponsoring firms' attempts to achieve promotional objectives through an affiliation with a team, event, festival, show, or other entity that engages a desirable audience. However, less attention has been given to the empirical evaluation of this alliance-based promotional strategy at an international level, despite the increasing availability of cross-cultural promotional channels. The study presented in this chapter takes the conception of promotional alliances to an international realm by applying the theories of cultural positioning and promotional standardization to the framework established in Chapter One, which detailed the confluence of strategic alliances and commercial sponsorship.

#### **4.1 Research Question**

Marketing strategy has increasingly taken an international aim while also becoming more reliant on interorganizational alliances (Varadarajan & Cunningham, 1995). Methods for evaluating global initiatives enacted through such relationships, and refining interorganizational theory across cultures must keep pace with the rapidly disappearing geographic boundaries to promotional efforts. Yet, marketing managers and

scholars share a common challenge in their ongoing attempts to quantify the value of strategic marketing initiatives to a firm (Moorman & Rust, 1999). Gauging the value of applied promotional tools such as advertising slogans, product endorsements, ad agency alliances, licensing relationships, and sponsorship partnerships through changes in sales or consumer surveys is often wrought with complications and difficult to monetarily quantify. Intervening variables lacking appropriate controls can produce misleading or inaccurate sales attributions, and self-reported consumer attitudes or even purchase intentions are frequently far from precise measurements of the financial value actually accrued to a firm from marketing activities (Crompton, 2004; Young, DeSarbo, & Morwitz, 1998). This challenge is further exacerbated in an international context where a standardized promotional platform carries a brand message across the globe (Jain, 1989; Szymanski, Bharadwaj, & Varadarajan, 1993). Two emergent research streams, one methodological, the other theoretical, are converged in this study to offer scholars and practitioners an empirical assessment of the cross-cultural marketing tactic of aligning with an internationally recognized promotional property.

Over the last three decades, the event study methodology has gradually migrated from the finance literature to achieve popularity in marketing research as a quantitative means of assessing the impact on equity of various marketing tactics (Johnston, 2007). While the capability of event studies to link the creation of shareholder wealth to a specific marketing program has fueled its acceptance and encouragement among marketing scholars, the need to accurately evaluate an international affiliation with a promoting organization has yet to be confronted with this empirical tool. Simultaneously, the availability and desirability of global marketing communication

channels has exploded as media technology continues to advance, thereby offering audiences media consumption opportunities far beyond the previously dominant local or national outlets (Alden, Steenkamp, & Batra, 1999). With global brand strategies now common in the marketplace (Aaker & Joachimsthaler, 1999), the purpose of this study is to extend interorganizational marketing theory by evaluating the impact on equity in worldwide markets of international promotional alliances. To that end, the primary research question addressed here is as follows:

- Do international promotional alliances add value to the firm, and if so, what characteristics of the interorganizational relationship influence value realization?

In approaching this question, the dilemma of promotional standardization across markets is revisited with a focus on consumer culture positioning and market evaluation. This review is followed by a description of the empirical context of commercial sponsorship and the presentation of the conceptual model, which identifies the factors hypothesized to impact value realization. A critical examination of the adoption and contribution of event studies in marketing is undertaken after the explication of theoretical hypotheses. Results are then presented and compared to similar domestic research. The subsequent chapter offers further discussion of the implications coupled with the results of the first study and in combination with industry executives to reinforce managerial relevance.

## **4.2 Promotional Standardization and Cultural Positioning**

Since Levitt's argument for the globalization of markets (1983) and Kotler's response warning of the pitfalls of standardization (1986), the debate between market adaptation of promotional messages and global standardization has raged in the marketing literature (for a review, see Theodosiou & Leonidou, 2003). Meanwhile, the explosion of global communication mediums has perpetuated the availability of international promotional platforms. As a result, attaining a consistent brand image across markets while realizing production cost savings through economies of scale has become an attractive proposition of standardization (Duncan & Ramaprasad, 1995; Kirpalani, Laroche, & Darmon, 1988). However, empirical assessments of the performance of a standardized marketing message have been sparse (Fastoso & Whitelock, 2007). Those published have been limited to managerial perceptions gathered by survey, where results indicated that globally standardized advertising and marketing strategy were perceived to positively affect financial performance (Okazaki, Taylor, & Zou, 2006; Zou & Cavusgil, 2002).

The growth in worldwide communication and the aforementioned survey evidence may tilt the debate toward the modern convenience of standardization, but this tentative conclusion is quickly followed by the question of how then to best position a brand's cultural origins on a global stage. Alden, Steenkamp, and Batra (1999) suggested more cross-cultural connections had allowed consumers to become increasingly familiar and cognitively integrated with cultures outside of their own. This integration has led to the emergence of a global consumer culture (GCC) that now enables marketers to position their brand as global by associating it with universally shared meanings and symbols. However, Alden et al. also point out that promotional standardization could

conversely be aimed toward either a domestic consumer culture position (DCC), where the brand aligns with symbols unique to the target audience's culture; or a foreign consumer culture position (FCC), where the brand is linked consistently to symbols of a specifically chosen foreign culture.

In addition to the ideas of standardization and cultural positioning, a third factor considered by international marketing researchers has been the potential for varying responses to marketing initiatives based on the cultural values of the specific market. For example, collectivist cultures such as Japan tend to value the perceived credibility of a brand to a greater extent than do members of an individualist culture such as the United States (Erdem, Swait, & Valenzuela, 2006). In the proper context, these issues create an interesting question of whether a standardized international promotional alliance impacts the perception of a firm uniformly across cultures, or if variations in cultural positioning and values influence the market's response to a promotional alliance.

#### **4.3 Theoretical Model & Hypotheses**

Commercial sponsorship in Formula One racing provides an optimal context from which to examine the value contributed by a globally standardized promotional effort. With eleven racing teams claiming primary allegiance to seven different nations and a stable of corporate partners that boast origins in 15 countries, the context of Formula One enables an eclectic mix of global promotional alliances. Undertaking an event study investigation of these alliances provides an objective financial market assessment of the cultural positioning of firms' international marketing messages. While almost a third of the sponsoring firms in this study aligned their brand with a team claiming a national

heritage shared by their own organization (a domestic consumer culture position), the remaining firms supported teams based on divergent criteria. Beyond nationality congruence, previous domestic research suggests several characteristics of the firm, promoting organization (team), and their relationship that could theoretically influence the value implications in the financial markets. In light of such considerations, the conceptual model below is proposed with each element dissected in the hypotheses that follow:

$$\text{Value}_{\text{contribution}} = f(\text{Complementarity}_{\text{resource}}, \text{Congruence}_{\text{nationality}}, \text{Level}, \text{Leverage}_{\text{plan}}, \text{Controls}_{\text{size, name, experience, agency conflict, partner success}}) \quad (2)$$

A significant change in the value of the firm is quantified as the dependant variable in the model. Four characteristics of the promotional alliance relationship serve as the primary independent variables, and several control factors are also taken into account. The complementarity of the resources brought to the alliance by each party relates to their respective operational industries and is discussed as the first hypothesis. Next, image and cultural positioning are examined by considering the nationality congruence between the promoting enterprise and the sponsoring firm. The level of immersion in the alliance relationship forms a third primary hypothesis, which is followed by the final proposition regarding the firm's identified plans to leverage the alliance through other marketing channels.

#### **4.3.1 Resource Complementarity**

The most prominent theoretical rationales for alliance success are rooted in resource complementarity and partner compatibility (e.g. Chung et al., 2000; Farrelly &



Quester, 2005b; Sarkar, Echambadi, Cavusgil et al., 2001), which are frequently conceptualized as congruence, fit, functional similarity, or strategic relatedness depending on the context (Gwinner, 1997; Johar & Pham, 1999; McDaniel, 1999; Speed & Thompson, 2000). These elements describe the match between alliance partners and are often enhanced by trust and commitment (Cullen, Johnson, & Sakano, 2000; Morgan & Hunt, 1994; Williams, 2005), which is later addressed in the third hypothesis. At the outset of alliance formation, firms tend to seek out partners that can deliver desired resources the firm cannot efficiently produce internally and for which pure transactional markets are not ideal for exchange (Burgers, Hill, & Kim, 1993). In doing so, a firm is prudent to identify and align with external resources that enhance the performance of its current resources toward the creation of incremental value (Chung et al., 2000). Such optimal alliance performance is often achieved when the resource contributions of each partner to an alliance are complementary, but not redundant, and the two partners establish an ongoing collaborative relationship (Sarkar, Echambadi, Cavusgil et al., 2001; Saxton, 1997).

This characterization of successful alliances suggests that additional value will be realized from alliances that extend beyond a simple transactional exchange and toward the coproduction of incremental relationship-specific resources (Madhok & Tallman, 1998). In order to collaborate beyond a property-based exchange, some degree of strategic relatedness is necessary to ensure not only common interests, but also a shared technical language (Tsai, 2000). In addition, where audience identification of the alliance is paramount, as would be the case in a vast majority of promotional alliances, the industry relatedness or product complementarity of the alliance members can enhance

recognition of a partnership (Johar & Pham, 1999; Samu et al., 1999). Therefore, it seems reasonable to expect that interorganizational alliances between two partners operating in complementary industries would generate greater value from their collaboration than partners from disparate industries.

Indeed, scholars have demonstrated the significance of a firm's industry compatibility in relation to added financial value in promotional alliances. The most obvious strategically related industry to motor racing is the automotive sector. As expected, firms operating within this industry have benefited from marginally greater shareholder returns from promotional alliances in motor racing (Cornwell, Pruitt, & Van Ness, 2001; Pruitt, Cornwell, & Clark, 2004). However, on a broader scale the technology industry has emerged as a sector particularly conducive to generating incremental value from interorganizational alliances (Das et al., 1998), and the advanced technological nature of F1 racing implies the potential for product innovation and testing, promotional credentialing, and knowledge transfer (Jenkins & Floyd, 2001).

Surprisingly, the basis for a positive relationship between a sponsoring firm operating in the technology sector and realized incremental returns from a promotional alliance has not always relied on the tech industry's functional congruence to the promotional environment. In fact, operation in the technology industry has been shown to add value to promotional alliances involving several major sports leagues (Cornwell, Pruitt, & Clark, 2005) in addition to individual teams when stadium naming rights are an exchanged resource (Clark, Cornwell, & Pruitt, 2002). To explain this positive relationship where resource complementarity or industry compatibility was not as apparent as in the F1 context, these studies evoked signaling theory. Their assertion was

that a promotional commitment to affiliate with a popular sports property often involved a significant financial investment that would not be made if the sponsoring firm was in unhealthy financial straits, and such a signal is more valuable to firms operating in a volatile industry like high technology (Clark et al., 2002). However, events over the last decade, such as the bankruptcy of several high-technology firms engaged in facility naming rights agreements, have raised numerous exceptions to the reliable interpretation of a major promotional sports alliance as a signal of financial health (Wright, 2002). As a result, the extensive technological demands of the current context of international motor racing perpetuates a more plausible, and theoretically supported, rationale of industry compatibility to support a hypothesized relationship to the added value realized from a promotional alliance.

Although the complementarity of the technology sector was not considered in two United States motor racing studies (Cornwell, Pruitt et al., 2001; Pruitt et al., 2004), the technological integration of Formula 1 motor racing beyond even other forms of motorsport could be construed as both a knowledge transfer and capabilities testing opportunity for technology firms. This type of functional congruence between the sponsoring firm's operations and the promotional activity highlights the alliance success factors of compatibility and collaboration mentioned earlier. For example, German technology firm Infineon stated in a press release announcing their newly formed alliance with an F1 team that "(t)hrough its activities in motor sport, Infineon is able to optimize products before mass production" (Infineon, 2003). Similarly, the CEO of AirAsia commented on his firm's F1 alliance by saying, "I am delighted that we have begun to pro-actively learn from the sport with the view to improving our technology" ("AirAsia

using,” 2007). By offering such opportunities, the alliance represents more of a knowledge-based resource, as opposed to purely a property-based resource, and is therefore more likely to be the source of a competitive advantage for the firm (Das & Teng, 2000).

H1: Firms capable of contributing resources through their operations that are functionally compatible to the promotional activity will realize more value from a promotional alliance than firms engaged in non-compatible industries.

#### **4.3.2 Nationality Congruence**

As briefly mentioned in the initial review of alliance success factors in section 1.3.2.1.3, congruence in a promotional situation has been conceptualized to extend beyond just functionally related activities to image-based conceptions (Gwinner & Eaton, 1999). With awareness and image enhancement often cited as reasons for engaging in promotional alliances (O'Hagan & Harvey, 2000; Thjømmøe et al., 2002), associations between the partners' images become a relevant consideration.

Extending from the associative network model (Collins & Loftus, 1975), brand associations are thought to be established in memory through schemas or informational nodes that link traits such as attributes, benefits, and attitudes to a brand (Keller, 1993; McDaniel, 1999). Accordingly, cognitive memory is thought to operate based on a schematic network of associations in the mind, wherein a particular stimulus (brand or corporate name) is processed, encoded, stored, and retrieved in memory based on a cognitive structure of prior knowledge and the degree of congruence with an activated memory domain (Halford, Bain, Maybery, & Andrews, 1998; Hunt, Kernan, & Bonfield,

1992). As a result, by engaging in an alliance with a promotional entity, sponsoring firms can alter or reinforce the associations that comprise their schematic network based on the perceived congruence with a set of attributes, benefits, and attitudes inherent in the promotional situation or possessed by the promoting partner. For example, the FedEx shipping corporation may seek to enhance its image association with the attributes of speed and precision. One avenue for accomplishing this objective would be to form a promotional alliance with a popular entity that glorifies these attributes, such as a racing team ("FedEx moves to McLaren," 2007). In doing so, FedEx looks to establish a mental link between the racing team's attributes of speed and precision, and FedEx's own image. The perceived congruence between promotional alliance partners is generally suggested to intensify the strength of this image association and contribute to brand awareness (Gwinner, 1997; Samu et al., 1999). However, a competing perspective argues that recall of a promotional alliance between a sponsoring firm and a sponsored event can be heightened when a moderate degree of incongruity stimulates further elaborative processing on the part of the audience (Jagre, Watson, & Watson, 2001).

Empirically, the idea of congruence has most often been explored experimentally through the identification of corporate image attributes and their match to a sponsored activity or endorser's attributes as related to dependant outcomes of consumer attitude and purchase intent (McDaniel, 1999; Rifon, Choi, Trimble, & Li, 2004; Schaefer & Keillor, 1997). While support for a positive image-based congruence effect is growing, results are not always conclusive (Till & Busler, 2000), and occasionally the line between functional and image congruence is undistinguished (Koo, Quarterman, & Flynn, 2006).

A distinctive image dimension that could be particularly important in an international alliance, but has received limited attention in prior research, is that of nationality. It may be conceivable that a perception of congruence arises from the shared nationality of alliance partners operating at a cross-cultural level. Theoretically, this dimension of image congruence may intensify the cognitive schematic network of associations in the mind of the audience, thereby reinforcing the alliance and its associated set of attributes, benefits, and attitudes (McDaniel, 1999). Ruth and Simonin (2003) demonstrated some support for this positive relationship through their finding of a moderating effect of nationality congruence when investigating the impact of promotional alliances involving controversial firms. Additional evidence for a geographically-based congruence affect at a more regional level is found in Clark et al.'s marginal support ( $p < .10$ ) for a local firm explanatory variable in the context of facility naming rights announcements (2002).

Broadening the investigation to the international realm enables an examination of the value-added benefits of Alden et al.'s global consumer culture (GCC) positioning theory versus a strategy of domestic consumer culture (DCC) positioning on a global scale (1999). In the context of this study, these two positions can be represented by sponsoring firms that align with an F1 team whose claimed nationality is incongruent to their own, thereby adopting a GCC positioning, and those firms that affiliate with a team that shares a common nationality to its own origins, or a DCC positioning<sup>19</sup>. Extending the evidence to date that leans toward a positive influence of image congruence,

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<sup>19</sup> It should also be noted that firms aligning with nationally congruent teams are viewed as adopting a DCC positioning as it relates to their home domestic market; while outside of that market, their positioning might be viewed as a foreign culture consumer (FCC) position. Since a firm's domestic stock exchange is used to collect the data for analysis in this study, the perspective of the evaluating market is emphasized here.

nationality congruence is proposed to enhance the value realized from a promotional alliance. The enthusiasm for a shared nationality is trumpeted by one F1 team boss when upon announcing a nationally congruent alliance, he exclaimed, "I have always aimed at a partnership with a Swiss group and this long-cherished dream has come true now" ("Sauber banks," 2001).

H2: International promotional alliances composed of a firm and promoting partner that share national origins will realize incremental value from their partnership as compared to firms aligning with a promoter of differing national origins.

#### **4.3.3 Level of Immersion**

The final two relationship considerations hinge on the level of immersion and strategic leverage initiatives exhibited by the sponsoring firm as representations of its trust and commitment to the alliance. Trust in a promotional alliance situation serves as a precursor to commitment, which is demonstrated by the parties through short-term investments in the relationship based on an expectation of benefits over a longer term (Farrelly & Quester, 2003a). The demonstration of commitment has been identified as a relational factor central to the ongoing success of interorganizational alliances (Farrelly & Quester, 2003b; Gruen, Summers, & Acito, 2000). The initial commitment signified through an alliance partner's level of immersion is discussed in this section, and the ongoing commitment designated by leveraging the alliance with additional supplementary resources is detailed in the subsequent section (4.3.4).

In a promotional context, the sponsoring firm often has several options for forging an alliance with the promoting partner based on the firm's available resources and desire

to immerse itself in the promotional context. At different “levels” of firm immersion, various promotional enhancements are available to the firm in exchange for an increased initial commitment in reciprocal resources (Gwinner, 1997). For example, an art festival’s highest promotional level available to a sponsoring firm could include the incorporation of the firm’s name into the title of the festival (i.e. title sponsorship), such as the Cadillac Festival of the Arts. In addition to the title naming benefit, this highest level may come with prime signage and display locations at the event, as well as comprehensive inclusion in the event’s promotional media and perhaps a retail promotion offering discounted event admission tickets at Cadillac car dealerships. Meanwhile, a firm aligning with the event at a lower level may only receive secondary signage opportunities and a restricted presence in the promotional media surrounding the event. Although a higher level typically requires greater costs in reciprocal resources, it also signals a greater level of commitment to alliance continuity and success that can be interpreted by both the firm’s stakeholders and the partner in the alliance (Farrelly & Quester, 2003b).

H3: Firms engaging in a promotional alliance at a higher level, and thereby demonstrating greater commitment, will realize greater financial market value from the relationship than firms engaged in a lower level promotional alliance.

#### **4.3.4 Leverage**

Beyond the initial commitment of resources to an interorganizational alliance, an important factor in generating positive returns from the promotional relationship is the ongoing leverage of such resources (Bucklin & Sengupta, 1993). In the context of



commercial sponsorship, leverage has been defined as “promotional expenditures over and above the sponsorship fee, including items such as advertising, sales promotion, and client entertainment” (Cornwell, Roy et al., 2001, p. 43). Recall that the resource-based view of promotional alliances stresses the deployment of additional organizational resources in support of the focal alliance as a key to developing a sustainable competitive advantage (Fahy et al., 2004; Ireland et al., 2002). By strategically instigating complementary combinations of interorganizational resources via leverage of a promotional alliance, a sponsoring firm can perpetuate resource inimitability through the generation of social complexity and increased causal ambiguity (Morgan & Hunt, 1999). In other words, competitors looking to imitate a sponsoring firm’s advantageous promotional position will find it more difficult to parse out which promotional resources and employed capabilities of the aligned organizations contributed to such a position and how their dynamic interaction created any perceived advantage.

In a sponsorship situation, where communicating the alliance and its relevance to a potentially diverse targeted audience is often imperative to success (Cornwell, Roy et al., 2001), leveraging the promotional alliance with other marketing resources takes on a heightened importance. Despite the consumer-based focus of research detailing the outcomes of commercial sponsorship, scholars have persistently identified a diverse range of audiences targeted through sponsorship objectives (Cornwell & Maignan, 1998; Crowley, 1991; Thjømmøe et al., 2002). To realize the maximum effectiveness of an investment in commercial sponsorship, the relationship must be leveraged toward the specific audiences targeted through the use of supplementary resources or capabilities (Clifflea & Motion, 2005). Beyond general consumers, these targeted audiences might

include suppliers and other channel members, employees, politicians, shareholders and other community stakeholders. In the B2B context, for example, commercial sponsorship can constitute a critical sales event if the resources and capabilities of a firm's sales force are mobilized to leverage the resources inherent in the sponsorship alliance, such as event hospitality and product or service credentialing (Clark, Lachowetz, Irwin, & Schimmel, 2003). The theory of "credentialing" through an alliance with a prominent entity, such as a popular sports team, suggests that the sponsoring firm not only has the opportunity to access the promoting team's other business partners, but can also gain recognition and an assumed status by functionally collaborating with such a prominent partner (Stuart et al., 1999).

Strategically integrating promotional alliances with other resources deployed by the firm as part of the marketing communication mix encourages the efficient targeting of relevant audiences and leverages the sponsorship relationship toward a distinct competence (Fahy et al., 2004). Further, this discerning style of promotional alliance management discourages haphazard engagement in an incoherent assortment of sponsorship alignments that are ultimately unsuccessful and fail to contribute to a competitive advantage in the marketplace (Amis et al., 1997; Amis, Slack, & Berrett, 1999). While the body of research concerning the leverage of a promotional alliance with other marketing resources remains relatively sparse (Cornwell, 2008; Farrelly, Quester, & Burton, 1997), evidence to date has indicated the strategic value of leveraging alliances to produce awareness, perceived differentiation, and accrued market value to the sponsoring firm (Cornwell, Roy et al., 2001; Crimmins & Horn, 1996; Quester & Thompson, 2001). Therefore, sponsoring firms prepared to commit supplementary

marketing resources to be integrated with the promotional alliance should expect increased returns to the alliance.

H4: Firms approaching a promotional alliance with an identified plan to leverage the relationship will realize greater financial market value from the alliance.

#### **4.3.5 Value**

The research question explored in this study asks if international promotional alliances contribute value to the firm. Instituting appropriate techniques for measuring the relationship between marketing initiatives and firm performance has long been a challenge for both scholars and practitioners (Moorman & Rust, 1999). In order to assess this relationship, some parameterization of value must be established. Otherwise, a change in value cannot be quantifiably captured and attributed in some way to a marketing tactic such as promotional alliances. To address this challenge, marketing researchers have begun to rely on the use of the event study methodology to quantify value in terms of the shareholders' equity markets (Johnston, 2007). Doing so allows scholars to ascertain a daily measurement of firm value.

According to the theory of efficient capital markets (Fama, 1970), any event that shareholders expect to impact the future cash flows of the firm is assumed to be reflected in the stock price. In other words, markets are efficient to the degree that security prices fully reflect all available information. Therefore, in the presence of an efficient market, marketing activities that add value to the firm should be reflected in a rising stock price approximately simultaneous to the activity's announcement, representing new information to investors. A primary rationale for firm collaboration via alliances is to

realize incremental value from “synergistic combinations of complementary resources and capabilities” (Madhok & Tallman, 1998, p. 327). As a result, it might be expected that announcements of a promotional alliance with a high-profile enterprise, such as an internationally-recognized entertainment or sport organization, would be represented by a positive increase in stock price. If the assumptions of the theory of efficient capital markets are correct and yet an announcing firm’s equity shares fail to exhibit a corresponding return, three possibilities exist. First, shareholders may have anticipated the event or been privilege to previously leaked information and thereby already incorporated the announced event into the stock price. Second, shareholders may hold a general expectation that the firm will engage in certain marketing initiatives and although they were unaware of the specific details of the announced event, the event met their general expectations for such marketing activities and was therefore already assimilated into the stock price. Finally, shareholders may not have anticipated the event, nor held a general expectation in relation to the event, but instead viewed the event as not relevant to discounted future cash flows of the firm, which are theoretically reflected in stock prices (McWilliams & Siegel, 1997).

Studies utilizing the equity market to measure the added value to the firm of an alliance have yielded inconclusive results to date, thereby suggesting that collaborative factors beyond the simple announcement of the alliance itself may be at work in determining the actual financial value accrued to a firm’s shareholders from such relationships. In fact, some cross-sectional evidence suggests that alliances involving research or technology collaborations are more likely to be valued by the market than licensing and marketing arrangements (Anand & Khanna, 2000; Chan et al., 1997; Koh &

Venkatraman, 1991). Given these factors and the heterogeneous nature of the promotional alliances included in the current sample (i.e. variation in the industry and size of the firm, levels of involvement, potential partnership foundations in technology, image dimensions, nationality, a mix or none of the above), it is expected that the realization of financial value emanating from promotional alliances will not be uniformly distributed, nor statistically significant for the aggregate sample of alliances (Das et al., 1998). Rather, the creation of shareholder value will be dependant on various characteristics of the collaborative relationship between the partners as described in the hypotheses above, as well as certain individual characteristics of the sponsoring firm and its chosen promotional partner, which are included as control variables in the analysis (Section 4.5.1.1).

#### **4.4 Methodology: Event study**

The purpose of an event study is to measure the impact of a specific event on the value of a firm's equity in a financial market. Fama et al. (1969) introduced the "modern" version of the methodology in determining the effects of stock splits on shareholder returns. However, the premise of event studies dates as far back as Dolley's published study of stock splits in 1933 (Campbell, Lo, & MacKinlay, 1997).

Several key assumptions are inherent in the use of event studies to evaluate marketing strategy. Each assumption is based on the expected collective behavior of investors beginning with their capacity to rapidly assimilate the implications of a marketing announcement. Next, they must use this new information to predict an impact on the long-term future cash flows of the firm, and then buy or sell the firm's equity

shares based on these expectations in relation to the stock price (Lane & Jacobson, 1995). Essentially, these first two assumptions rest on the idea that investors are primarily rational and those investors engaging in irrational behavior do so unsystematically, thereby canceling each other out (Geyskens, Gielens, & Dekimpe, 2002). Lastly, the event consideration period, or window, must not be confounded by other events that could conceivably affect the stock price beyond the general fluctuation of the market. This last assumption highlights the importance of identifying a reasonable event window that is not so small as to forgo the complete impact of the specific event, yet not overly inclusive so as to incorporate potential intervening variables such as earnings announcements or executive personnel changes without appropriate controls (MacKinlay, 1997). Well-executed event studies will often perform several robustness checks using various event windows, binomial tests, and subsamples (removing outliers, bootstrap or jackknife methods) to address these assumptions (McWilliams & Siegel, 1997).

The “market model” is the most commonly used modeling approach in event study research (Brown & Warner, 1985; Fama, 1970). The model relates the expected return of a given stock ( $E[R_i]$ ) at time  $t$  to the return of a selected market index ( $R_{Mt}$ ) through a linear specification:

$$E(R_{it}) = \alpha_i + \beta_i R_{Mt} + e_{it} \quad (3)$$

In the model,  $\alpha_i$  and  $\beta_i$  are firm-specific parameters estimated by an OLS regression of a stock’s return ( $R_{it}$ ) on the market index return ( $R_{Mt}$ ) for a baseline period typically prior to the event window. Recently, a four-factor model that also incorporates a firm-size risk factor, value risk factor, and momentum factor has gained popularity, but its use in international settings has been deemed unnecessary (Gielens et al., 2008; Srinivasan &

Hanssens, 2009). The  $\beta_i$  parameter in the base market model can be interpreted as a measure of a firm's stock volatility or risk in comparison to the chosen market index (Lane & Jacobson, 1995). The error term ( $e_{it}$ ) signifies realized abnormal returns (AR), which are simply the difference between the actual return ( $R_{it}$ ) and the modeled expected return ( $E[R_{it}]$ ). According to efficient market theory, this deviation ( $e_{it}$ ) should be randomly distributed with a zero mean. Therefore, a hypothesis test that demonstrates a statistically significant difference from zero for a cross-sectional mean abnormal return (MAR) on the event announcement day ( $t = 0$ , which are different calendar days for the different firms in the sample) offers evidence of a value-added event at time  $t$  recognized by the capital market.

A common practice in event studies is to also examine event windows that include days before and after the actual event date to account for the potential leakage of information before the formal announcement and to capture any delayed effects. This is accomplished through the calculation of cumulative abnormal returns (CAR), which are simply the sum of daily abnormal returns during a given event window. However, as noted earlier, expanding the event window also increases the potential for confounding effects and often leads to reduced statistical power in smaller sample sizes (McWilliams & Siegel, 1997).

Measurements of abnormal returns apparently produced upon announcement of a promotional alliance represent value added to the firm in this study. Several researchers have utilized these estimated measures as a dependent variable in testing hypotheses related to certain firm or partnership characteristics (Clark et al., 2002; Cornwell, Pruitt et al., 2001; Pruitt et al., 2004). However, this procedure is questionable from an

econometric standpoint because the individual abnormal returns that serve as the dependent variable in such an analysis are estimated and may, or may not be significantly different from zero regardless of the significance of the overall sample (Leeds et al., 2007). Therefore, this type of regression analysis could be relying on variance in the individual measures of abnormal stock returns that are not recognized as significantly different from zero.

To address the issue of statistical significance at the firm level and simplify the modeling steps in an event study analysis, Leeds and colleagues (2007) followed the suggestion of Karafiath (1988), who advocated for the use of an event window dummy variable indicator in the market model. Adopting this specification of the event study model reduces the multi-step estimation procedure to one step (i.e. model parameters for the individual stocks and the associated abnormal returns can be estimated simultaneously), and produces an intuitive test of statistical significance for each individual stock's estimated abnormal returns. To accomplish this, the procedure relies on the following model:

$$R_{it} = \alpha_i + \beta_i R_{Mt} + \sum_{w=(t=0)}^{(t+1)} \delta_w D_w + e_{it} \quad (4)$$

The dummy variable,  $D_w$ , signifies the event window analyzed and together with its associated coefficient,  $\delta_w$ , these terms differentiate this model from the original market model popularized by Fama (1970) and described in Equation 3. For a two-day event window that includes the announcement day ( $t = 0$ ) and the day following the announcement ( $t + 1$ ), the dummy variable would carry a value of one in the equation for each of those two days. All other days included in the dataset are treated with a zero dummy variable and serve to estimate the included parameters similar to the original



market model. However, in the “indicator model,” which is using the dummy variable to “indicate” the event window, a statistical test of the significance of the dummy variable coefficient for an individual stock provides a straightforward evaluation of the hypothesis that the abnormal returns in the indicated event window are different from zero for that stock.

The magnitude of the abnormal returns is captured by the value of the dummy variable coefficient,  $\delta_w$ , and the cumulative abnormal return (CAR) of a multiday event window is calculated by aggregating the coefficient values across the days of the event window (Karafiath, 1988). Therefore, if the same days used for estimating the  $\alpha_i$  and  $\beta_i$  parameters in the original two-step market model are utilized within the indicator model along with the identical event window days, the resulting CAR estimations should be the same. This assertion is explored empirically within this study and discussed in the results section (4.6). Despite the advantages of the indicator model in simplicity and statistical testing of the individual abnormal return estimates, the original two-step market model remains prevalent in the marketing literature.

#### **4.4.1 Recent Applications in Marketing**

Marketing researchers have employed the event study methodology to measure the impact of a range of initiatives, including corporate name changes, product recalls, new product announcements, customer service awards, and changes in advertising agencies (see Johnston, 2007 for a comprehensive review). Three studies in particular, published in the *Journal of Marketing*, deserve special attention in relation to promotional alliances. First, Lane and Jacobson (1995) examined the market’s reaction to brand

extension announcements and found that the directionality of the reaction (positive or negative equity returns) depended on brand attitude and familiarity. Although this study did not specifically address an alliance situation, it demonstrated that consumers' perceptions of a brand, as perceived by investors, may affect the stock market reaction to a similar event differentially across corporations. In other words, a marketing strategy that is viewed favorably by the financial market in one case may spark a reverse reaction if undertaken by a rival brand.

Agrawal and Kamakura (1995) ventured into the arena of promotional alliances when they utilized an event study to examine the profitability of celebrity endorser relationships. In this context, two brands (that of the product and of the endorser) converge to promote a strategically contrived meaning to consumers (McCracken, 1989). An analysis of the stock market effect allows for an aggregated assessment of the endorser's potential impact on future revenue beyond the market's perceptions of associated costs. However, while an efficient market is assumed to make accurate collective assessments of costs when considering new information relating to potential revenue generation, often information relating to costs remains proprietary and is not necessarily widely known by investors. Agrawal and Kamakura concede this widely accepted limitation of event study analysis in their admission that the costs of celebrity endorsement are "significant" (p. 56), yet the specific information needed to include cost data in an analysis of abnormal returns is presumed to be unavailable to the researcher. The present study overcomes this challenge by directly including promotional alliance investment data and other contract relationship elements in the supplemental empirical analysis that compliments the discussion section (4.7).

The third marketing event study warranting special attention outside of specific commercial sponsorship applications is Geyskens, Gielens, and Dekimpe's (2002) investigation of the shareholder wealth effects of internet marketing channel additions. This appears to be the only event study in the marketing literature that includes firms with securities listed on different stock exchanges. However, the four exchanges (Amsterdam, Frankfurt, London, and Paris) are all located in Western Europe and no cross-cultural effects are reported. The results of this study and the previous two discussed here (Agrawal & Kamakura, 1995; Lane & Jacobson, 1995) are included in Table A.7 for a comparison of these marketing activities to ten other studies published in the marketing and economics literature that investigate athlete endorsement or commercial sponsorship announcements as value-adding events.

Beyond the selected marketing studies discussed above, Table A.7 compares a variety of promotional alliances ranging from corporate Olympic partnerships (Farrell & Frame, 1997; Miyazaki & Morgan, 2001) to official product designations in the North American major league sports (Cornwell et al., 2005). Samples sizes in these commercial sponsorship investigations ranged from a low of 24 NASCAR team sponsorships (Pruitt et al., 2004) to 76 various event sponsorships (Mishra, Bobinski, & Bhabra, 1997). The mean abnormal return (MAR) for the various samples on the individual event days spanned from -0.24 percent in the case of the primary sponsors of the Indianapolis 500 race winner (Cornwell et al., 2001) to 0.82 percent in the case of basketball star Michael Jordan's announcement of his return from retirement and the stock price impact on a small sample (5) of his endorsed firms (Mathur, Mathur, & Rangan, 1997). The largest

MAR reported in a commercial sponsorship context was 0.73 percent for the announcement of a stadium naming rights agreement (Clark et al., 2002).

Interestingly, stadium naming rights agreements are one of the promotional alliance events for which two separate studies have been published. In a later study, Leeds and colleagues (2007) challenged the findings of Clark et al. (2002) when Leeds et al. discovered only a 0.18 percent effect on the event days for a slightly larger sample of promotional naming rights agreement announcements. In their analysis, Leeds et al. (2007, p. 583) used the indicator model discussed in the previous section, calling it a “more familiar econometric method” to measure abnormal returns. Instead of using a two-step modeling approach where the parameters for a firm’s expected return in relation to the market index are estimated during a baseline period before estimating the model for abnormal returns during the event window, Leeds et al. used the dummy variable approach inherent to the indicator model to represent the individual announcement days. If the coefficient of the variable was significant, the announcement was thought to have an immediate effect on firm equity. By summing the coefficients of the dummy variables representing the event window, the cumulative abnormal return (CAR) was determined. According to Leeds et al., this method allows for less restrictive assumptions by not assuming the covariance of abnormal returns are zero when computing the standard error of the CAR. They cite this difference in measurement of the standard error, along with conflicts in the identified event announcement dates and use of a different baseline market index as the main reasons for their general lack of significant findings at the firm level. This finding was contrary to the overall results reported by Clark et al. (2002). By identifying one outlier in the data set (CMGI) that experienced an AR on the event day of

15.5 percent, Leeds and colleagues also point out a potentially common problem in event study research with limited sample sizes. When deleted from the sample, the cumulative MAR on the event day falls from 0.18 to -0.12 percent, suggesting that the reporting of a median abnormal return is necessary to more accurately judge a sample's distribution. The median abnormal return on event day ( $t = 0$ ) for the Clark et al. (2002) study is reported as 0.05 percent, compared to their finding of a significant MAR of 0.73 on the same day.

The other promotional alliance event examined by more than one study reviewed here was the announcement of a 1996 Summer Olympics commercial sponsorship (Farrell & Frame, 1997; Miyazaki & Morgan, 2001). These two studies demonstrate the importance of choosing a theoretically valid event window. Despite similar sample sizes (26, 27) and the same event choice, the studies arrived at two contrasting conclusions. In the earlier study, Farrell and Frame (1997) found almost no MAR effect (0.01 percent) on the event announcement day. When they expanded their analysis to a three day event window that included two days after the announcement date, they found a statistically significant negative cumulative MAR (-0.43 percent). However, in a later study, which did not cite the work of Farrell and Frame, Miyazaki and Morgan (2001) uncovered a statistically significant *positive* effect (1.24 percent) for a five-day event window that included the announcement day and the four days *prior to* the event day. Meanwhile, they did not report the MAR for the event day in isolation. Instead, they reported the cumulative MAR for the days  $t - 1$  and  $t = 0$  in tandem as 0.12 percent ( $p > .10$ ). These contrasting results for a similar event demonstrate the importance of subsequent research that takes into consideration the assumptions and methodological choices of past studies.

Otherwise, comparisons of findings across studies in a research domain become difficult, thereby slowing substantive progress toward accepted theory.

**[TABLE A.7]**

#### **4.5 Empirical Data**

As is often the case with a growing collection of research in a specific area, inconsistencies emerge and are addressed in subsequent studies to advance the theoretical application and development within an investigative domain. The exploration of interorganizational alliances with a promotional agenda has gained some early momentum in the literature as demonstrated in the preceding section, and this study aims to expand this progress beyond domestic borders and examine emerging theory. The first step to a traditional event study analysis employing Fama's market model (1970) (Equation 3) is to determine the estimation period for the model's parameters. Table A.7 lists the baseline period chosen for several prior event studies in marketing. The duration of the intervals range from 260 days to 50 days with the earliest beginning 320 days before the event (Lane & Jacobson, 1995). Only one study employed a post-event estimation window (Pruitt et al., 2004). In general accordance with a majority of previous studies utilizing the two-step model, the baseline estimation period adopted in this research ranged from 250 days before the announcement date ( $t - 250$ ) to 50 days prior to the announcement ( $t - 50$ ). Individual security and market quotes were also compiled continuously through the event date until 50 days following the announcement for a total data collection window of 301 calendar days ( $t - 250, t + 50$ ) for each firm included in the sample set.

To complete step one in the original market model, an OLS regression was undertaken for the baseline period (-250, -50), which specified the appropriate  $\alpha_i$  and  $\beta_i$  terms for use in estimating any abnormal returns in the event window. After this calculation, the two parameters were entered into Equation 3 for each day designated as part of an event window, and the resulting residual, or error term ( $e_{it}$ ), was recorded as an abnormal return. Following accepted practice, several event windows surrounding the announcement date were designated for analysis with a particular emphasis on a two-day window inclusive of the day of the announcement and one day following (0,+1) to allow for news distribution and time zone considerations given the global nature of the alliances (Geyskens et al., 2002; Lane & Jacobson, 1995).

Once the market value impact of the announced alliances had been quantified through abnormal returns and the main effect evaluated (detailed in results section), attention moved to explaining the factors that influenced returns beyond the expectations specified in the market model. In previous studies, this analysis has taken the form of a multiple regression with the sample firms' abnormal returns on event day or cumulative abnormal returns within a specified event window as the dependent variable. However, adopting this procedure relies on the magnitude of an estimated statistic (modeled abnormal returns) as the dependent variable when the statistic itself is not necessarily different from zero at the firm level. When estimated abnormal returns are non-significant at the firm level, the null hypothesis that such returns are in fact zero cannot be rejected (Leeds et al., 2007). Therefore, employing the magnitude of such returns as the dependent variable in a regression analysis would be inappropriate. To avoid this shortcoming, the current study utilized logistic regression to analyze the realization of

abnormal returns significantly different from zero. Extending the investigation to this prescriptive stage facilitates theory building and confirmation by allowing for the rationales for abnormal returns in previous studies, or claims of moderator effects, to be controlled for while new hypothesized sources of added value are evaluated in the current sample of firms, which in this case represent a more geographically diverse cross-section of organizations compared to previous research. Given the increasing globalization of promotional efforts (Aaker & Joachimsthaler, 1999), such advancements in both theory and sampling frame are necessary to assess tactics across markets.

The promotional alliances that paired Formula One teams and their respective corporate partners in 2007 composed the sample for this investigation. Of the 261 alliances, 167 (64%) involved publicly-traded sponsoring firms. From that group, 73 (43.7%) alliances had verifiable announcement dates<sup>20</sup> that signaled the release of their partnership information to the public. These announcement dates ranged from Mercedes Benz's announced alliance with the McLaren team on October 26, 1994, to Oerlikon's announced alliance with the Red Bull team on January 23, 2007. The sample of 73 alliances consisted of 65 sponsoring firms and 10 promoting teams<sup>21</sup>. Within the composition of firms, 18 (24.7%) claim headquarters in Asia, including 12 from Japan, 27 (41.5%) hail from nine Western European nations, and 20 (30.8%) originate from the United States. Table A.8 presents the sample's descriptive statistics in relation to the independent variables described in the following section.

**[TABLE A.8]**

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<sup>20</sup> The 73 alliances resulted in 70 individual announcement dates as one announcement (Bridgestone) included three separate alliances with three different F1 teams announced simultaneously. As a result, this particular announcement is excluded from subsequent analyses considering specific alliance characteristics.

<sup>21</sup> Table A.2 contains the names and claimed national origins of the 11 F1 teams. One team (Torro Rosso) did not have any publicly-traded corporate partners with verifiable announcement dates.



#### **4.5.1 Independent Variables**

The primary independent variables utilized in this study are composed of a series of binary measures. Based on a content analysis of each promotional alliance announcement and in consideration of the Datastream Industrial Classification of each sponsoring firm, resource complementarity (RCOMP) (H1) and alliance leverage (LVG) (H4) were independently coded by two researchers after reviewing the theoretical basis for each of these variables described in the hypotheses above. Recall that resource complementary was described in Section 4.3.1 as industry relatedness allowing for the coproduction of incremental relationship-specific resources (Madhok & Tallman, 1998); while leveraging an alliance was characterized in Section 4.3.4 as the deployment of incremental marketing resources to support the alliance's promotional objectives (Cornwell, Roy et al., 2001).

After examining each sponsoring firm's industrial classification and the press releases announcing the promotional alliances, each researcher independently coded each alliance between a firm and their sponsored team as consisting of complementary resources (coded '1,' otherwise '0'), and as including an announced plan to leverage the alliance with supplementary marketing resources (coded '1,' otherwise '0'). The resulting inter-coder reliability was 89.5 percent. Discrepancies were resolved by collectively revisiting the theoretical rationales for each concept and achieving unanimous agreement following discussion and the consultation of a third researcher. The following quotes from two alliance announcements exemplify these two concepts.

- Resource complementarity: “Formula One activities are an excellent platform on which to showcase breakthroughs for emerging technologies such as the Metris’ optical metrology solutions to commercial automotive manufacturers” (“New sponsor,” 2005).
- Leverage: “The title partnership deal will be highlighted through an integrated global branding and marketing approach aimed at strengthening the ING brand and bringing it more into line with the scope of our global customer base of 60 million clients” (“ING confirms,” 2006).

Nationality congruence (NATC) (H2) was determined by a match of the corporate headquarters location of the sponsoring firm and the country of origin designation of the promoting team (coded ‘1,’ otherwise ‘0’). Nationality congruence was shared by 22 (30%) of the alliances included in the sample, and its importance was echoed by several of the alliances announcements with quotes such as, “The Dutch heritage of both companies played an important role for us” (Spyker F1, 2007).

The level (LVL) (H3) of the promotional alliance was operationalized at three incremental degrees. The highest level was reserved for alliances involving sponsoring firms that either took an equity stake in the promoting team or had their designated brand integrated into the name of the promoting team, or both. These designations were typically noted in the alliance announcements as “title partner” or “team owner.” This exclusive level was met by 10 (14%) of the sample’s partnerships. The middle level consisted of alliances not satisfying the relationship conditions of the highest level but still involving the commitment of millions of US dollars annually by the sponsoring firm to the alliance, as evidenced within the announcement or via a reliable industry source

(*Black book Formula One*, 2007). Forty (55%) alliances fell within this level, which was typically characterized by designations of “team partner,” “corporate partner,” or “official partner.” The final category of alliance levels was that of supplier only. Alliances at this level did not appear to involve any financial exchange and were often referred to as “official supplier,” “team supplier,” or “promotional supplier.” This lowest level of commitment was populated by 23 (32%) alliances. It should be noted that alliances at all three levels were commonly described in announcements as involving an exchange of resources that extended beyond solely financial considerations.

When evaluating the level of immersion in an alliance and its contribution to the value realized by the sponsoring firm, a continuous variable quantifying the investment contributed to the alliance by the firm would seemingly be a more accurate measure than the three-level categorical variable described above. However, in order for such a variable to be relevant in an event study, the actors in the market would need to be privy to this specific investment, or cost, information. While a collection of this alliance information exists internally within Formula One and its teams (*Black book Formula One*, 2007), it is considered highly confidential. Unlike naming-rights sponsorships of sport stadiums where the monetary cost and duration is often included in various press reports, F1 alliance announcements rarely include any investment figures beyond the occasional general reference to “multi-million dollar” outlays. Despite this fact, a plausible argument could be made that if researchers can gain access to the data through insider networks, the financial markets and its many tentacles might also be able to do so. As a result, in the discussion section (4.7) the total investment figure on behalf of the sponsoring firm for each alliance is also analyzed supplementary to this hypothesis

postulating that the level of immersion enhances the value realized by the firm. Total investment aggregates direct monetary and non-monetary commitments to the alliance. Examples of non-monetary commitments include expertise in technology, aerodynamics, various component parts, financial leverage mechanisms, logistics, and international travel to name a few.

#### **4.5.1.1 Control Variables**

Beyond the collaborative relationship characteristics of an interorganizational alliance described above, certain factors of the individual organizations must be controlled for when predicting if value is contributed by a promotional alliance. Included in Appendix A are three tables summarizing past research that examined the financial market impact of domestic promotional alliances. The tables are grouped by characteristics of the alliance (Table A.9), sponsoring firm (Table A.10), and promotional partner (Table A.11), and each lists the examined variables, their context, the associated coefficient, and test statistic.

In regards to the characteristics of the sponsoring firm, corporate size may impact returns from an alliance in divergent ways. To begin, a negative relationship between realized financial market returns and corporate size may result from the theory that any individual sponsorship announcement or event is less likely to impact a large, potentially diversified corporation's future cash flows than it would a smaller, more focused corporation (Cornwell, Pruitt et al., 2001). This proposition is rooted in resource dependence theory (Pfeffer, 1972; Pfeffer & Nowak, 1976), where a large firm may possess more internal resources or external resource links that enable it to reduce

dependency on the focal alliance. As a result, any single alliance takes on greater importance to a smaller firm, which relies incrementally on the alliance's resources to contribute value (Koh & Venkatraman, 1991). Sarkar, Echambadi, and Harrison (2001) demonstrated this relationship in an entrepreneurial environment where smaller firms realized a greater performance impact of alliance proactiveness. In this study, the number of employees as reported by Thomson Reuters' Worldscope Fundamentals financial database is used to control for any effects attributable to the size of the firm (SIZE), which are expected to be either negligible or of a negative magnitude (Das et al., 1998).

Conversely, the use of a corporate name, as opposed to a brand or smaller subsidiary name, in the promotional communications touting the alliance has been suggested to exert a positive influence on abnormal stock returns (Pruitt et al., 2004). Two potential factors account for the hypothesized difference in returns between corporate names and singular brand names. First, when corporations harbor multiple brands within their portfolio, these conglomerates offer more avenues for a perceived fit with the alliance partner, as well as greater potential to leverage the promotional alliance across several brands, which stakeholders may recognize. Although this assertion appears contradictory to the previous argument put forth regarding firm size, scholars have substantiated managerial objectives for commercial sponsorship engagement beyond brand awareness and exposure that a conglomerate corporation may be better positioned to take advantage of, such as community support, employee loyalty, and business-to-business relationship building through hospitality (Copeland et al., 1996;

Thjømmøe et al., 2002). Second, the utilization of a corporate name in the alliance announcement offers a more direct link to the moniker of the market-traded security.

One example that demonstrates both these rationales is the alliance of energy drink Battery with the Williams F1 team. Battery is a brand owned by Carlsberg Breweries and therefore any anticipated future cash flows as a result of the alliance should theoretically be reflected in the financial value of Carlsberg. However, had Carlsberg promoted its own corporate name, perhaps in conjunction with Battery and other brands under its purview, the alliance announcement could have been more easily linked to the stock moniker (CAB), and investors may have interpreted the promotional alliance as more valuable given a stated intent to leverage the relationship across multiple brands. Both of these rationales lend credibility to the proposition of a positive influence when utilizing a corporate name, and as a result, a dichotomous variable is included here to control for the use of a corporate name (i.e. a firm name identical, or closely resembling the stock moniker) in promotional communications surrounding the alliance.

Apart from controlling for sponsoring firm size and the use of a corporate name, previous research suggests several other factors that should be accounted for when considering the impact of promotional alliance announcements. Anand and Khanna (2000) suggest that, consistent with organizational learning theory (Levitt & March, 1988), firms learn to create value in alliance situations as their alliance experience accumulates. In the current context, this suggests that sponsoring firms with past experience in the Formula 1 context will be more likely to realize alliance value. To account for this possibility, the F1 sponsorship experience of each firm in the sample is

represented by a variable summing the years of any promotional involvement in Formula One.

In a high profile promotional alliance such as F1 racing, the potential for an agency conflict creates an interesting scenario. The prospect of a conflict in the principal-agent relationship has been characterized as a moral hazard effect where executives realize the corporate hospitality benefits of commercial sponsorship without the associated personal costs (Mishra et al., 1997). As a result, executives may be tempted to engage their firm in promotional alliances that do not necessarily add value to their organization. Based on the thought that stakeholders would have more difficulty in monitoring agency conflicts when cash flow is more accessible for executive discretion, a measure of corporate cash flow has been used by researchers as a proxy for the expected negative relationship induced by agency conflicts (Cornwell et al., 2005; Pruitt et al., 2004). Like most popular international sporting events, Formula 1 offers the executive representatives of its corporate partners luxurious hospitality opportunities in the exclusive F1 Paddock Club, located just above each team's garage and overlooking their pit stop area at each race (Bartunek, 2007a). Basking in such elite entertaining could certainly be conceived as a moral hazard to stakeholders who evaluate the value to the firm of such high profile and costly promotional alliances. Therefore, a negative influence is expected when evidence of an increased potential for an agency conflict exists. In line with previous research, this factor is controlled for through the inclusion of a cash flow ratio variable.

The last set of influential considerations in this study concerns characteristics specific to the promotional partner or F1 team in this case. All else equal, it seems safe to

assume that a sponsoring firm would prefer to align with a high-status promoting team. Research that views alliances as interorganizational endorsements supports this idea of building status based on the status of an organization's partners (Stuart et al., 1999). In a motor racing context, status of the teams can be operationalized based on their performance in direct competition on the track (Pruitt et al., 2004). In this study, both recent and historical performance are controlled for through separate variables. A promoting team's accumulated points in the year prior to the alliance announcement represent their recent performance; while the team's aggregate drivers' championships up until the alliance announcement demonstrate historical performance in a manner commonly associated with status in F1 circles (Elizalde, 2008). Descriptive statistics of all six control variables are included along with the dependent variable and the four hypothesized variables in Table A.8. A correlation matrix is also included as Table A.12. While a few significant correlations exist between variables (for example, firms larger in size are correlated with higher level sponsorships [highest sponsorships coded 1]), the primary independent variables do not show a significant degree of multicollinearity.

**[TABLE A.12]**

#### **4.6 Results**

Given the popularity of the two-step market model in prior research and the functionality of the indicator model in producing an intuitive significance test of individual firm's abnormal returns, both models were employed in this study. Starting with the traditional market model, cumulative abnormal returns (CAR) were calculated across several feasible event windows. Interestingly, two conventional windows



representing both an immediate (0,+1) and slightly longer term effect (0,+10) produced mean CAR values significantly different from zero across the sample in the *negative* direction ( $p < .05$ ). This finding is surprising in light of the sparse evidence for a negative impact on value for sponsoring firms. While Leeds et al. (2007) argued that naming rights had no effect on firm value, only Farrell and Frame (1997) have uncovered empirical support for a negative effect of commercial sponsorship and it was only apparent in the somewhat unconventional event window of (0,+2). In checking the robustness of this study's initial finding, the exclusion of one significant outlier in the negative direction (EMC<sup>2</sup>), and the exclusion of another firm also with a negative CAR that announced multiple team alliances on the same day (Bridgestone), did not change the result of negative significance for either event window. The various event windows examined are featured in Table A.13.

**[TABLE A.13]**

This negative result foreshadows a challenge in supporting the four hypotheses of this study that predict positive contributions to firm value. While possible, it now seems more likely that certain alliance characteristics might dissuade an overall negative effect of Formula One alliances. To further validate these results, the event indicator model was employed initially with only the days used by the traditional market model that included the baseline period (-250, -50) and specified event windows. This allowed for the aggregation of abnormal returns within the event windows and a direct comparison to the CAR values calculated by the traditional market model, which is discussed below. Once this was completed, the event indicator model was also run with all collected dates included (-250, +50) and the event window signified with the dummy variable for the

appropriate dates, similar to Leeds et al.'s application (2007). Just as in the traditional market model, both event indicator model applications exposed statistical significance ( $p < .05$ ) for a negative effect on firm value across the sample of alliances for the event windows (0,+1) and (0,+10). The various event window coefficients and associated t-statistics for the full indicator model are also included in Table A.13. On the surface, these findings indicate that a promotional alliance with an F1 team actually *reduces* the value of the sponsoring firm.

Using a correlation analysis to compare the CAR measures generated by the three model applications for each sponsoring firm revealed an extremely high correlation between the model estimations (Pearson  $r > .99$  across all three applications for both [0,+1] and [0,+10]). Examining the individual values confirmed almost identical measures, which demonstrates the utility of the more straightforward event indicator model approach as advocated by Karafiath (1988). Table A.14 produces these three measures for each sponsoring firm in addition to its announcement date ( $t = 0$ ).

**[TABLE A.14]**

Probing the abnormal returns at the firm level exposed the lack of statistical significance for a vast majority of the estimated returns. This was determined in the indicator model by the significance of the event window dummy coefficient for each firm. Meanwhile, a one-sample t-test ( $H_0: CAR = 0$ ) was conducted for every sponsoring firm within each event window to ascertain statistical significance at a firm level in the traditional market model. Table A.14 shows that a maximum of ten firms display significant returns in any one of the model applications or chosen event windows. None of the three model applications produced any positive significant results for the (0,+1)

event window, and although the (0,+10) event window produced a total of 25 significant CAR measures at the firm level across the three applications, only seven are positive effects.

After studying the results of the estimation of abnormal returns, it is invalid to declare that CAR values at the firm level are not zero in a majority of cases within the sample. As a result, utilizing these estimations as a dependant variable was deemed inappropriate<sup>22</sup>. Instead, logistic regression was determined to be most suitable for testing the effects of the hypothesized alliance characteristics on the value of the firm. Employing logistic regression enabled a distinction to be made between firms realizing a statistically significant abnormal return and those alliances generating no discernable effect. At this stage of analysis, the event window chosen is conventionally short to isolate the announcement's effects. Table A.7 shows a majority of prior studies to have utilized windows between two and five days in duration. Following this precedent, the event window inclusive of the announcement date and following day (0,+1) was chosen as the focus going forward in this investigation (Geyskens et al., 2002; Lane & Jacobson, 1995). In regards to the three applications of the market model discussed above, the CAR estimations produced by the event indicator model that included all collected dates (column four of Table A.14) were used to designate significant returns at the firm level in the subsequent regression analysis (Leeds et al., 2007). The cross-sectional examination

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<sup>22</sup> Although this paper firmly maintains that utilizing the magnitude of non-significant, estimated abnormal returns as a dependant variable is inappropriate, given the use of this procedure in previous research, a regression analysis was undertaken to explore the results when the estimated CAR values were employed as a predicted, continuous variable. Similar to Model 2 in Table A.12, no predictor variable achieved a marginal level of significance ( $p > .10$ ), but when isolated as the sole predictor, nationality congruence was marginally significant in the *positive* direction ( $t = 1.89$ ,  $p = .063$ ). The coefficient suggested that nationally congruent sponsoring firms enjoyed a 1.2 percent rise in stock price compared to nationally incongruent firms upon announcement of an F1 team promotional alliance.

of these CAR estimations showed a negative effect on firm value that is highly significant ( $p < .01$ ) when compared to the null hypothesis of no abnormal returns. At the firm level, seven alliances displayed event window coefficients deemed to be statistically significant from zero ( $p < .10$ ), and all seven were in the negative direction. Therefore, the dependent variable for the logistic regression analysis was coded as one (1) for sponsoring firm alliances producing at least a marginally significant negative return, and zero (0) otherwise, which would designate non-significant abnormal returns in the event window.

Focusing first on the four hypothesized variables, Model 1 in Table A.15 outlines the effects of the logistic regression predicting significant negative returns. Contrary to expectations, the model did not contribute to explaining negative returns beyond the constant-only specification ( $p > .10$ ). Amongst the individually hypothesized variables, only nationality congruence (H2) appeared to demonstrate the potential for influence on negative returns. No support was apparent for resource complementarity between the alliance partners (H1), level of immersion of the sponsoring firm (H3), or identified plans to leverage the alliance (H4). Before exploring the possible relationship between negative returns and nationality congruence further, the various control variables were added to the model to ascertain any possible effects (Model 2 in Table A.15). Again, the model lacked overall improvement from a constant-only model and no individual variables reached a standard level of significance ( $p > .10$ ) in the expanded model.

**[TABLE A.15]**

Reducing the model to concentrate on the sole effect of nationality congruence (Model 3) yielded a specification that significantly contributed to the likelihood of

negative returns beyond the base, constant-only model. Surprisingly, the relationship between nationality congruence and a reduction in firm value is opposite the hypothesized association (H2). By computing the anti-log of the logistic regression equation and translating the result to a probability, the relationship can be interpreted as a higher probability (19.06%) for significant negative returns when a sponsoring firm and sponsored team claim the same national origins compared to divergent national origins (4.17%).<sup>23</sup> As an odds ratio, the odds of significant negative returns are 5.41 times greater for nationally congruent alliances versus those non-congruent in nationality. In other words, the results of this analysis indicate that aligning with a sponsored enterprise that does *not* originate from the same country can decrease the chance of realizing a loss in firm value from the promotional alliance. It therefore appears as if the financial markets are punishing firms that engage in F1 promotional alliances with teams in the firm's home market. This interesting phenomenon is explored further in the following discussion section (4.7).

#### 4.7 Discussion

The results of this study characterize promotional alliances in Formula One motor racing to be potentially detrimental to the value of the sponsoring firm. At the very least, such alliances do not seem to add value to the firm as interpreted by worldwide financial markets. This empirical finding contradicts the prevalent assertions of similar domestic research in the United States that finds positive value implications of commercial

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<sup>23</sup> This anti-log procedure for nationally congruent alliances is specified by  $e^{(-3.135 + 1.689(1))} = 0.2355$ ; which is converted to a probability as  $0.2355 / (1 + 0.2355) = 19.06\%$ . Likewise, non-nationally congruent alliances is specified by  $((e^{(-3.135 + 1.689(0)))} / (1 + (e^{(-3.135 + 1.689(0))})) = 4.17\%$ . The resulting odds ratio is computed as  $e^{1.689} = 5.414$ .

sponsorship announcements (Clark et al., 2002; Cornwell et al., 2005; Pruitt et al., 2004; Mishra et al., 1997). Several possibilities exist that could account for this contradiction.

First, unlike the majority promotional alliances studied in prior research, F1 alliances may be regarded as either a net drain on sponsoring firm resources or any benefits accrued are considered by investors to be offset by the substantial costs of such an alliance. Similarly, when re-examining the effects of stadium naming rights sponsorships at the individual firm level, Leeds et al. (2007, p. 583) stated that “(t)he market does not interpret the announcements of naming rights as a positive event because the cost of the naming rights is comparable to any future cash flow benefit.” Given a median cost of about US\$3 million annually for firms aligned with F1 teams (*Black book Formula One*, 2007), this possibility is certainly plausible in this promotional context and is explored further when discussing the level of immersion (H3) below.

A second rationale for the discovery of a negative influence on firm value, despite the positive findings of previous scholars in similar context, is that promotional alliances in F1 motor racing might be perceived to entail a particularly enhanced agency conflict (Farrell & Frame, 1997). While Formula One’s Paddock Club is heralded for its business networking opportunities (Bartunek, 2007b), it is simultaneously notorious for its trackside opulence. At F1 races around the globe, executives of sponsoring firms commonly arrive by helicopter at the track to avoid event traffic. Once on-site, they enjoy private tours of the teams’ working pit areas and personal introductions to drivers and other team-invited celebrities before retreating to their team’s private suite within the Paddock Club complex. Once they reach their team’s luxury hospitality area, sponsoring executives are treated to imported wine, champagne and a four-course meal catered by

the Austrian company, DO&CO regardless of the location of the particular race (Bartunek, 2007a).

Although an attempt consistent with prior studies was made in this investigation to control for the moral hazard effect of agency conflicts, such a control variable is only as accurate as its ability to quantify the hazard. In this research, the use of a cash flow ratio to market value as a proxy for an agency conflict showed no significant effect on the likelihood of negative abnormal returns ( $p = .62$ ). Despite its negative significance in one study (Pruitt et al., 2004), the continued use of cash flow as a proxy for an agency conflict remains a relatively crude measure of an executive's prerogative regarding his/her firm's promotional investments. While the general assumption that a firm's high cash flow margin reduces institutional monitoring may or may not be correct; if needed, executives can justify promotional expenditures in various ways given the lack of a universal gauge of marketing value (Moorman & Rust, 1999). Therefore, a sponsoring firm's cash flow may be a weak or inaccurate approximation for investors' perceptions of an agency conflict in a promotional alliance situation. If that is the case, shareholders could view certain high-profile promotional alliances as nothing more than an executive's holiday excursion at the firm's expense, and the reflection of this assessment in a market reaction would not be captured through a relationship with the traditional cash flow to market value ratio.

Finally, any event study utilizing the financial markets as a measure of an event's impact on firm value is simultaneously testing two hypotheses. The main hypothesis is that the event in question will influence the future cash flows of the firm (Fama, 1970). The underlying, implied hypothesis is that financial markets are efficient and

participating investors can interpret all relevant information and accurately apply the information to the market's valuation of the firm (Geyskens et al., 2002; McWilliams & Siegel, 1997). While it is possible that investors in general make poor judgments regarding the value of promotional alliances and therefore financial markets are inefficient in measuring the value of this particular marketing tool; it is also possible that investors in the US markets are substantially better or worse at interpreting the value of certain promotional alliances compared to their counterparts in other global regions. If this was the case, a sample of only US firms might show a result different from a globally diverse sample.

To check this possibility, the 20 alliances involving US firms were selected and their estimated CAR values for the event windows (0,+1) and (0,+10) were tested as a subsample against the null hypothesis of zero abnormal returns. Although not statistically significant for the immediate event window (0,+1) ( $t = -1.15$ ), the effect was negative; as was the effect for the longer event window (0,+10), which was significant ( $t = -2.37, p < .05$ ). This evidence dispels the prospect that US markets positively evaluated Formula One alliances, leaving other markets to drive the negative effects of this study. However, given the diversity in the sample's sponsoring firms, perhaps the negative effect is not consistent amongst other geographic regions.

Though not formally hypothesized, a unique contribution of this investigation is the analysis of alliance effects on sponsoring firm value across different markets. Whereas previous promotional alliance research had limited investigation to the United States market, this study's sample of alliances contained sponsoring firms hailing from 14 different nations. Each firm's home securities market was used to generate the



financial returns analyzed throughout this research. Across markets, these returns were interpreted as changes in the value of the represented firm based on investors' collective assessment of the impact of a promotional alliance announcement. Yet, organizational research has suggested that cultural values are not consistent across the globe (Hofstede, 1983), and these differences can affect international marketing strategy and priorities (Erdem et al., 2006; Kogut & Singh, 1988). To evaluate the potential for differing effects by culture, the sample was categorized into four regions representing Japan, other Asian nations, Western Europe, and the United States. The resulting logistic regression showed no discernable effects by market region as neither the model nor any of the categorical variables comparing regions approached significance ( $p > .10$ ). This finding was reinforced by a non-significant, between-groups ANOVA that compared the estimated CAR values between regions. These supplementary tests of the data confirm that the negative influence of F1 alliance announcements was not isolated to one region's markets; thereby implying that the markets' evaluation of this standardized promotional tool was somewhat consistent between cultures.

Moving beyond the macro effect of F1 promotional alliances in the sample, a discussion of the hypothesized influences is warranted despite their general lack of empirical support within this study. The first hypothesis postulated that sponsoring firms able to contribute complementary resources to the alliance context would realize greater value at the announcement of their alliance with an F1 team. This assertion was based on the theory that aligning with partners that possess external resources that enhance the performance of a firm's internal resources facilitates the creation of incremental value (Chung et al., 2000). Such resource complementarity is most often found between

alliance partners in strategically related industries (Tsai, 2000). Consequently, sponsoring firms engaged in the automotive or high-technology sectors were deemed to offer resources complementary to F1 motor racing. Both industries had shown relevance in previous studies of sports-based promotional alliances (Cornwell, Pruitt et al., 2005; Pruitt et al., 2004). However, no distinction was made between sponsoring firms generating services and those producing tangible products. Yet some alliance research implies that audiences are more likely to recognize an alliance when compatible products are involved (Samu et al., 1999). To explore if the delineation between product and service offerings accounted for the lack of support for this hypothesis, the resource complementarity categorization was subdivided into product and service-based sponsoring firms. Nevertheless, subsequent analysis of the newly categorized variable yielded similarly non-significant results in relation to reduced firm value. This lack of support for an influence of complementarity in promotional alliances suggests that industry compatibility may not be sufficient to justify certain marketing expenditures in the eyes of investors.

Another hypothesis with scarce support in the empirical model was the influence of an announced plan to leverage the promotional alliance (H4). The literature on leveraging promotional investments has only gained traction in the last decade and remains sparse (Cornwell, 2008). Nevertheless, strategically deploying organizational resources in support of a focal promotional alliance has been considered vital to realizing a competitive advantage according to the resource-based view of the firm (Fahy et al., 2004; Ireland et al., 2002). Therefore, alliance announcements that specify a plan to leverage the relationship through integration with further firm resources would appear to

be closer to achieving a competitive advantage than sponsoring firms failing to disclose such a plan. However, this assumption was not apparent in the markets' reactions to alliance announcements.

One possibility is that investors assumed that all sponsoring firms had some plan to leverage the alliance even if the firm did not mention any leverage initiatives in their announcement. Given the multi-million dollar commitment involved in F1 alliances, this may seem like a logical assumption. Yet, research on commercial sponsorships has demonstrated that sponsoring firms do not always have a coherent plan for integrating their promotional alliances with other strategic marketing resources (Amis et al., 1997; Farrelly et al., 1997).

Another possibility for the lack of impact of announced plans to leverage the F1 alliance is that the firms' strategies were not adequately communicated to investors who were evaluating the value implications of the alliance. To further explore this prospect, data was gathered on the number of news stories published within a 21-day window (-10, +10) around the announcement date of each alliance. Lexis Nexis' Major World Publications database, which includes the world's major newspapers, magazines, and trade publications, was used to quantify the mass media dispersion of news of each alliance announcement (Demers & Lewellen, 2003). While the mean publication quantity was just over four (4.17), about half (51.4%) of all alliances in the sample did not generate any discernable press coverage in the world's major publications<sup>24</sup>. This

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<sup>24</sup> Keep in mind that alliance announcement dates and content was originally ascertained and verified through sponsoring firm and F1 team press releases, as well as Formula One news outlets and other public sources.

finding is somewhat surprising given the global popularity of F1 racing and the promotional purpose of these interorganizational relationships.

On the surface, this data seems to suggest that despite the investment involved, many sponsoring firms may indeed not have a plan in place to promotionally leverage the alliance when initiating the relationship. Otherwise, a reasonable expectation would be that a sponsoring firm's public relations personnel would tactically maximize the publicity of the alliance's commencement. If the formation of a promotional alliance is not being trumpeted in the press, then investors must rely on internal or specialty sources to describe the new relationship or remain unaware of the partnership. Awareness and a degree of alliance information are necessary conditions for a sponsoring firm's leverage initiatives to influence the perceived value of the announced alliance. To determine if the level of publicity played a role in investors' assessments of the value of F1 alliances, the number of stories printed in Lexis Nexis' major news outlets was regressed against the dichotomous dependent variable signifying negative returns. The result showed no effect of publicity ( $p = .57$ ) on likelihood of realizing significantly negative abnormal returns.

In light of the supplementary data regarding the amount of publicity and the negative overall effect on firm value, a final possibility concerning the hypothesized effect of an announced plan to leverage the alliance is that some sponsoring firms may actually be avoiding mass media coverage of their alliance announcements. Instead of attempting to generate initial publicity and outlining their plans to utilize the alliance, perhaps sponsoring firms have become fearful of investors' perceptions of the initial resource commitment required and agency conflicts inherent in these promotional alliances. As a result, firms might not orchestrate a media splash for the announcement

of the alliance, and instead integrate the desirable facets of the alliance with their complementary operations and marketing resources over time; thereby gradually incorporating the alliance into their promotional channels and messaging. Although the alliances in this investigation were announced over the last 15 years, this possibility is even more feasible in the current economic climate, where the scrutiny of promotional alliances and the monetary commitments that often accompany them has entered the public debate (Lefton & Mickle, 2009). Typically, the monetary investments involved in forging a promotional alliance are directly reflected in the identified “level” of immersion with the sponsored enterprise. This premise served as the basis for the third hypothesis of this study.

It was proposed (H3) that sponsoring firms at a higher level of immersion in the alliance signified greater commitment and would be more likely to realize additional value. Recall that this hypothesis was originally operationalized at three categorical levels: owner/title partner, official partner, and supplier. The reference category was set as “supplier,” the lowest of the three levels, for the primary logistic regression model. Neither higher level showed a significant difference ( $p > .10$ ) from the reference level in the primary model or a reduced model considering only H3. These results imply that the level of immersion in the promotional alliance as measured by sponsorship designation does not affect the likelihood of significant negative returns upon announcement of the alliance. However, a superior measure of the commitment to a promotional alliance could be the initial investment agreed to at the commencement of the relationship. While the magnitude of this investment might carry a positive connotation of immersion and strategic commitment, it also signifies a resource outlay, opportunity cost commitment,

and often a considerable monetary expenditure; all of which carry negative connotations with investors. Beyond the uncertain directionality of any effect of initial alliance investment on firm value, there remains a question of whether the market actors have access to this information. A vast majority (81.4%) of the alliance announcements analyzed for this study did not contain numeric details on the initial exchange of resources or the stipulated resource exchange over the duration of the alliance. Therefore, the level of alliance designation was conceptualized as an appropriate representation of the theory that greater commitment demonstrated through alliance immersion would result in a higher likelihood of positive returns.

Conversely, if market actors were aware of, or could accurately approximate the details of the sponsoring firm's resource commitment beyond the general publicized information, the market may estimate the future benefits to be outweighed by the required costs of an F1 promotional alliance. Leeds et al. (2007) surmised a similar cost/benefit analysis in the minds of investors when evaluating the value of naming rights agreements to the sponsoring firm. Using an F1 team source (*Black book Formula One*, 2007), the estimated alliance investment for each sponsoring firm in the study's sample was ascertained and recorded within the database of independent variables. The firm's investment was defined in millions of US dollars and was an aggregation of monetary, technology, expertise, component, and other commitments to the alliance. Investment estimations ranged from US\$50,000 to US\$350M annually, with an average of US\$27.2M and a median of US\$2.9M.

To empirically test the possibility that the likelihood of sponsoring firms' negative returns was related to the detailed magnitude of investment in the alliance, a

logistic regression model (Model 1 in Table A.16) was analyzed with a dichotomous indicator of significant negative returns as the predicted variable and the estimated investments of sponsoring firms as the independent variable. This model proved to be a significant improvement from the constant-only model ( $\chi^2_1 = 5.718$ ,  $p < .01$ ), and suggested that the odds of significant negative returns in shareholder value are 1.011 times greater for every US\$1M invested in an F1 promotional alliance. Table A.17 (column 3) shows the probabilities of significant negative returns at various alliance investment levels. These computations demonstrate that although statistically significant, when the magnitude of investment is considered in isolation, the probability of negative returns remains relatively stable at low levels of investment. However, as the resource commitment escalates, the probability for reduced shareholder value simultaneously grows. The analysis indicates that contrary to the theoretical foundation behind the positive influence of the level of immersion (H3), market actors actually perceive commitments to an F1 promotional alliance as incremental costs detrimental to firm value. Given that the categorical level of sponsorship was non-significant, the finding also implies that market actors are more sensitive to the magnitude of investment than the alliance designation in mass media reports and press releases.

One caveat to the model employing a continuous variable representation of alliance investment as the sole predictor of significant negative returns is the apparent lack of fit to the observed data according to the Hosmer and Lemeshow test ( $p = .034$ ), which tests the null hypothesis that there is no difference between observed and predicted values. In rejecting this hypothesis, there is concern that the model's estimates do not adequately fit the observations in the sample. The Hosmer and Lemeshow test evaluates

this contention by dividing cases into predicted probability deciles and calculating the chi-square based on the frequencies of observed and expected significant negative returns (dichotomous dependent variable). With the small number of significant negative returns in the sample, the test indicates their dispersion by investment magnitude may be greater than the model predicts, thereby hinting at the influence of outliers, which is discussed further below. To potentially improve the fit of the model, alliance investment might be considered in tandem with the impact of nationally congruence.

Nationality congruence between the sponsoring firm and the sponsored enterprise was found to also be detrimental to firm value (Model 3 in Table A.15), contrary to hypothesized expectations (H2). Considered in isolation, sponsoring firms sharing a national origin with their sponsored F1 team were over five times more likely to experience a significant reduction in shareholder value than firms aligning with a team that claimed a different nationality. The finding suggests that market actors are less concerned with image congruence theory, which states that the perceived congruence between alliance partners positively influences consumer brand association and awareness (Gwinner, 1997; Samu et al., 1999), and perhaps more concerned with the common alliance objective of expansion into new international markets (Varadarajan & Cunningham, 1995). Further, investors seem to favor a global cultural positioning as opposed to a domestic cultural positioning. Alden et al. (1999) contend that the expansion of the global marketplace has created widely accepted symbols of global consumer culture, and by strategically associating with such symbols, brands can be viewed by consumers as global brands. International branding research also asserts that the perception of a brand as global can raise its esteem and positively contribute to the



pursuit of a competitive advantage (Johansson & Ronkainen, 2005). When evaluating the multi-national promotional context of F1 motor racing, investors appear to value the global dimension of the marketing channel and might feel as though nationally congruent alliances fail to take full advantage of the promotional potential.

The primary and supplemental analysis undertaken in this study has revealed a negative effect on sponsoring firm value upon announcement of an F1 promotional alliance. The likelihood of incurring a reduction in shareholder value seems to be influenced by the nationality congruence between the firm and the sponsored team, and the magnitude of investment committed by the sponsoring firm. To better understand the confluence of these two factors, a final logistic regression model was composed inclusive of the two significant variables. This model is presented in Table A.16 (Model 2), which shows it to be a significant improvement over a constant-only model ( $p < .01$ ). Both nationality congruence and the total investment are individually significant, and the Hosmer and Lemeshow test now indicates the model to be a good fit to the observed data.

**[TABLE A.16]**

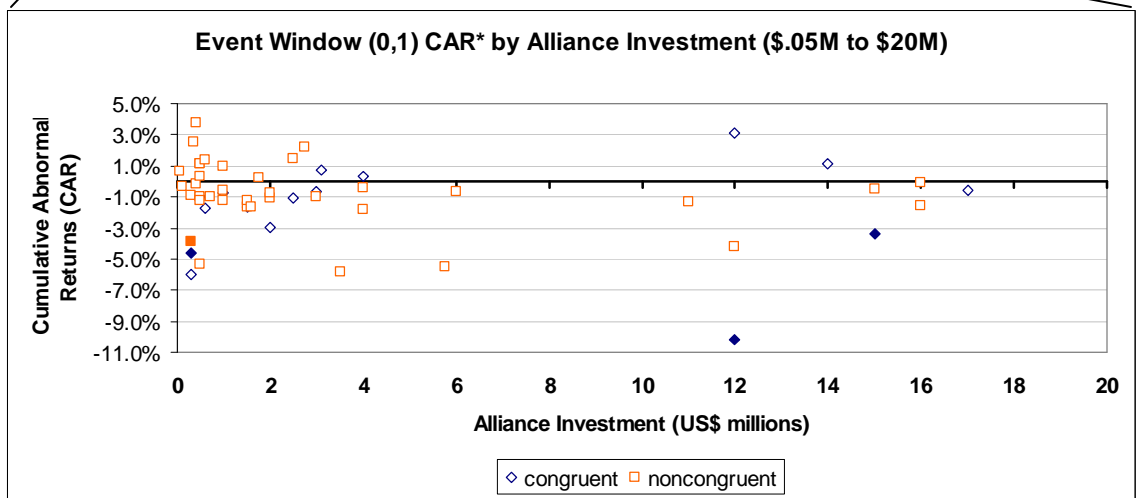
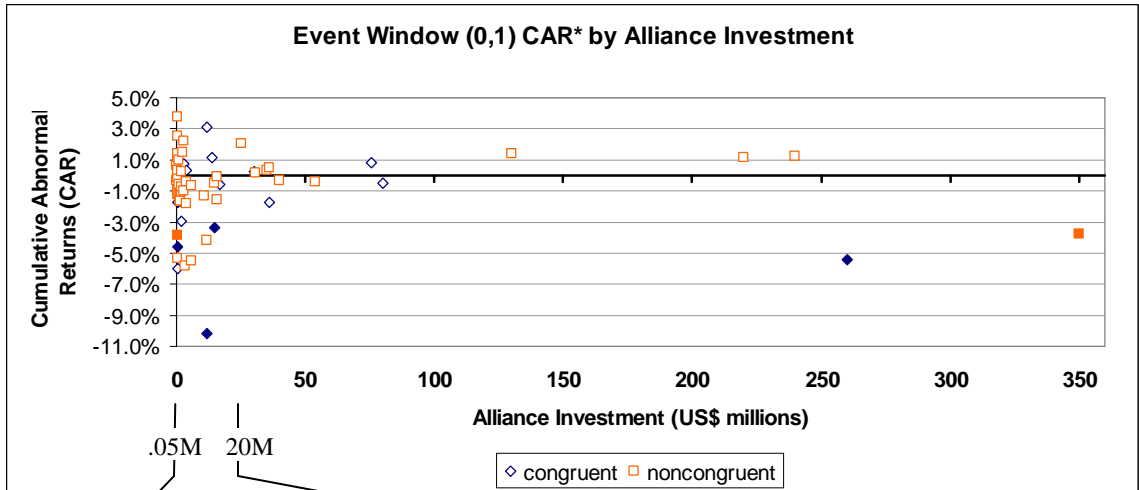
To interpret the effects specified by the final model, consider the examples of FedEx, which invested just below the median F1 investment in their alliance with the McLaren team estimated at US\$2.75M annually; and Toyota, which commits one of the largest single investments in F1 at US\$260M each year to field its own team carrying the Toyota nameplate. If each of these two sponsoring firms had aligned at their same investment level with an F1 team of a different national origin from their own, the probability of realizing a significant reduction in shareholder value would be 1.69 percent for FedEx and 33.49 percent for Toyota. On the other hand, if FedEx and Toyota had

decided to each form a promotional alliance with an F1 team that shared the same nationality as their own firm, the probability of reduced market value would rise to 13.42 percent for FedEx and 81.90 percent for Toyota<sup>25</sup>. Table A.17 (columns 4 & 5) displays the likelihood of this reduction in shareholder value by nationality congruence and total alliance investment of the sponsoring firm at varying levels. The modeled data presented implicates sponsoring firms at high investment levels as being particularly susceptible to a negative reaction from shareholders, especially when aligning with a team native to their own country. To conceptualize this finding in relation to the sample's sponsoring firms and their estimated cumulative abnormal returns for the immediate event window (0,1), Figure 4.1 plots these CAR values by alliance investment and distinguishes between nationally congruent and non-congruent promotional alliances.

**[TABLE A.17]**

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<sup>25</sup> The probabilities listed in this example can be calculated as follows. Beginning with a non-congruent nationality alliance, the FedEx probability of significant negative returns is,  $(e^{-1.90059 + (0.01311642 * (\$2.75M)) - 2.199}) / (1 + (e^{-1.90059 + (0.01311642 * (\$2.75M)) - 2.199})) = 0.0169$  For Toyota,  $(e^{-1.90059 + (0.01311642 * (\$260M)) - 2.199}) / (1 + (e^{-1.90059 + (0.01311642 * (\$260M)) - 2.199})) = 0.3342$ . Transitioning to a nationally congruent alliance situation, the FedEx probability is,  $(e^{-1.90059 + 0.01311642 * (\$2.75M)}) / (1 + (e^{-1.90059 + 0.01311642 * (\$2.75M)})) = 0.1342$ . For Toyota,  $(e^{-1.90059 + 0.01311642 * (\$260M)}) / (1 + (e^{-1.90059 + 0.01311642 * (\$260M)})) = 0.8190$ .



\* Solid (filled) markers indicate statistically significant CAR at the individual sponsor level.

**Figure 4.1:** Scatterplot of CAR estimates according to the sponsoring firm’s investment in the announced F1 promotional alliance and the firm’s nationality congruence with the sponsored team.

A close examination of the scatterplot reveals the graphic placement of the alliances that generated CAR values significant at the individual firm level (designated by solid markers). These locations suggest that outliers may be influential in the right-skewed sample. In fact, the two highest spending firms, Honda and Toyota, both

experienced significantly negative abnormal returns upon announcement of their F1 alliances. While removing these two firms from the sample does transform the impact of the alliance investment magnitude to make it non-significant (nationality congruence remains marginally significant [ $p < .10$ ]), keep in mind that removing these data points also reduces the number of sponsoring firms with significantly negative abnormal returns by a third in the logistic regression model.

In summary, this event study has uncovered a significantly negative financial return across a cross-sectional sample of firms announcing a promotional alliance with a Formula One racing team. Within a two-day event window that encompassed the announcement date and the following day, 64.3 percent of alliance announcements were accompanied by cumulative abnormal returns in the negative direction for the sponsoring firm. A similar significantly negative effect was also present for a longer event window inclusive of the announcement date and the ten following days. Utilizing an econometric dummy model to signify the event window (Karafiath, 1988; Leeds et al., 2007), the alliances exhibiting statistically significant abnormal returns at the individual firm level were designated for use in a logistic regression analysis. The subsequent investigation was aimed at discerning the likelihood of such returns based on several characteristics of the alliance, the sponsoring firm, and the sponsored team.

Only the nationality congruence within the alliance and the magnitude of the annual investment by the sponsoring firm influenced the probability of realizing negative returns upon the alliance announcement. The effect of alliance investment was primarily felt at very high levels of expenditure, thereby implying that investors are particularly weary of annual commitments to F1 that reach into the hundreds of millions of US

dollars. Financial market actors also appear to be especially skeptical of the value of a firm's alliance with a domestic F1 team. This may indicate that investors view such international promotional alliances as opportunities to expand or strengthen a firm's reputation outside of its home market. However, both these findings must be interpreted cautiously given the general lack of significant abnormal returns at the firm level and the dispersion of returns represented in Figure 4.1. It is certainly possible that despite the global popularity of F1 racing, many firms aligning with teams for promotional purposes will not discern a significant stock market impact; while others will experience a negative reaction by shareholders.

Unfortunately for both alliance partners, this study demonstrates that a significantly positive return in financial market value for a sponsoring firm is unlikely regardless of the characteristics of the specific alliance. On the surface this declaration is discouraging because publicly-traded corporations will continue to be scrutinized based on their ability to create value for investors. Yet, research probing the rationales for commercial sponsorship indicates that the immediate objective of these alliances is not necessarily to influence stock prices (Cornwell, Roy et al., 2001; Thjømmøe et al., 2002). To explore this assertion further and proactively assess the practical implications of this study, the next chapter engages executives from both sides of the promotional alliance relationship. Their opinions and interpretations of both studies included in this dissertation are highlighted and frame the relevance of the work. A concluding chapter that reviews both the contributions and limitations of these studies, as well as the potential research extensions, closes the body of the dissertation.

## CHAPTER 5

### APPLIED CONTRIBUTION

The concept of a promotional alliance between two organizations was developed and investigated in this dissertation. By embarking on two studies, each side of the alliance was featured. The first study focused on the perspective of an enterprise that attracts an audience desirable to commercial organizations. Through an interorganizational alliance, the enterprise exchanges promotional services with a commercial organization for various resources offered by the commercial entity. For both studies completed within this dissertation, the specific institutionalized mechanism for such an exchange was Formula One (F1) team sponsorship. In the context of F1, a motor racing team acts as a sponsored enterprise that offers promotional services to various corporate partners in exchange for performance, financial, and operational resources. The initial study examined the impact accessing these resources had on the survival of the F1 team, which was characterized as an entrepreneurial enterprise. The latter study moved to the perspective of the sponsoring firm and focused on the influence these alliances exerted on the firm's shareholder value.

Collectively, the two studies empirically confirmed several theoretical expectations, but also uncovered statistical evidence contrary to other hypotheses and prior research. Specifically, promotional alliances with corporate partners offering certain resources were found to contribute to the survival of sponsored enterprises. Meanwhile, in some cases the announcements of such alliances were demonstrated to be detrimental to the shareholder value of sponsoring firms. The former finding extends to a promotional context the resource-based view of entrepreneurial organizations, which

suggests that the continued existence of such enterprises depends in part on the resources obtained through interorganizational alliances (Bergmann Lichtenstein & Brush, 2001; Sheppard, 1995). Yet, the latter finding contradicts prior research that suggests the promotional resources received by the sponsoring firm in a commercial sponsorship relationship are recognized by shareholders as beneficial to the firm's value (Clark et al., 2002; Cornwell, Pruitt et al., 2005; Miyazaki & Morgan, 2001; Pruitt et al., 2004). When approaching these two key outcomes from an alliance framework, the exchange relationship appears to favor the sponsored enterprise, which relies in part on the sponsoring firm for its mere existence. Despite this apparent asymmetry in outcomes, corporations continue to engage in promotional alliances in the form of commercial sponsorships at a global level approaching US\$40 billion (IEG, 2006).

## **5.1 Expert Interviews**

To further explore this interorganizational phenomenon and the implications arising from the research completed within this dissertation, this chapter utilizes qualitative methods to reach out to industry practitioners as informants on either side of the promotional alliance relationship. There are both rewards and risks to this approach as a supplemental tool of analysis. The core benefits of qualitative research are well documented, and its tools are uniquely suited to explore organizational phenomena such as agent (employee or executive) perceptions and ascribed meanings (Lincoln & Denzin, 2000; Morgan & Smircich, 1980). Specifically, the interpretive approach is committed to understanding an agent's own experiences from her/his viewpoint as related to a chosen organizational phenomenon (Taylor & Bogdan, 1998). In their article on the stock

market's reaction to brand extension announcements, Lane and Jacobson (1995) demonstrated the usefulness of expert interviews to actively qualify their findings for industry application. Here, experts are treated as informed members of the commercial sponsorship industry. As informants, their insights, opinions and interpretations of the studies' findings are solicited to facilitate the explication of industry implications, as well as raise potential limitations and future research that is further discussed in the concluding chapter. The interviewing of informants allowed for a degree of personal rapport-building between the researcher and the industry expert, which was especially important in the context of organizational resource commitments, where the conversation could be viewed as being of a confidential nature. To overcome potential sensitivities, an interview setting enabled the researcher to relate to the participants on a personal level, thereby establishing as much trust and empathy as possible within the limited interaction timeframe (Taylor & Bogdan, 1998).

Nevertheless, introducing interview data carries with it some risks in the inherent assumptions of the method (Seidman, 1991). In seeking to draw out informants' interpretations of the research findings and investigate agent decisions through solicitation of an expert informant's own conscious descriptions of underlying drivers of behavior, an assumption was made that it was possible for an informant to identify and convey the reasons for their actions within the industry. In analyzing this type of data, a certain degree of participant-perceived truth is claimed as the researcher sought to build an inductive interpretation of the organizational phenomenon. At this point, it is important to explicitly recognize and take steps to mitigate the potential pitfall of collecting and disseminating mere cultural assumptions via the interview process



(Silverman, 1993). In other words, data collected in expert interviews is subject to several potential biases. First, the interviewee holds a unique perception of the investigated phenomenon from his or her position in the professional and social world. This perception may represent reality for the interviewee but not necessarily reality for others. Second, the interview process relies on the accurate and forthright passing of these interpretations and perceptions from the interviewee to the researcher. Where experts are embedded in the research context, an insider perspective can be valuable but also subject to the bias of professional desirability. For instance, a sponsoring firm executive might be able to offer a nuanced explanation for how a particular promotional alliance creates value for his or her firm, but the same executive is also unlikely to admit when an alliance fails to achieve value objectives yet permits her to travel the world and engage in prestigious entertainment hospitality. Therefore, even when the embedded expert perceives negative implications, they could very well be withheld from the researcher because of the professional undesirability projected by such admissions. This likelihood of an agency conflict on the part of the informants must be properly acknowledged as a preface to insider interviews.

In order to overcome such biases where possible, the interviewer must work to establish rapport and aim to achieve a level of depth with the expert that moves beyond the verbal representation of cultural or social expectations. To do so here, the author recognized the reflexivity of the interview process. Essentially, the informant and the interviewer worked together to produce this supplemental data (King, 2004). While certain assumptions were made on the part of the expert participant (e.g. that he could

accurately verbalize the meaning perceived within his role in the industry), there were also inherent assumptions brought to the interviews by the researcher.

In this case, the researcher attempted to approach the interviews from an interpretive orientation, attempting to hold back preconceived notions of the experts' potential rationales, feelings, values, and applied meanings (Seidman, 1991). The aim was to create an interview environment where the participant felt encouraged to place themselves within the phenomenon and thereby attach meaning to their involvement, despite the presence of the researcher facilitating the social interaction. Still, the researcher's prior work in the industry, view of the interorganizational phenomenon and the world in general, and production of the two empirical studies, framed the interpretation of interview data and therefore must be properly acknowledged. When seeking a naturalistic understanding of the phenomenon through qualitative data, removing the researcher entirely from the environment of her/his data collection is an impossibility (King, 2004; Silverman, 1993). However, by explicitly attempting to identify and make known the assumptions inherent in this additional analysis, hopefully the value and contribution of the supplemental data will become apparent.

Following the example set by Lane and Jacobson (1995), five experts engaged in high-profile, international promotional alliances were interviewed to ascertain their interpretations of the research conducted in this dissertation. Two informants, Ted and Thomas,<sup>26</sup> were directly involved in F1 commercial sponsorships through their employment as executives in the commercial alliance division of an F1 team. The three other experts interviewed, Fran, Fey and Aaron have each represented major corporations

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<sup>26</sup> All personal names used in this chapter are pseudonyms. Ted and Thomas represent the team; Fran and Fey represent sponsoring firms; and Aaron represents an agency perspective.

in their firms' negotiations and management of various international promotional alliances. Fran is the Senior Vice President for an international financial institution and acts as the Motorsports Platform Executive for all marketing partnerships in that domain. Fey served as the Vice President for Marketing at a major sports equipment and apparel manufacturer that maintains numerous league, team, and individual athlete sponsorship relationships. Aaron has extensive experience on both sides of the promotional alliance relationship, but has most recently worked on behalf of sponsoring firms. After serving as Vice President for Corporate Sponsorships for a US professional basketball team, he founded a sports marketing agency in 1998 that has represented numerous sponsoring firms such as Pepsi, Blue Cross Blue Shield, Kmart, and Lucent Technologies. In addition, his agency has owned and managed several minor league teams as well as a first division football club in the UK.

In the interviews, the executives raised four topical themes that structure the remainder of this chapter. The first two implications emerged from discussion of the findings regarding the survival of entrepreneurial enterprises sponsored by firms seeking promotional benefits (Study One). These two topics were the prioritization and usefulness of different alliance resources and the heterogeneous nature of enterprise circumstances. When considering the value implications to the sponsoring firm (Study Two), the experts' insights focused on two final themes: the responsibility and mechanisms for justifying these alliances, and the potential asymmetries between the markets' actors and those intimately involved with such interorganizational relationships.

Before proceeding to these four themes, recall the theoretical framework advanced by this dissertation (Chapter 1) converged the conceptions of strategic alliances

and commercial sponsorship. Interestingly, Fran formerly served as the Vice President for Strategic Alliances for a major packaged food manufacturer and distributor. When questioned about the title, Fran responded, “Calling us a sponsorship group wasn’t something that was valued by our organization. We look at it more as strategic alliances, which includes sponsorships, but is more of a promotional relationship.”<sup>27</sup> While anecdotal, this initial quote emphasizes well the applicability of the theoretical perspective advanced here.

## **5.2 The Survival of the Sponsored Enterprise**

The interviewees were not generally surprised by the significant relationship between certain alliance resources and enterprise survival documented in Study One, though Aaron pointed out that interorganizational alliances should be viewed as “just a piece of it (survival). Smaller in some cases; bigger in others.”<sup>28</sup> For certain sports organizations in particular, Aaron went on to emphasize the importance of attracting an audience (ticket sales) and adequately controlling costs (player payroll). Without a core consumer audience, sponsoring firms are unlikely to find the sports enterprise to be an attractive promotional alliance partner, and organizational costs are likely to dictate the level of resources that need to be accessed through alliance partners. Therefore, in his opinion, accessing resources through alliances should be viewed as an important piece of a promotional enterprise puzzle that also includes cultivating an audience and managing

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<sup>27</sup> Quotes from Fran throughout this section were taken from an interview conducted on November 4, 2009.

<sup>28</sup> Quotes from Aaron throughout this section were taken from an interview conducted on October 20, 2009.

costs. Yet, the size of these pieces can vary widely depending on organizational circumstances, which is discussed later in this section.

Overall, the experts representing sponsored enterprises viewed financial resources as the most vital in their organizational experiences. Speaking from his experience on the team side of promotional alliances, Aaron was blunt with his assessment of the prioritization of various resource types, “You want to get cash but if you can’t, you go trade (for services or other resources available).” Ted justified the preference for financial resources at his team by saying, “if we get the cash, we can buy the exact resources we need; rather than partner with a company and have to use their resources, which may not necessarily be what we want.”<sup>29</sup> Thomas elaborated on this same mindset when he stated the following:

“The financial part is a very important component. The money they (sponsoring firms) contribute allows us to develop faster cars and to go racing. ... We do a vast amount of our own internal manufacturing and car development so there is not a huge amount that outside partners can contribute to certain areas of the business, and therefore the most valuable contribution is often financial because that allows us to ensure that we have the best equipment, people, and so forth.”<sup>30</sup>

Conversely, on the other side of the alliance, Fey emphasized the importance to his sponsoring firm of playing a role in the performance of the sponsored enterprise beyond just a contribution of financial resources.

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<sup>29</sup> Quotes from Ted throughout this section were taken from an interview conducted on October 23, 2009.

<sup>30</sup> Quotes from Thomas throughout this section were taken from an interview conducted on October 10, 2009.

“It was a huge factor. The whole strategy was if we’re going to talk the talk, we need to walk the walk and we’ve got to be providing high-level equipment at every aspect of the [sponsored competition]. If we’re the heart-lines producer and sponsor, that doesn’t do us any good unless we’re backing it up and having the actual equipment [in competition]. And then we have to translate what’s [used by the sponsored enterprise in competition] to what’s in the retail environment in order to get that return on investment.”<sup>31</sup>

A potential conflict in the sponsorship relationship arises here, where a sponsored enterprise prioritizes one resource type (financial), but sponsoring firms may prefer to contribute performance-based resources to the alliance as described by Fey. In such cases, Thomas agreed that a different calculation of alliance resource potential must be employed when the non-financial resources, both tangible and intangible, offered by a sponsoring firm can substantially impact the sponsored enterprise’s performance.

“In certain key areas it is quite important. ... I think we would make a decision (on resources) based on the quality of what they (sponsoring firm) bring perhaps over and above the financial contribution they can make. Our key objective is really to make competitive racing cars and win races so anything we can do to achieve that we really will do, and that’s obviously to the benefit all our existing partners. We are not the type of organization that makes very short term decisions in that regard.”

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<sup>31</sup> Quotes from Fey throughout this section were taken from an interview conducted on October 23, 2009.

Tangibly, official suppliers “naturally contribute to [the team’s] effort through discounts and supply of their products, such as trucks that provide transport to European races,” stated Thomas. Then speaking of the more intangible assets of expertise and credibility accessed through sponsoring firms, he concentrated on the example of a global management consulting firm that has been aligned with his team for close to a decade. This sponsoring firm has provided consultancy work that ranges from “lead manufacturing to systems developing to the exploitation of intellectual property developed outside of motorsport.” In Thomas’ estimation, such activities represent a “substantial amount of value (for the team) every year.” Similarly, Ted cited how the team’s alliance with a computer and data technology provider had enabled the team to run their “computational fluid dynamics data analysis three-times quicker” than before the alliance was initiated. In further expounding on the intangible benefits a sponsoring firm can bestow upon an entrepreneurial enterprise, Thomas also described below the interorganizational endorsement effect that can occur within an alliance portfolio, which was characterized by Stuart and colleagues (1999) and examined through H6<sup>32</sup> of Study One.

“There is an interesting intangible benefit in building up the partnership base that we’ve got – I think it’s up to eight Fortune 500 companies. That makes the [sponsored enterprise’s] internal business-to-business environment very attractive to existing partners as well as other partners. So the individual partner may put in financial benefits to the [sponsored enterprise] but just having them on-board, a company like [a major

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<sup>32</sup> While this networking benefit may be important for reasons other than enterprise survival, no support was found in Study One’s primary analysis to indicate that network embeddedness reduced the likelihood of team dissolution.

international telecom firm] lends a huge amount of credibility to what we do. And also provides opportunities for [company B] to go and speak to them, or [company C] to go and speak to them and so forth.”

In actuality, the range of resources accessed by sponsored enterprises through this manifestation of interorganizational alliances is a function of both “the industry and capabilities of particular partner(s),” as raised by Thomas, and the specific resource needs of the enterprise. Despite Aaron’s frank admission of cash as king, he went on to say, “if there are other things the sponsor can put into the mix, you add that too.” Specifically, he gave the example of an energy company his agency is pursuing as a potential alliance partner for one of his teams because the team is spending US\$270,000 a year on energy costs. As Aaron put it, “if we can get US\$500,000 for a sponsorship, I’d be happy to take US\$270,000 of it on trade.” This example demonstrated the prevailing sentiment from the experts speaking on behalf of sponsored enterprises that while different resources were in fact accessed by their sponsored enterprises via promotional alliances, in most but not all cases, resources other than financial were simply a replacement or streamlining of ancillary operational costs.

In that regard, it is not surprising that operational resources such as the energy example given above were not found to be significantly related to enterprise survival in Study One. Yet, alliances offering performance-based resources were robust contributors to the survival of sponsored enterprises and were still overshadowed by the interviewees’ strong partiality for financial resources. This overwhelming preference is perhaps not as surprising as it first seems given that the sponsored enterprises represented by these



experts had each already accumulated a considerable amount of experience in their respective sporting context. When questioned about whether the prioritization of alliance resources was contingent upon the experience of the sponsored enterprise, Thomas conceded that an entrepreneurial enterprise starting from scratch was indeed likely to have a differing view of the value of various resources available to an F1 team through alliance relationships. This admission is in line with the changing reliance on performance-based alliances uncovered in Study One, where younger enterprises were more dependent on accessing performance resources for survival (SprPer\*TmExp in Model 4). It also highlights the second theme that arose from the experts' comments regarding the first study's research: the heterogeneity of circumstances surrounding promotional enterprises.

Admittedly, an objective of any sample-based researcher is to control for extraneous variance between sample members while investigating a specific research question. Still, limitations in data collection, the balance of sample size and breadth, a desire for parsimony, and bounded foresight restrict the researcher from accounting for all differences between examined organizations. Due to these inherent boundaries, published studies frequently contain admissions of the research limitations and suggestions for future research on the topic (as are included in the next chapter of this dissertation). Likewise, part of the value added by bringing industry experts into the research process is the contribution of their nuanced expertise in relation to the research findings. Here, in addition to the dynamics of enterprise experience mentioned above, experts emphasized the legitimacy of considering varying institutional factors and the potential for path dependency. Specifically, Thomas realized that the samples for the two

studies in this research operated within a common institutional structure, but he also recognized that F1 was different in many ways from other institutions that support promotional alliances.

In comparing the institutional environment of F1 motor racing to other sporting contexts where commercial sponsorship is also widely employed, Thomas indicated that less control trickled down to the individual team enterprises. In F1, the governing body (FIA) and commercial rights holder (FOM) dictate much of the competitive structure and can make it easier or more difficult for upstart enterprises to survive. Unlike football (soccer), where teams own and control the venue of competition in which fans gather, in motor racing the teams compete at independent venues that negotiate a promotional relationship with FOM. Likewise, television and media rights contracts are controlled by FOM and not the individual teams. Because a portion of the resulting revenue is then distributed to the teams based on competitive performance, according to Ted, a “vicious cycle” develops for access to the financial resources apart from a team’s corporate alliances. As he put it, “competitiveness is necessary to raise funds, ...but budget plays a part in competitiveness.” Therefore, the effectiveness of a team’s marketing staff in supplementing the budget through corporate alliances becomes one of the primary factors influencing an F1 team’s propensity to survive. If the number of promotional alliances that provide a team access to performance and financial resources is considered a proxy for the effectiveness of a team’s marketing staff, Study One’s results would empirically support Ted’s assessment of the vital role of marketing personnel within an F1 team.

While neither Ted nor Thomas had the history in F1 to offer detailed personal insight as to the institutional shift that seemed to occur in accordance with the adoption of

the new Concorde Agreement in 1996; both agreed that the evolving dynamics of F1's governance structure was "highly likely" (Thomas) to influence the teams' promotional alliances. Furthermore, both went on to suggest that the heterogeneous ownership structures within individual teams were also germane to enterprise continuity through the path dependence it established (Liebowitz & Margolis, 1995).

Thomas emphasized the difference in ownership structures as relevant to enterprise survival by stating that his team "doesn't have a sugar daddy," meaning there was "not one sole large partner," nor a billionaire owner behind an infinite budget. One result of such a structure, according to Thomas, was that the team had to "allocate a high level of service to all partners;" thereby implying that each individual corporate partner was more vital to his team than they might be at other teams with a single dominant 'sugar daddy' (i.e. a corporate owner or billionaire investor with business interests outside of racing). In referring to these teams without a 'sugar daddy' as 'independent', Ted offered a detailed explanation as to how the ownership differences impacted longitudinal enterprise continuity:

"Increasingly, there were less and less independent teams, so [Team A] was until recently one of the few independent teams in F1. The majority of teams are owned by car manufacturers, and then there's two teams owned by Red Bull. The difference with that structure, with those teams and those manufacturers, is that they are very unlikely, unless you are Ferrari, to stay in Formula One for 50 years. So as we've seen with Honda pulling out of F1; BMW pulling out of F1; Renault was in, then out, now back in; and we don't know how long they're going to stay in

again. So car manufacturers come and go. Once they've achieved what they want to achieve in their marketing program, they'll leave. But [Team A] is slightly different in that it (F1) is all we do. We're a racing team and we don't do anything else other than build Formula One cars so we'll always be in the sport as long as we can rub two pennies together."

Therefore, the heterogeneous ownership structures supporting the teams within F1 racing would seem to be a factor in the survival of the entrepreneurial enterprises operating in this particular institutional environment. Although a control variable (Sold) was used in Study One to capture changes in ownership, it did not delineate one ownership structure from another. However, the 'Sold' variable, which was non-significant in all models, did allow for some differentiation between a completely new startup enterprise and one that was simply the continuation of an existing enterprise under new ownership. Nonetheless, the variance in ownership and concentration of support (i.e. 'sugar daddy') remains a limitation of the research here that is also addressed in the next chapter. As Thomas put it, "a unique set of factors allows a team to come into existence each time a team enters," and path dependency would suggest that these heterogeneous factors impact the team's propensity to survive (Liebowitz & Margolis, 1995).

### **5.3 Influencing the Value of the Sponsoring Firm**

The final two themes emerging from the insights of the executives corresponded with the findings of the second study of this dissertation. First, it was evident from their

comments that a burden for justifying these promotional alliances for the sponsoring firm was increasingly being felt by both parties to the relationship; and second, a disconnect was claimed between the internal and external understanding, and perception, of such relationships, perhaps resulting from information asymmetry. When asked to characterize a successful sponsorship alliance, Aaron described a relationship in which “both sides win,” but when elaborating further, he focused solely on the need for the sponsoring firm to justify the alliance, seemingly taking for granted that the sponsored entity had achieved a win. “When a (sponsoring) company can actually see the benefits versus the costs, and justify it, then it makes sense.” Similarly, Thomas stated, “we typically expect partners to receive three-times return on investment just in terms of TV exposure, so it’s not an unjustified investment.” In light of the research findings in this dissertation, it is interesting that experts from both sides of promotional alliances focused their discussion of justification on the sponsoring firm. Such a one-sided burden appears to be born out in the primary results of this research, where sponsored enterprises reaped survival benefits from their corporate alliances, but the promotional relationship was potentially detrimental to the shareholder value of the sponsoring firm. This demonstrates the necessity of the alliance for the sponsored enterprise, but calls for an explanation for the continued alliance investment on the part of the sponsoring firm.

All five experts spoke of the importance of collaboration on leveraging activities, or activation, as a mechanism to meet this felt burden for justification. Fran and Fey particularly emphasized return on investment (ROI) for their sponsoring firms, which Fran explained as follows.

“We look at sports that have a middle-tier business opportunity for us. When you look at Major League Baseball (MLB), it’s where we have a significant banking relationship; be it with the [specific team] and [team owner] in financing a new stadium or in refinancing the debt for a league like MLB. We know that we have an underlying business that helps generate ROI for the marketing investments. And then we look at the marketing investment and the assets we receive through that investment and how that can drive the consumer side of our business; be it through our credit card, checking card, checks and all the affinity banking part of our business. So we’re not totally reliant on that (B2C) business to generate all the ROI for a major sponsorship in a league like the NFL or MLB and in motorsports.”

Fran’s quote illustrates his firm’s efforts to link their promotional alliance engagement with tangible business opportunities on both the commercial and consumer dimensions. However, the financial markets do not seem to recognize, or remain skeptical of this internally perceived correlation, which is discussed later in this section.

Speaking from his firm’s experience, Fey was critical of the sponsored enterprises’ capabilities to meet the demand for ROI. “We tried to justify that (ROI) as much as we possibly could. Where most (sponsored) organizations fell short was in providing activation activities that would provide you with a positive return on investment.” This claim seems to indicate that in Fey’s opinion, alliances initiated with an identified plan to leverage the relationship would be more likely to add value for the sponsoring firm. Yet, the variable in Study Two that attempted to capture the element of

planned activation was non-significant in influencing the markets' evaluation of F1 promotional alliances (H4). With the longest professional experience in commercial sponsorship of the five experts, Aaron perceived this collaboration in leveraging the alliance as a relatively recent phenomenon. "For years, teams didn't care. Now teams need to make sure it works for their sponsors so they can keep them." To encourage leveraging activities, Ted's team customizes their promotional service for each sponsoring firm.

"There are different ways of a partner exploiting the parts depending on what sort of company they are. Some of our partners are what we would classify as B2B partners, in that they really don't have a consumer element...their package is very different from someone like [company B] which is a consumer product. So, if we focus on companies like [company A], it's all about B2B access; so the VIP hospitality, the money can't buy experiences, access behind the scenes with their VIPs to meet the drivers, etc. The likes of [company B], because they're more consumer focused, they leverage it heavily across all marketing platforms: internet, television advertising, print advertising, in-store imagery, photos of drivers next to a [company B product] encouraging you to buy the [product], and radio. Literally, the whole gamete of their marketing portfolio they would use our imagery and the F1 program."

Still, whether and how this customized activation activity ultimately results in the payoff of future cash flows for the sponsoring firm remains debatable by both financial

market actors and researchers, who have recently suggested that marketing capabilities contribute to firm value through a two-step process (Ramaswami, Bhargava, & Srivastava, 2009). First, the marketing resources and capabilities must impact performance in a market-facing process like new product development or customer management. Then, only after this initial impact has been achieved, will financial performance result. In the case of leveraging promotional alliances, it may therefore be necessary for the planned activation to be substantiated through more tangible marketplace outcomes before the financial markets recognize a positive influence.

The prerequisite of the first step in the process is borne out in Study Two, where despite ex-ante claims of specialized collaboration to meet a particular sponsoring firm's objectives, investors punished firms engaging in these international promotional alliances. Furthermore, identifying a leveraging plan in the announcement did not significantly affect the negative result. The two-step theory described above would suggest this occurs because investors first require some evidence of the alliance's effectiveness in terms of marketplace impact (i.e. customer development, retention, expansion, etc.). Financial market actors are likely to recognize the agency bias inherent in a sponsoring firm's announcement of a promotional alliance and the prognosticated ROI touted due to planned leveraging activities. While the firm's agents may be acting in what they perceive as the best interest of the firm in initiating an alliance, investors also realize good intentions do not always parlay into financial results. Additionally, a personal interest is intrinsic to many sponsorship arrangements that include lavish corporate hospitality and entertainment, which can raise suspicion of an agent's true



motives. Unfortunately, capturing such an agency conflict as a control variable in quantitative analysis proves elusive, as was discussed in Chapter Four (Section 4.7).

The practitioners from sponsored enterprises viewed the markets' skepticism of these promotional alliances as disappointing, but attributable to an asymmetry in the understanding of global promotional alliances. As Thomas stated, "I thought it (Study Two) would be analogous to NASCAR (referring to Pruitt et al., 2004) and show positive effects because the market understands the investment. ... (But apparently, the) market doesn't have enough information to understand the implications of Formula One sponsorship." Specifically, he pointed to the finding that aligning with a nationally congruent team increased a sponsoring firm's odds of a negative return. "There might be an expectation that when a sponsorship is announced in local marketing from a local company, (investors think) 'hang on a second, why are you spending so much money on marketing when Formula One's presence in this country is one race a year or we don't even have a race?' ... and (local investors) don't see it as contributing significant value." However, he reasoned that aligning with a nationally incongruent team signaled to the market that the sponsoring firm was utilizing the promotional resources of F1 because of the "footprint opportunity it provides around the globe," and not solely for a myopic presence in the local market. Essentially, Thomas' argument rests on his perception of imperfect information in the markets and a reliance on signaling cues that lead to inefficiently in evaluating the likelihood of future cash flows.

When considering the contrasting result to Pruitt et al.'s study (2004) executed in NASCAR, Fran offered a slightly different explanation.

“I think in NASCAR for a long time, it was recognized in the business community that NASCAR really is a smart investment. You can generally get good deals in NASCAR that do provide value. It would be interesting to do that same study today. I think that the price of a NASCAR sponsorship caught up to the market a little bit. And I don’t know if that’s recognized, but my guess is that it is by the investment community. You might not have the same reaction to the announcement of a NASCAR deal today that you did five-plus years ago. ...In the case of F1, it’s just the sheer size of a sponsorship. In F1, you know it’s going to be a drain on your marketing resources. ...If you’re going to be a real player in F1, you’re going to spend \$20 million. ...Anybody that looks at that is going to question, ‘Are they getting a little a drunk with their success and throwing money around?’”

Fran’s assessment of the outside perception of F1 alliances accurately matches the relationship uncovered in Study Two, where the magnitude of investment contributed to the likelihood of negative shareholder returns. Through this relationship, investors appear to concur that value is more elusive as affiliated costs rise. On this point, Ted agreed there may be a sticker-shock effect to F1 promotional announcements, but by citing an example, he elaborated on how in his opinion, this negative reaction is ultimately still driven by a misunderstanding or value underestimation of stakeholders external to the alliance.

“Generally, I would guess that the perception of a Formula One deal is extraordinarily expensive because the vast majority of people don’t understand the value that a company gets out of the relationship. So, if for example a major piece of branding goes on the car, the analysts might look at it and say ‘Whoa, that’s 10 million pounds (£) per year, and over the next five years that’s 50 million.’...But what they don’t see is the brand value that it adds and also the business opportunities it provides and I’ll give you a very specific example. [Company A] is our partner and when they joined us they wanted to do business within F1, and we said ‘OK we’ll introduce you to all of our partners so there may be some efficiencies we can add to your business.’ So we introduced them to [company B]. [Company B] will look to do some work with them to increase their efficiency in their communications platforms, but more importantly and very demonstrable was the introduction we made for them to meet with [company C]. Now [company C] are not a sponsor of ours but of [another F1 team]. ...After that introduction, [company A] then did a presentation to the [company C] board. We set up the meeting. We set up the opportunity to meet with the [company C] board because we knew their CEO very well. And after that, [company A] got a global supply deal with [company C] to supply 400 new hotels that [company C] are building with [company A] televisions, [company A] irons, [company A] kettles, etc., etc. So it was somewhere in the region of 100 million dollars worth of business. That is something that most analysts would never know

about. They would just see the bottom line figure of a marketing spend and not see the benefits come back in the other way.”

As this example describes, there may be a degree of asymmetry in the information available to financial market actors and the insiders involved with initiating and managing an alliance. Thomas and Ted both characterized internal alliance evaluation metrics used by their team’s sponsoring firms. According to Ted, ‘company A’ in his example above tracks a net promoter score that indicates how likely a respondent might be to recommend ‘company A’ to a friend. Company A’s research has allegedly linked a consistent rise in their net promoter score to their F1 alliance activation. Similarly, when discussing a different partner’s proprietary brand building metric, Thomas said, “[company D] for example has done quite a bit of work on that in the last few years and the relationship with Formula One shows a major shift there. So we’re very confident internally about the value it contributes; which means we disagree with the market or disagree with the lack of knowledge in the market.” However, the imperfect information rationale for negative returns, which seems to be at the core of the argument made by these team executives, is subject to several counterarguments.

First, proprietary information is not a novelty in the financial markets relating exclusively to F1 alliances. Insider trading regulation is based on the realization that certain internal constituents will be privy to information not readily available to the markets (Chiang & Venkatesh, 1988); yet financial markets are still generally considered efficient in their setting of security prices. Recall for instance that the markets reflected negatively on the magnitude of F1 alliance commitment despite the fact that frequently

no specific numbers quantifying the commitment levels were released in public press reports. Still, market actors seemed to either acquire the information via other channels or construct a reasonable approximation of the commitment based on other signals. Second, if the information described by Ted and Thomas is indeed unknown by market actors, the question of whether the additional alliance information would in fact influence the assessment of a sponsoring firm's value remains untested. At best, the newly publicized information may be interpreted as predictive of incremental future cash flows and therefore warrant an increase in firm value, but the information might just as well be disregarded if actors are unable to decode a substantial link to firm value (Ramaswami et al., 2009).

Zuckerman (1999) suggested corporate actions can often be dismissed when market actors are unable to quickly categorize firm information due to a deficiency of comparison basis. Therefore, if investors and analysts are unaware of how to categorize F1 promotional alliances and lack the capacity to judge their value against other promotional initiatives (an opportunity cost to the alliance), the actor is likely to downgrade or ignore the alliance. Theoretically, for supplementary information to better inform this evaluation and improve the markets' perceived efficiency, the provided data would need to conform to a category or format readily recognized by financial market actors. Ted rationalized why such information might be slow to disseminate in the wider marketplace.

“Sometimes unfortunately our partners are reluctant to give out too much data on their sponsorships because they feel it's proprietary data, and also they don't want to come back to us and go ‘this program's brilliant’

because they're worried we're going to increase the price. So in some respects, we're sort of a devil to ourselves because they're getting great value but they don't necessary want to admit that. They're worried, as I said, that we might say 'OK, well it's worth a bit more than we asked for in the first place.'”

This sentiment of an ongoing disconnect in both evaluation and understanding between those involved directly with these promotional alliances and the investors who analyze the relationships in the financial markets was generally shared by Fran and Fey from the sponsoring firm's perspective. However, contrary to the initial reaction of the team executives, Fey was not surprised by the shareholders' reaction to these promotional alliances.

“What jumped out at me was 'yea, no kidding.' The markets don't like anything except for something that's objectively, quantifiably going to deliver greater profits. ... Most of the population thinks that marketing is very illogical and not very quantifiable. And there's a lot of misunderstanding about what marketing and sports marketing is all about. So that's part of it. The other part of it is 'yea, some of this is true.' What is the true value of sponsorship? What is the true value of naming rights? If Wall Street can't put their finger on an exact number, they're not going to celebrate a sponsorship announcement. They don't like spending money; they like making money. So that result didn't surprise me at all.”

Essentially, Fey is lamenting Wall Street's treatment of marketing initiatives as expenses rather than investments. He believes that, similar to the two-step process proposed by Ramaswami et al. (2009) and described earlier in this section, the markets will hold this line until the promotional initiative can be substantiated quantitatively. Pending such substantiation through a market-recognized metric, promotional alliances will continue to be categorized inaccurately according to Fey. Again, this conception falls in line with the imperative of categorization for favorable market treatment (Zuckerman, 1999). Likewise, Fran acknowledged the increasing need to educate external stakeholders and begin to close the information gap by providing some ROI numbers.

“We had to explain that what you're seeing is a credit card and deposits program but there's a significant portion of our ROI that is below the line; so you're not going to see that. We're not going to show you all our numbers but we'll say that for every dollar we spend in sports we have ten dollars in revenue and three dollars in EBIT (earnings before interest and taxes). It's a good business for us.”

Nevertheless, until sponsoring firms are willing to be more transparent and show the numbers that connect the promotional alliance to revenue and EBIT, the markets appear unlikely to take an agent's claim at face value. Without a quantified basis for comparison that warrants categorizing these promotional alliances as an investment, market actors cast them as expenses.

Upon further reflection, Thomas rationalized the disconnect between promotional alliance insiders and the evaluating investors to go beyond just informational asymmetry and include a time dimension as well. According to him, insiders not only have more extensive information regarding the performance of these alliances, but also a potentially differing perspective in regards to an alliance investment's payoff period.

“Is this going to generate additional income for this company? Is it going to build their brand long term? I think it depends on which sort of investor you are talking about. Are they looking to flip the stock in 6 months at which time the effects of this sort of long-term brand building exercise, as is the case with us and [sponsoring financial firm], then it's largely irrelevant to them (i.e. short-term investor) and actually detrimental because it's an additional cost in the first year with relief much later on. So whether or not their analysis of value is that sophisticated, I think will depend on the individual investor but I think for some of them that would be the calculus they weigh for the investment.”

The imposition of a short-term versus long-term dilemma was not lost on Fey either. As a sponsoring firm executive, he conveyed strong convictions when addressing this potential conflict between investors' immediate interests and the business horizon ahead.

“You do what's right for the business. You don't do what's right for the stock price. If you fundamentally believe that this is what's going to drive the business forward, then as a management team or as an



individual executive you need to make the right decisions for that. Justifying the spend is a whole different question. ...It (speaking of a specific eight-year, US\$125 million commercial sponsorship he negotiated on behalf of his sponsoring firm) was hard to justify it from a dollars and cents standpoint, but it was harder to justify for the long-term viability of the business if we didn't do it. ...You can't run your business by worrying about what the stock price is going to do or what Wall Street is going to think because if you do that, then you'll be a slave to what Wall Street will be thinking. You won't effectively run your business because Wall Street doesn't know about running businesses, it knows about running numbers."

While these comments by Thomas and Fey retain some face validity, according to the theory of efficient capital markets (Fama, 1970), the share value of a security should reflect the estimated discounted future cash flows of the firm. As a result, if investors anticipate a future payoff of an alliance investment, it would be absorbed into the share price when the markets initially became aware of the alliance. Theoretically therefore, it should not matter if an investor planned to hold the stock until a payoff from the alliance actually occurs because the anticipated time-discounted payoff would already be incorporated into the current market value.

If, as the experts' collective comments have suggested in this chapter, sponsored enterprises and their sponsoring firms do collaborate in best practices to produce alliance mechanisms to justify ROI for the sponsoring firm; yet the full information yielded by

such practices is deemed proprietary and thereby facilitates an asymmetry in the broader marketplace, what can be done to rectify the markets' treatment of promotional alliances as expenses instead of corporate investments? This closing question arises from the industry experts' interpretations of Study Two's results and is imperative to the future evolution and evaluation of these alliance relationships. Given the reliance of the sponsored enterprise on such relationships for survival, as demonstrated in Study One, the continuity of the promotional alliance system should be of utmost concern to these enterprises. The financial markets' negative reaction to F1 commercial sponsorship threatens the sustainability of the alliance system if the "misunderstanding" and asymmetric view is not broached. Ted addressed this difficult challenge for the sponsored enterprise.

"Clearly from our perspective we want as many people as possible to know about the good work we do for our partners. And I think the companies we've got as partners, [names a couple of the Fortune 500 firms that align with this team], they're not stupid. They're very experienced marketers. They've got a lot of knowledge and research to tell them what programs to support. ...What we try to do is encourage our partners to talk about their successes. To share research they have to demonstrate the success of the program. And to enter awards, sponsor awards programs, so they can win 'X' sponsor of the year.... Because in those awards you have to give very tangible results on the business effect, the brand effect, within the sponsorship."

On the other side of the alliance, the sponsoring firm has to contemplate the potential loss in value from a first-person perspective. Their own shareholders are bearing the risk in potentially lost value while judging the contribution of these alliances to future returns. As a result, Fey emphasized the importance of persuasive communication with these shareholders when announcing promotional alliances.

“(You) make a decision and you stand by the decision. ... You scream it from the rooftops. You make it sound like the best thing that’s ever happened. It’s like any marketing program that you do. You’re trying to influence the greatest number of people at any one given time. Never do I think it should be signing a deal that you’re your not proud to announce in the loudest possible manner.”

Interestingly, this assertion is contrary to the possibility put forward in the discussion section (4.7) of Study Two, where in supplemental analysis it was determined that over half of the alliances in the sample failed to generate any discernable press coverage in the world’s major publications<sup>33</sup>. In light of such a finding, it was suggested that perhaps sponsoring firms were attempting to minimize their publicity at the outset of these promotional alliances because of the connotation of the costs involved. Fran indicated that his firm fell more in line with this measured approach.

“There’s a lot more discussion about how its positioned and how we announce it. At one point we would have been much more aggressive with pumping our fists and saying ‘hey, we got a great deal done.’ Today we’re going to take a much more restrained approach to it. That doesn’t

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<sup>33</sup> As determined through a search of Lexis Nexis’ Major World Publications database.

mean we turn that business down, because we still believe its good business. We just have to take a different approach to how we're involved."

Such a deliberative approach may be considered prudent given that the magnitude of the costs associated with these high-profile promotional alliances, though typically unannounced, was shown to be significantly related to the likelihood of realizing negative abnormal stock returns. Nevertheless, the experts seem to agree that completely avoiding the markets' pessimistic perception is not a constructive approach to alleviating the conundrum presented by investors' disapproving perceptions.

The industry experts concurred that Study Two highlighted empirically a disconnect that exists between the internal and external parties to these promotional alliances. Given the results of the study, the interviewees asserted that while justification in terms of ROI is improving between the internal parties to the alliances, this information is not sufficiently reaching relevant external stakeholders. As discussed within this chapter, another potential contingency is the accurate interpretation and categorization of the information once it does reach actors in the financial markets. Industry executives may be wise to develop ROI metrics that are comparable to those already recognized by the markets. Thus far, a barrier to improved communication outside the alliance has been the competitive ramification of the release of more data both in terms of alliance renegotiation and competitor intelligence. Nonetheless, informants agreed that overcoming these obstacles is increasingly necessary when the value of the

sponsoring firm and the continuity of the promotional alliance system are at stake, as evidenced by the collective findings of this research.

While the experts' rationalizations of the studies' results are informative in detailing an industry perspective, it is important in concluding this chapter to recall some of the assumptions and limitations to presenting insiders' claimed reality. The interviewees engaged here all relied on promotional alliances as the basis for their careers. Consequently, each informant was subject to the norms of professional desirability inherent to the sponsorship industry. For example, the possibility remains that financial market actors are generally aware of the internal information the experts claim as proprietary, just as investors seemed to ascertain the magnitude of alliance investment despite its omission from public announcements. In which case, the financial markets are evaluating these promotional alliances as detrimental to firm value even after weighing potential internal metrics, such as net promoter score, against the assumed costs. However, even if the experts here perceived this possibility, they held a personal incentive as well as a sponsorship industry expectation to rationalize the markets' negative reaction in a manner that does not dismiss the alliances as unnecessary.

Conversely, where the interviewee was an agent of the sponsoring firm, they also held a duty to their company and shareholders to act in the best interest of the firm. Here an agency conflict can easily arise and must be acknowledged when contemplating their offered insights. Yet hopefully, the risks of introducing the qualitative elements of this chapter are outweighed by the rewards of actual practitioner involvement in assessing industry implications. By engaging field experts as informants, the applied interpretation offers more than researcher speculation and allows for the consideration of these human

biases in combination with purported rationales, potential limitations, and future directions that draw upon professional experiences beyond that of the researcher.

The final chapter of this dissertation pulls together the design and results of the two studies, the context of the investigations, and the insights of the industry experts to address the research contributions and limitations to a further extent. First, the conceptual contribution made by this work is reviewed, followed by several empirical and theoretical implications resulting from the two studies. To close the body of the dissertation, the limitations of the endeavor are acknowledged and future research recommended.

## **CHAPTER 6**

### **CONCLUSION**

#### **6.1 Research Contribution**

This dissertation set out to investigate interorganizational alliances based on the exchange of a promotional resource. The theoretical underpinnings of strategic alliances and commercial sponsorship were reviewed and compared in Chapter One, where the concept of an interorganizational exchange relationship based on satisfying competitive resource needs was highlighted as central to the themes explored by each research stream. While already common in sponsorship industry circles (“One-on-one,” 2005; Walt Disney World Public Affairs, 2007), the term “alliance” has recently crept into sponsorship research to describe the bilateral relationship between organizations engaged in this promotionally-based association (Farrelly & Quester, 2005a). To appropriately designate the confluence of these ideas, the term ‘promotional alliance’ was coined as a strategic alliance based on resource exchange between a promoting enterprise and a firm seeking to fulfill promotion-based objectives through an ongoing collaboration with the enterprise. Conceptually, this designation represents a research contribution by establishing common ground between the strategic alliance and commercial sponsorship literature.

While numerous similarities between strategic alliances and commercial sponsorship are evident in the research overview presented in Table A.1, a few differences arise that differentiate the two concepts and spell out the middle ground of promotional alliances. The idea of a strategic alliance encompasses the search for a competitive advantage and in that regard is more strategy-oriented than the generic

conception of a commercial sponsorship, which is characterized simply as assistance offered to an activity for commercial purposes (Meenaghan, 1983) or the right to associate with the activity (Cornwell & Maignan, 1998). Yet, strategic alliances subsume a much broader range of exchanged resources and means to achieve the desired competitive advantage (see ‘Purpose’ section of Table A.1); as well as several structural manifestations not common to commercial sponsorship, which is typically limited to a unilateral or bilateral contract-based structure (Das & Teng, 2000). By conceptualizing a promotion-based subset of strategic alliances, sponsorship relationships based on collaborative resource exchange and competitive advantage join several other types of marketing-oriented interorganizational relationships (e.g. co-op advertising, licensing, and brand extensions) that also have the potential to meet such criteria. Approaching these phenomena as promotional alliances support the emerging resource-based view of commercial sponsorship (Amis et al., 1997; Fahy et al., 2004), while also reducing the academic silos that discourage cross-functional research (AACSB International, 2008), and better reflecting the industry trend toward strategic collaboration (“One-on-one,” 2005).

In the chapters that followed this conceptual contribution, two empirical studies were completed that evaluated the utility of promotional alliances from each side of the relationship. For the sponsored enterprise, the usefulness of promotional alliances as a means of accessing resources that contribute to survival was empirically documented in Study One. Study Two employed shareholder value as a measure of the anticipated contribution of promotional alliances to the sponsoring firm’s future cash flows.



Beginning with the first study, the research contribution emanates from the longitudinal association between entrepreneurial enterprise survival and resource access via alliances. While several case studies have examined this relationship (Bergmann Lichtenstein & Brush, 2001; Brush et al., 2001), studies with larger samples have tended to focus on organizational performance metrics (Baum et al., 2000) or the dissolution of the alliance (Blodgett, 1992; Baker & Faulkner, 1998), and not necessarily dissolution of the enterprise itself. By utilizing a sport competition setting, the study embarked upon here was able to control for firm performance and evaluate the impact of alliance resources on enterprise continuity. Though Baum and Oliver (1991) established an association between organizational survival and institutional linkages in the childcare industry, the current study migrated to a more business-to-business context and distinguished between the resource types available to a promotion-based enterprise. This progression in organizational research design is particularly important given the expansion of the resource-based view (Auh & Menguc, 2009) and Grant's (1991) theory of the heterogeneous rent-earning potentials of various organizational resource categories.

The development of the resource-based view of the firm refocused the search for a competitive advantage from external industry factors to internal organizational resources (Barney, 1995). Since that time, scholars have migrated back toward the middle ground where external elements such as institutional norms, regulations and governance, and even other firms can impose limits, offer provisions, or present access to useful resources (Auh & Menguc, 2009; Madhok & Tallman, 1998). The latter of these suggestions framed the context of Study One, where entrepreneurial enterprises in a

common institutional environment have turned to promotional alliances as an interorganizational mechanism for resource acquisition and utilization. The results of this study empirically demonstrated the vital role interorganizational alliances play in facilitating the resource access necessary for entrepreneurial enterprise survival. In the organizational research domain, implications arise from this study's findings in three interwoven areas.

First, though an enterprise's offerings in a network of interorganizational alliances may be consistent (i.e. promotional services), the reciprocal resources accessed are not necessarily equivalent and their impact on enterprise outcomes may differ. By accessing either performance or financial resources through promotional alliances, entrepreneurial enterprises in this environment were able to reduce their odds of dissolution by over 40 percent. However, alliances offering operational resources had no effect on the enterprise's propensity to survive. Therefore, further research in this area should be mindful of not only the heterogeneity of alliance resources, but also the utility of resource categorization based on their strategic application in the relevant institutional environment. This argument corresponds with Skilton's recent claim that dividing resources as knowledge-based or property-based (Miller & Shamsie, 1996) is too broad and should be "supplemented by an understanding of the functions of different resources in a production system" (Skilton, 2009, p. 840). In this study, alliances based on performance resources consisted primarily of those offered by automotive, aerospace, and high technology firms; and these alliances maintained a robust impact on race team survival through various analyses. This nature of categorization and subsequent finding substantiates a comprehensive resource-based view that recognizes resource value is

contingent on contextual deployment (Slotegraaf et al., 2003). At the same time, institutional forces often change the competitive environment and in doing so, influence the resource dependency of the enterprises within the relevant context (Auh & Menguc, 2009; Ulrich & Barney, 1984).

The potential impact of an institutional force was also raised in this study and the resulting analysis informs a second research implication. Within the study's Formula One context, evidence of a major alteration in institutional governance emerged in 1996, when the flow of financial resources from the regulatory institution (FIA) was disrupted, thereby precipitating a rapid proliferation of promotional alliances to fill the void. However, instead of becoming more influential in staving off dissolution, alliances based on financial resources became less vital to enterprise survival to the point where additional alliances actually increased the odds of dissolution. Such a drastic reversal in alliance resource utility emphasizes the peril in neglecting dynamic institutional forces present within an investigative context (Miller & Shamsie, 1996). Though many interorganizational studies do not take a longitudinal approach, recognition of the institutional conditions and their influence on the current reality as well as their potential for change is a necessary contemplation toward relevance (Koza & Lewin, 1998). Failure to consider the institutional dynamics within this particular case would have not only overlooked the changing influence of financially-based alliances, but also left hidden the possibility for diminishing returns. The increasing quantities of alliance relationships compiled in the era after 1995 revealed support for a diminishing returns effect on enterprise survival, which offers a third implication to this study's research.

Strategic alliance theory suggests that enterprises possess an alliance management capability (Ireland et al., 2002). Recently, the potential for this capability to be strained to varying degrees by different types of alliances has been explored in high technology ventures (Rothaermel & Deeds, 2006). The first study of this dissertation offers initial evidence in a promotional context to support this emerging theory. Not only did financial alliances reverse their effect at higher magnitudes (seen after 1995) to become a positive influence on enterprise dissolution, but an empirical model incorporating quadratic alliance terms (Model 6 in Table A.5) also demonstrated significant diminishing returns of both financial and performance alliances. This finding agrees with the notion that alliance management capabilities are bounded. Though Deeds and Hill (1996) uncovered a similar effect when examining the influence of alliances on rates of new product development, the idea of diminishing returns to alliance engagement has yet to be widely adopted in interorganizational research (Rothaermel & Deeds, 2006). At the very least, studies quantifying alliance propensity as related to enterprise performance should consider curvilinear possibilities. Yet, more detailed research into alliance management capabilities and potential institutional restrictions is needed to better explicate the factors behind this effect. The evidence offered for its existence in this first study, in combination with the dynamic impact raised by institutional forces and the varying influence on survival of different alliance categories discussed above, composed three distinct implications for ongoing research in this vein.

The second study of this dissertation extended and challenged previous research on the value of promotional alliances to a sponsoring firm. By moving to an international context, the investigation broached the neglected research topic of nationality congruence

between promotional alliance partners. The study also produced evidence contrary to the positive value influences suggested by past literature, and offered a methodological challenge to the previous use of non-significant estimated abnormal returns as a continuous dependant variable in multiple regression analysis.

The vast majority of published research that evaluated the implications of promotional alliance announcements on the shareholder value of sponsoring firms claimed a positive and statistically significant, cross-sectional effect (Clark et al., 2002; Cornwell, Pruitt et al., 2005; Mishra et al., 1997; Miyazaki & Morgan, 2001; Pruitt et al., 2004). Nevertheless, recent research has begun to question the actual value accrued by an average (or median) firm within these studies (Leeds et al., 2007), and this investigation now joins one smaller-scale study that suggests a negative return may be more likely for sponsoring firms in certain cases (Farrell & Frame, 1997). Identifying what qualities these negative cases share is the sequential step in this line of research, and work to date has implied only the theory of an agency conflict as a potential explanation for negative returns (Farrell & Frame, 1997; Pruitt, et al., 2004). The second study completed in this dissertation not only contributes evidence of other influentially negative elements (alliance nationality congruence and investment), but also questions the method by which such assessments should be undertaken.

Once the abnormal returns have been estimated within a designated event window for a sample of sponsoring firms, past research has employed these estimations as a predicted variable in a multiple regression analysis (Clark et al., 2002; Cornwell, Pruitt et al., 2005; Farrell & Frame, 1997; Mishra et al., 1997; Pruitt et al., 2004). However, within this dissertation it is argued that utilizing the magnitudes of estimated statistics not

demonstrated to be statistically different from zero is inappropriate. In analyzing a sample of naming rights sponsorships at the firm level, Leeds et al. (2007) point out the danger of outlier influence in making cross-sectional judgments. Heeding this caution, a firm level analysis of this study's sample of 70 sponsoring firms reveals only seven cumulative abnormal returns to be significantly different from zero at the firm level ( $p < .10$ ). Such a finding suggests that the returns of all other firms in the sample may in fact be zero, and their model estimated magnitudes are therefore unreliable as a predicted outcome variable. To compensate for this statistical constraint, logistic regression is suggested in this work as the most appropriate method for addressing the research question of what alliance characteristics impact the realization of abnormal returns. While logistic regression limits the researcher to a binary outcome, by designating between firms realizing statistically significant abnormal returns and those experiencing a negligible impact, a more accurate assessment of the influential alliance factors can be discerned.

In regard to Study Two's results, the negative cross-sectional finding reinforces the need for continued research into the value implications of promotional alliances. While event studies serve as just one method to investigate the value proposition of these relationships, a clear mandate within this particular line of research has yet to immerge across studies. Momentum in recent years, as gauged by published research, seemed to be leaning toward added shareholder value for sponsoring firms engaged in promotional alliances. However, the findings in the international setting of this study have clearly contradicted any claim of added shareholder value. Therefore, researchers committed to this domain of investigation must be increasingly open to the prospect of negative

influences to value realization. Specifically, nationality congruence within the alliance in this international context was found to negatively influence value. Also contributing to the likelihood of negative returns was the magnitude of the alliance investment by the sponsoring firm. As it impacts continuing research, this finding confirms that actors in the equity markets have access to, or make accurate judgments of, the magnitude of resource commitments beyond the information publicly announced. Therefore, when possible, researchers should not limit their purview to alliance characteristics assumed to be publicly available. Further consideration is given to this directive and the aforementioned research implications in suggesting future research below.

## **6.2 Limitations**

Even without the confines of journal publication guidelines, no dissertation research is devoid of limitations. The limitations to the research presented here can be categorized by data, methodology, and context. First, the data used in these analyses were quite extensive in terms of quantity and comprehensiveness. Amongst other data, over five thousand alliance years spanning 41 calendar years were analyzed in Study One and 301 days of stock returns for 73 alliances were carefully compiled for the modeling of Study Two. Yet, certain restrictions in data collection must be acknowledged.

When evaluating the impact on enterprise survival of promotional alliances offering various resources (Study One), a weighting of each alliance by the quantity of resources exchanged would be a more accurate measure of each alliance's meaning. Instead, because of the longitudinal nature of the dataset, a count of the alliances that offered a certain designation of resource (i.e. performance, financial, or operational) to the sponsored enterprise had to be sufficient. The scope of conclusions that can be drawn

from the analysis is confined by this research compromise since some alliances may actually contribute much more in terms of resources than other alliances. This was highlighted in the View from the Field section (5.2) when an executive referred to the influence on survival of a “sugar daddy.” In this instance, he was speaking of two possibilities: either, 1) a dominant alliance partner that provided a majority of resources, or 2) a wealthy owner supporting the team through financial resources generated via other business involvements. Because longitudinal data on either of these two circumstances was unavailable, and likely to be non-existent for a four-decade span, alliances were identified by resource category and not by the magnitude of resource contribution, and ownership structure was not considered beyond the ‘sold’ control variable in this dissertation.

In categorizing alliances into distinct resource groups, some assumptions also had to be made on the part of the researchers (author and other independent coder). Given that the actual resources exchanged in the over 5,000 alliances during 41 years was unknown, the researchers used press reports and conversations with experts to compose a guide of industry relatedness to F1 racing. Then alliances with sponsoring firms in particular industries were assumed to offer a certain resource designation, which matched the evidence suggested in media reports and by industry experts. Nevertheless, it should be acknowledged that many of the alliances undertaken during this longitudinal time span likely offered the team multiple resources. Specifically, most recent alliances involve an exchange of financial resources (collected by the team) even when other resources are also provided to the team as well (*Black book Formula One, 2007*). While this does not necessarily change the focus of the alliance as it relates to F1 competition, which is the



basis of the study's research, it does add a dynamic to the finding of diminishing returns to alliances based on financial resources. In other words, if appropriate data was available, a valid question for future research would be if returns to financial alliances are diminishing because the financial resources necessary for survival are being accessed through alliances that also offer performance and/or operational resources.

In Study Two, the largest data limitation was the restrictions to the sample size. Although 73 promotional alliances represent a respectable sample size when compared to other event studies (see Table A.6), it only includes about 28 percent of the 261 F1 promotional alliances active in 2007. This data limitation is bounded by publicly-traded firms with an identifiable announcement date, which is a function of the use of the event study methodology to evaluate the construct of value. Arguably, the value of a promotional alliance is not limited to its direct influence on stock price. An array of rationales for alliance engagement have been suggested in the literature (see 'Purpose' section of Table A.1), and it is possible that by achieving one or more of these purposes, a promotional alliance could indirectly add value to the firm. However, if this added value is expected to ultimately result in incremental cash flows, the time-discounted effect should be reflected in the stock price if markets operate efficiently (Fama, 1970). Within this argument are two limitations of the event study methodology. First, markets are assumed to be efficient, which while still generally accepted, continues to be the subject of debate (Malkiel, 2003). Second, for the method to attribute abnormal returns to an alliance announcement, market actors must realize and react appropriately to the value implications of the alliance within the event window period designated by the researcher. Otherwise, if the value of an alliance only becomes apparent to market

actors at some unidentified later point in time, the effect is unrecognizable amid the noise of other potential influences to future cash flow. More generally, in an event study, value is limited to its manifestation in stock price.

Alternatively, through an event history model, Study One judges the value of alliances by their association with entrepreneurial enterprise survival. While offering a different perception of alliance value, the event history method shares some general limitations with event studies. Neither method offers the inside-the-organization depth that is boasted by qualitative research methods (Lincoln & Denzin, 2000; Morgan & Smircich, 1980). Recognizing this limitation and the contribution a qualitative effort can make to personifying archival data, expert interviews were incorporated into the discussion of industry implications (Chapter 5). Yet, undoubtedly an endeavor focused solely on the qualitative approach would have yielded a substantially different depth of investigation but also addressed the research questions without the breath of longitudinal and cross-sectional analysis achieved through the methods employed here. One specific example of an issue that arose in this research that qualitative methods might well address is the full dynamic effects of the institutional change in 1996. While the primarily quantitative approach taken in this dissertation uncovered both a change in the quantities of promotional alliances after this event and the emergence of diminishing returns to team survival, a complete explanation of why this change was enacted and how it may have impacted the actors in this environment beyond mere survival and alliance numbers is a story left untold here. However, such an investigative fixation on one particular event in this unique setting is also outside the scope of the broader research questions framing this dissertation.

Given that like all research methods, the tactics called upon in this dissertation possess inherent strengths and weaknesses, the investigative context in which the methods were deployed also limits the studies to some degree. Formula One motor racing offers an extremely interesting environment with several beneficial qualities for organizational research, most of which were described in Chapter Two. Nonetheless, certain intricacies of the context also limit the prospect of generalization to all organizations. In Study One, F1 teams are examined as entrepreneurial enterprises. Appropriately, the characteristics of the enterprise and its relationships with other organizations are studied in relation to its survival within the institutional environment of Formula One competition (Audretsch & Mahmood, 1995). However, it must be acknowledged that the institutional support system in F1 is fairly unique in that once teams are accepted for a racing season, they share disproportionately in the media revenues of the series<sup>34</sup>. Essentially, given that F1 is at its core a sporting competition, the teams have a vested interest in each others' survival to the extent that an attractive base of competition exists for spectator interest. The sporting dynamic thereby contributes a dimension to the context that remains distinct from pure corporate competition<sup>35</sup>. Therefore, as with any research in a given context, consideration of the nuances of F1, some of which were raised in the last chapter's interviews, must be recognized in any argument for the generalization of the results discovered in these studies.

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<sup>34</sup> The formula for this allocation, while widely speculated on, is a closely guarded secret of Formula One Management, which owns the media rights to the racing series (Collings, 2004).

<sup>35</sup> Yet from an entrepreneurial standpoint, enterprise dissolution remains a very real possibility in F1 as evidenced by a total dissolution rate of 12.1 percent across the longitudinal timeframe. Generally this suggests that on a season-to-season basis, more than one in every ten teams fails to survive to the following season.

### **6.3 Future Research**

While the knowledge surrounding various iterations of interorganizational alliances has expanded remarkably in the last several decades (for an overview, see Chapter One as well as Das & Teng, 1996; Ireland et al., 2002; Varadarajan & Cunningham, 1995), opportunities remain for further research. The work embarked upon in this dissertation represents an advance in the conceptualization of strategic alliances based on promotional objectives, but this avenue of interorganizational research is just beginning to flourish. Commercial sponsorship has only recently been viewed in the research literature as an alliance between cooperating organizations (Farrelly & Quester, 2005a; 2005b). As a result, the cross-disciplinary contribution of these two literature streams remains relatively untapped. When an integrative perspective is applied to the composition, structure, moderators, outcomes, value, and stakeholders of these alliances, several future research possibilities emerge.

Distinct from other alliance relationships, promotional alliances rely on a promoting enterprise to essentially propel their partners' prospective customers through the customer learning curve from need recognition to retention, or at least encourage movement along particular segments of the curve (Hellmen, 2005). Identifying what dimensions of a promotional alliance relationship best apply to the various steps between need recognition and customer retention is an applicable area of research, but these associations must be preceded by a thorough understanding of the dimensions offered within promotional alliances. Sponsorship survey research strongly suggests that relationship building is likely to be one of these dimensions (Copeland et al., 1996; Crowley, 1991; O'Hagan and Harvey, 2000; Thjømmøe et al., 2002), while the strategic alliance literature implies interorganizational endorsement or credentialing as another

dimension (Stuart et al., 1999). Still several other facets of these alliances may be relevant to their operation and ongoing effectiveness. Such a descriptive exploration of the composition of promotional alliances may be tackled most effectively by qualitative research similar to that offered in the last chapter, which engaged actors from various alliance perspectives. Internal to the alliance, Farrelly and colleagues (Farrelly et al., 2003; Farrelly & Quester, 2003a) draw on the relationship marketing literature to emphasize the importance of trust, commitment, and collaborative communication between the promoting enterprise and sponsoring firm (Morgan & Hunt, 1994); but how these relationship qualities impact the achievement of an alliance's promotional objectives remains uncertain.

A structural dimension of promotional alliances warranting further study is the fact that the promoting enterprise often provides their marketing service to several firms simultaneously, thereby forming a network of B2B relationships (Erickson & Kushner, 1999). While interorganizational research has evolved beyond the dyadic perspective to now commonly incorporate a network approach to resource acquisition (e.g. Brass et al., 2004; Gulati, 1998; Gulati et al., 2000; Ritter & Gemünden, 2003), resource networks in a promotion-based context remain unexplored despite the likelihood that a promotional organization's survival is contingent upon such networks. The results of the first study executed here demonstrate this imperative. Certain scholars have acknowledged that employing the tools of social network analysis would be beneficial in explicating the power dynamics within this type of resource network (Wolf et al., 1997), but empirical research has not yet followed through on this prospect. Does providing resources of a scarce type signify power in promotional networks? If so, how does the power

distribution affect network evolution? Is there also power in network positions that fill structural holes between firms (i.e. serving as a broker of B2B relationships) (Burt, 1992)? Such a conception of power may be beneficial to a sponsored enterprise that can forge business relationships between sponsoring firms. Perhaps developing a network competency of brokering relationships provides an advantage to one promotional enterprise in competition with others for the resources offered by sponsoring firms. The initial study of this dissertation is one of the first to examine the perspective of the promotional enterprise within these alliances and thus many questions such as these are unanswered at this time.

Even though the sponsoring firm's perspective has been more popular amongst researchers, the findings of Study Two renew some questions regarding the tenets of commercial sponsorship and more broadly, promotional alliance relationships. As operationalized in this research, two of the foundations of commercial sponsorship theory, complementarity and leverage (Gwinner, 1997; Quester & Thompson, 2001), were not valued by the shareholders of sponsoring firms. In the case of complementarity, this finding seems contrary to some of the interview data in the last chapter and the positive significant results for industry congruence in domestic US research that utilized abnormal returns as the dependent variable in multiple regression analyses (Cornwell, Pruitt et al., 2001; Cornwell, Pruitt et al., 2005; Pruitt et al., 2004). Beyond the previously stated objection to the use of estimated abnormal returns as a predicted variable, future research might explore if aligning with complementary promoting enterprises is unrecognized as value enhancing in other international settings as well. If so, either investors on the international stage are correct in their assessment and the

complementarity between promotional alliance partners does not affect the sponsoring firm's future cash flows, or complementarity does indeed matter and investors simply do not recognize its contribution, as seemed to be suggested by the experts interviewed. If sponsorship theory is correct and complementarity enhances desired outcomes, can investor perceptions of the value of alliance complementarity be positively influenced by more explicit descriptions in alliance announcements of why complementarity is likely to enhance future cash flows for the firm? An extensive content analysis of past alliance announcements would be a starting point for this avenue of research, and a controlled manipulation of factitious press releases could add an experimental element to such an investigation.

The second study of this dissertation utilized a content analysis of F1 promotional alliance announcements to identify the acknowledgement of a plan to leverage the relationship. Despite scholars' description of leveraging activities as a necessary condition for commercial sponsorship to act as a strategic resource (Fahy et al., 2004), this study's findings show investors to be skeptical of the value of leverage initiatives. While this may be because the initiatives are unrealized at the time of announcement, if investors perceived the activities as likely to occur and result in enhanced cash flow, the market value should reflect that perception. Although the research on leveraging promotional relationships is much less developed than that of industry congruence, the same value dilemma arises in regard to judging the actual effectiveness of leveraging sponsorship with other resources, or simply educating market actors better in alliance announcements. Given the early state of research on leveraging promotional alliances, future study should first be directed toward the former of these questions regarding how

leveraging an alliance through the commitment of other supporting resources actually enhances its effectiveness. Cliffea and Motion (2005) have suggested that promotional alliances should be leveraged toward specific customer targets of the sponsoring firm, but exactly which supporting resources should be deployed and their moderating impact on various measures of effectiveness, such as awareness (Crimmins & Horn, 1996; Johar & Pham, 1999), image enhancement (Javalgi et al., 1994), purchase intent (Koo et al., 2006; Madrigal, 2000), and loyalty (Sirgy et al., 2008) have yet to be determined. Without more precise knowledge of how leverage activities influence such outcomes, perhaps it is not surprising that investors have so far failed to recognize the subsequent link to shareholder value.

In summary, Study Two indicates that shareholders of sponsoring firms view F1 promotional alliances as costs rather than investments likely to yield future cash flows in excess of their related expenses. Future research needs to build on this finding by investigating if investors are mistaken in this assessment and these alliances are in reality associated with future cash flows, and through what process (i.e. by positively impacting which stage of the customer learning process [Hellmen, 2005]), or if investors are correct in their categorization of such alliances as liabilities. Central to this general theme is the link between the theorized promotional alliance outcomes mentioned above (awareness, image enhancement, purchase intent, and loyalty) and shareholder value. An assumption of utilizing shareholder value as an ultimate outcome variable is that through efficient markets it reflects a range of other positive effects realized by the firm. However, promotional alliances may act as theorized and affect certain customer outcome measures without impacting shareholder value if a strong connection does not exist between the



customer measures touted in theory and future cash flows. Research into this link is vital to the future proliferation of event studies in marketing research and would also be informative in the evolution of theory surrounding the tools of marketing communication.

Finally, this dissertation has expanded the knowledge of strategic alliances based on promotional resource exchange. A strong association between promotional enterprise survival and alliances offering financial and performance-based resources was established and information on the utility of other types of alliance resources was also investigated. Financial markets' negative assessments of the value of an international promotional alliance were analyzed, which provided the view of sponsoring firms' shareholders. Yet, several other stakeholders in the B2B relationships forged by promotional alliances have not been addressed in this research and are generally underrepresented in the topic's current literature. Studies investigating the effects of promotional alliances have focused almost exclusively on a consumer audience despite the diversity of goals and targeted audiences found in research on sponsorship objectives. When surveyed, marketing managers have consistently included stakeholder groups such as employees, suppliers, shareholders, and other potential business partners as target audiences for commercial sponsorship (Crowley, 1991; Copeland et al., 1996; Cliffee & Motion, 2005); but researchers have neglected to empirically investigate the impact of promotional alliances on these audiences. For example, one of the most common dimensions of commercial sponsorship is event hospitality, but its strategic use to leverage the alliance as a business-to-business relationship builder has been ignored thus far in scholarly research. Further, companies heavily engaged in promotional alliances that also boast large employee populations, such as UPS and Home Depot, have

anecdotally referred to employee benefits such as commitment and pride in popular press articles (Bradley, 1996). Nevertheless, empirical work on the impact of promotional alliances on employees has not materialized. Consequently, future research that embraced a diversified stakeholder perspective would advance the momentum of this discipline of study in addition to the questions raised in the areas of promotional alliance dimensions, structure, compliments, outcomes, and valuation. Hopefully, the studies undertaken within this dissertation successfully evoke conversation and intrigue that lead to even more knowledge generation concerning these interorganizational alliances.

## APPENDIX A

### THE TABLES

**Table A.1.** Overview of the research characterizing strategic alliances and commercial sponsorship.

<b>Strategic Alliance</b>			<b>Commercial Sponsorship</b>	
Aspects	Description	Source	Description	Source
Definition	Cooperative relationships driven by a logic of strategic resource needs and social resource opportunities.	Eisenhardt & Schoonhoven, 1996, p. 137	The provision of assistance either financial or in kind to an activity by a commercial organization for the purpose of achieving commercial objectives.	Meenaghan, 1983, p.9
Alternate Definition	Voluntary cooperative inter-firm agreements aimed at achieving competitive advantage for the partners.	Das & Tang, 2000, p.33	An alliance between those who market sport and those who market through sport.	Farrelly & Quester, 2005, p. 238
Purpose	<ul style="list-style-type: none"> <li>▪ Create optimum value from limited resources</li> <li>▪ Improve strategic position</li> <li>▪ Stimulate demand</li> <li>▪ Organizational learning</li> <li>▪ Differentiation</li> <li>▪ Cost risk reduction</li> <li>▪ Access new markets</li> <li>▪ Broaden product line</li> <li>▪ Exploit opportunities</li> </ul>	Barringer & Harrison, 2000; Das et al., 1998; Das & Tang, 2000; Varadarajan & Cunningham, 1995	<ul style="list-style-type: none"> <li>▪ Achieve competitive advantage</li> <li>▪ Image/awareness enhancement</li> <li>▪ Differentiation</li> <li>▪ Sales</li> <li>▪ Relationship building</li> <li>▪ Community relations and support</li> <li>▪ Personal interest</li> </ul>	Amis et al., 1997; Copeland et al., 1996; Cornwell et al., 2001; Crowley, 1991; Fahy et al., 2004; Meenaghan, 2005; O'Hagan & Harvey, 2000; Thjømmøe et al., 2002
Structure	<ul style="list-style-type: none"> <li>▪ Unilateral contract-based</li> <li>▪ Bilateral contract-based</li> <li>▪ Equity joint venture</li> <li>▪ Minority equity alliance</li> </ul>	Das & Teng, 2000	Exchange between sponsor and sponsee whereby the latter receives a fee and the former obtains the right to associate itself with the activity sponsored.	Cornwell & Maignan, 1998

Success Factors	<ul style="list-style-type: none"> <li>▪ Commitment</li> <li>▪ Trust</li> <li>▪ Compatibility</li> <li>▪ Cultural fit</li> <li>▪ Expectation and conflict management</li> <li>▪ Information exchange</li> <li>▪ Interdependence</li> <li>▪ Balance of power</li> <li>▪ Mutual learning and adjustment</li> <li>▪ Shared decision making</li> <li>▪ Strategic similarity</li> <li>▪ Strong interpersonal relations</li> <li>▪ Reputation</li> </ul>	Bucklin & Sengupta, 1993; Day, 1995; Doz, 1996; Gulati, 1998; Hughes & Weiss, 2007; Hutt et al., 2000; Saxton, 1997	<ul style="list-style-type: none"> <li>▪ Commitment</li> <li>▪ Trust</li> <li>▪ Collaborative communication</li> <li>▪ Fit/match-up: functional or image-based congruence</li> <li>▪ Involvement level</li> <li>▪ Leveraging activities</li> <li>▪ Market orientation</li> <li>▪ Sincerity</li> </ul>	Amis et al., 1999; Farrelly & Quester, 2003a; Farrelly & Quester, 2003b; Gladden & Wolfe, 2001; Gwinner & Eaton, 1999; McDaniel, 1999; Musante et al., 1999; Speed & Thompson, 2000
Evaluation Measures	<ul style="list-style-type: none"> <li>▪ Longevity</li> <li>▪ Profitability</li> <li>▪ Partner satisfaction</li> <li>▪ Perceived effectiveness</li> <li>▪ Survival</li> </ul>	Bucklin & Sengupta, 1993; Das & Teng, 2000; Gulati, 1998; Hutt et al., 2000; Saxton, 1997	<ul style="list-style-type: none"> <li>▪ Longevity</li> <li>▪ Goodwill</li> <li>▪ Image/awareness enhancement</li> <li>▪ Consumer attitude</li> <li>▪ Partner satisfaction</li> <li>▪ Perceived contribution to brand equity</li> <li>▪ Perceived differentiation</li> <li>▪ Purchase intention</li> </ul>	Cornwell et al., 2001; Farrelly & Quester, 2003b; Gwinner & Eaton, 1999; McDaniel, 1999; Meenaghan, 2001; Meenaghan & Shipley, 1999; Ruth & Simonin, 2003; Speed & Thompson, 2000

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**Table A.2.** 2007 Formula One Team and Driver Nationalities

<b>Team (Constructor)</b>	<b>Team Nationality</b>	<b>Driver</b>	<b>Driver Nationality</b>
Vodafone McLaren Mercedes	British	Fernando Alonso	Spanish
		Lewis Hamilton	British
ING Renault F1	French	Giancarlo Fisichella	Italian
		Heikki Kovalainen	Finnish
Scuderia Ferrari Marlboro	Italian	Felipe Massa	Brazilian
		Kimi Räikkönen	Finnish
Honda Racing F1	Japanese	Jenson Button	British
		Rubens Barrichello	Brazilian
BMW Sauber F1	German	Nick Heidfeld	German
		Robert Kubica	Polish
		Sebastian Vettel	German
Panasonic Toyota Racing	Japanese	Ralf Schumacher	German
		Jarno Trulli	Italian
Red Bull Racing	Swiss	David Coulthard	Scottish
		Mark Webber	Australian
AT&T Williams	British	Nico Rosberg	German
		Alexander Wurz	Swiss
		Kazuki Nakajima	Japanese
Scuderia Toro Rosso	Italian	Vitantonio Liuzzi	Italian
		Scott Speed	American
		Sebastian Vettel	German
Etihad Alder Spyker F1	Dutch	Adrian Sutil	German
		Christijan Albers	Dutch
		Markus Winkelhock	German
		Sakon Yamamoto	Japanese
Super Aguri F1	Japanese	Takuma Sato	Japanese
		Anthony Davidson	British

**Table A.3:** Descriptive statistics for the variables of Study 1.

Variable	Hypothesis/ Control	Expected sign*	Measure	Count (%)^	Min	Max	Mean (S.D.)
Dissolution (annual)	Dependent Variable		Binary	68 (12.1% of 562 team yrs.)			
Sponsor firm context experience (yrs.)	H1	(-)	Continuous	n = 5,054 alliance yrs.	0	41	5.02 (6.51)
Performance resources	H2	(-)	Continuous	2,781 (55.0)	0	29	4.46 (5.48)
Financial resources	H3	(-)	Continuous	1,318 (26.1)	0	21	2.14 (2.80)
Operational resources	H4	(-)	Continuous	955 (18.9)	0	21	1.53 (2.79)
Institutional dynamics (era: post-'95)	H5	(-)	Binary interaction	3,352 (66.3)			
Embeddedness (Btwn)	H6	(-)	Continuous		0	0.513	0.096 (0.097)
Team performance: recent (5 yr. avg. pts.)	H7a	(-)	Continuous		0	198	25.74 (35.86)
Team performance: historic (champ.)	H7b	(-)	Continuous		0	15	1.905 (3.136)
Team Sold	Control	unspecified	Binary	22 (3.9% of team years)			

\* Note that the expected sign is the relationship to the hazard of enterprise dissolution. As a result, a negative relationship is hypothesized to reduce the probability of dissolution, or in other words, increase the probability of enterprise survival.

^ Unless otherwise noted, percentage reported is based on the sample of 5,054 unique sponsor-team alliance years. For instance, of all sponsor-team alliances in every year (5,054), 55 percent (2,781) involved the exchange of performance-based resources.

**Table A.4:** Correlation matrix for variables in the event history model (Study 1).

	SprExp	SprPer	SprFin	TmExp	SprOps	Era1996	Btwn	Av5yrPts	CumDrv	Sold	Dissolved
SprExp	1	.848**	.627**	.648**	.661**	.692**	.547**	.649**	.569**	.073	-.191**
SprPer	.848**	1	.719**	.454**	.766**	.765**	.655**	.409**	.326**	.132**	-.198**
SprFin	.627**	.719**	1	.331**	.738**	.756**	.513**	.213**	.125**	.187**	-.134**
TmExp	.648**	.454**	.331**	1	.317**	.403**	.348**	.685**	.860**	.014	-.215**
SprOps	.661**	.766**	.738**	.317**	1	.763**	.526**	.221**	.135**	.162**	-.129**
Era1996	.692**	.765**	.756**	.403**	.763**	1	.441**	.286**	.216**	.159**	-.152**
Btwn	.547**	.655**	.513**	.348**	.526**	.441**	1	.329**	.273**	.051	-.219**
Av5yrPts	.649**	.409**	.213**	.685**	.221**	.286**	.329**	1	.812**	-.093*	-.236**
CumDrv	.569**	.326**	.125**	.860**	.135**	.216**	.273**	.812**	1	-.097*	-.197**
Sold	.073	.132**	.187**	.014	.162**	.159**	.051	-.093*	-.097*	1	-.073*
Dissolved	-.191**	-.198**	-.134**	-.215**	-.129**	-.152**	-.219**	-.236**	-.197**	-.073*	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table A.5:** Event history model analysis examining the influence on enterprise (F1 team) survival of promotional alliances offering various resources (Study 1).

Variable	Hyp.	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6 <sup>^</sup>
SprExp	1	0.018	0.005	0.009	0.020	0.021	0.025
SprPer	2	-0.541 ***			-0.635 ***	-0.730 ***	-0.650 ***
SprPer (binary)			-0.756 *				
SprPer (share)				-26.527 ***			
SprPer * SprPer						0.027 ***	
SprFin	3a	-0.628 **			-0.420 **	-0.642 **	-0.551 **
SprFin (binary)			-0.756 *				
SprFin (share)				-11.949 **			
SprFin * SprFin						0.083 *	
TmExp <sup>#</sup>		0.122	0.180 *	0.139	0.123	0.154	0.110
SprPer * TmExp					0.021 **		
SprFin * TmExp	3b	0.038				-0.010	0.001
SprFinBinary * TmExp			0.008				
SprFinShare * TmExp				0.493			
SprOps	4	0.324			0.062	0.179	-0.048
SprOps (binary)			0.116				
SprOps (share)				-0.425			
SprOps * SprOps						-0.028	
Era1996 <sup>#</sup>		0.577	5.981		2.081		
SprFin * Era1996	5	1.023 **			0.384		
SprFinBinary * Era1996			-5.446				
DegBtwn	6	0.711	-4.562	1.315		0.739	1.597
Av5YrPts	7	-0.067 **	-0.067 **	-0.071 **	-0.062 ***	-0.078 ***	-0.0694 ***
Av5YrPts * Era1996		-1.959 **	-0.544 *		-0.842 **		
CumDrv	7	-0.855 **	-0.992 **	-0.435	-0.704 *	-0.610	-0.567
Sold		-28.973	-15.351	-15.165		-25.869	-15.202
Likelihood ratio test ( $\chi^2$ )		79.401 ***	65.750 ***	62.814 ***	78.621 ***	73.641 ***	58.921 ***
- 2 Log likelihood		210.9	224.547	191.449	254.731	216.657	203.008
df		13	13	10	11	13	10

\*\*\* p < 0.01, \*\* p < .05, \* p < .10

<sup>^</sup> Includes only data prior to 1996. (n = 432 team years)

<sup>#</sup> These terms are included in the model as lower order terms of hypothesized interaction effects.



**Table A.6:** Main hypothesized results of Study 1, where the dependent variable is the likelihood of team dissolution.

Variable	Hypothesis	Operationalization	Prediction	Coefficient <sup>^</sup>	Result
Experience (sponsor)	H1	Sum of sponsor portfolio yrs. of experience in F1	(-)	0.018	not supported
Performance resources	H2	No. of performance-based sponsors	(-)	-0.541 **	supported
Financial resources	H3a	No. of financial-based sponsors	(-)	-0.628 *	supported
Financial resource interaction w/ team exp.	H3b	Financial sponsors * Yrs. of team experience in F1	(-)	0.038	not supported
Operational resources	H4	No. of operationally-based sponsors	(-)	0.324	not supported
Institutional dynamics	H5	Financial sponsors * Era (post '95)	(-)	1.023 *	not supported (reverse)
Embeddedness	H6	Betweenness centrality in F1 sponsorship network	(-)	0.711	not supported
Team performance: recent	H7a	Rolling avg. sum of team points in past 5 yrs.	(-)	-0.067 *	supported
Team performance: historic	H7b	Cumulative drivers championships won by team	(-)	-0.855 *	supported

<sup>^</sup> Coefficient for corresponding term in the primary model (Model 1 of Table A.5)

\*\* p < 0.01, \* p < .05

**Table A.7:** Results and characteristics of selected marketing event studies.

Author(s)	Event	Sample size	Baseline period	MAR (%) at t = 0	Test statistic	Event window <sup>a</sup> (days)	CMAR (%) of event window	Test statistic
Lane & Jacobson, 1995	Brand extension	89 extensions (34 firms)	t – 320 to t – 60	Not reported	NA	0, +1 (2)	0.63	3.67***
Geyskens, Gielens, & Dekimpe, 2002	Internet marketing channel additions	98 channel additions (22 firms)	t – 250 to t – 30	0.35	2.89***	0, +1 (2)	0.71	Not reported
Agrawal & Kamakura, 1995	Celebrity endorsement	110 endorsements (35 firms)	t – 244 to t – 6	0.44	2.39**	-1, 0 (2)	0.54	2.04*
Mathur, Mathur, & Rangan, 1997	Michael Jordan's return to NBA	5 firms endorsed by Jordan	t – 55 to t – 6	0.82	1.83*	-2, +2 (5)	1.99	(p<.05)^
Cornwell, Pruitt, & Clark, 2005	Official product sports sponsorship	53 sponsorships (43 firms)	t – 275 to t – 26	0.28	1.11	-2, +2 (5)	1.11	2.32**
Clark, Cornwell, & Pruitt, 2002	Stadium naming rights sponsorship	49 sponsorships (48 firms)	t – 175 to t – 26	0.73	2.37**	-1, +1 (3)	1.65	3.12***
Leeds, Leeds, & Pistolet, 2007	Stadium naming rights sponsorship	54 sponsorships	t – 170 to t – 21	0.18	5/54 sig. (.05) at firm level (3+, 2-)^	-20, +21 (42)	2/54 sig. (.05) at firm level, (both [-])^	Not reported
Pruitt, Cornwell, & Clark, 2004	NASCAR team primary sponsorship	24 sponsorships	t + 101 to t + 200	Not reported	NA	-1, 0 (2)	1.29	2.08**

Author(s)	Event	Sample size	Baseline period	MAR (%) at t = 0	Test statistic	Event window <sup>a</sup> (days)	CMAR (%) of event window	Test statistic
Sullivan & Dussold, 2003	NASCAR race effect on team sponsors	39 firms (34 races)	2001 calendar year	0.19	1.9***	NA		
Cornwell, Pruitt, & Van Ness, 2001	Indy 500 race winner effect on team sponsor	28 sponsorships (17 firms)	t – 170 to t – 21	-0.24	-1.19	-2, +2 (5)	-0.26	Not reported
Miyazaki & Morgan, 2001	Olympic sponsorship	27 firms	t – 125 to t – 6	0.12 (t – 1,0)	0.20	-4, 0 (5)	1.24	2.10**
Farrell & Frame, 1997	Olympic sponsorship	26 firms	t – 250 to t – 10	0.01	0.04	0, 2 (3)	-0.43	-2.20**
Mishra, Bobinski, & Bhabra, 1997	Various event sponsorships	76 sponsorships	t – 147 to t – 22	0.56	2.02**	-1, 0 (2)	0.69	1.91*

\* p<.10; \*\* p<.05; \*\*\* p<.01

<sup>^</sup> Column statistic (and SE) not reported.

<sup>a</sup> The event window reported here is the window used for multiple regression analysis of CMAR.

**Table A.8:** Descriptive statistics for the variables of Study 2.

Variable	Hypothesis/ Control	Expected sign	Measure	Count (%); [n = 73*]	Min.; Max.	Mean (S.D.)	Median
CAR (0,1), Event Indicator Model	Dependent Variable	unspecified	Continuous/ Binary by Sig.	10 negative; 0 positive (p<.10)	-0.1020; 0.0380	-0.00940 (0.0240)	-0.00628
Resource Complementarity	H1	+	Binary	47 (64.4)			
Nationality Congruence	H2	+	Binary	22 (30.1)			
Level (Owner/Title)	H3	most likely	Categorical	10 (13.7)			
Level (Top)	H3	less likely	Categorical	40 (54.8)			
Level (Supplier)	H3	least likely	Categorical	23 (31.5)			
Leverage	H4	+	Binary	17 (23.3)			
Size (Employee #)	Control	-	Continuous		422; 366,736	81,533 (92,361)	40,900
Corporate name	Control	+	Binary	15 (23.1)^			
Experience (yrs.)	Control	unspecified	Continuous		0; 24	3.40 (5.10)	0
Agency conflict	Control	-	Continuous		-1,182; 4,256	260.63 (593.69)	152.22
Partner performance: recent (% pts.)	Control	+	Continuous		0; 50%	10.01% (10.0%)	8.68%
Partner performance: historic (champ.)	Control	+	Continuous		0; 14	4.53 (4.31)	3

\* Seventy-three alliances are specified by the abnormal returns of the sponsoring firm. These 73 alliances are made up of 65 firms and 10 promoting teams. Percentages reported in this column represent the sample's 73 unique alliances unless otherwise noted.

^ The percentage reported is based on the sample's inclusion of 65 unique firms.

**Table A.9:** Alliance characteristic variables used in prediction of cumulative abnormal returns in corporate sponsorship event studies.

<b>Independent variable</b>	<b>Operationalized</b>	<b>Context</b>	<b><math>\beta</math></b>	<b>Test statistic</b>	<b>Author(s)</b>
Congruence	Dummy for yes/no relationship to sport	MLB, NBA, NFL, NHL, PGA sponsorship	11.47	3.51***	Cornwell, Pruitt, & Clark, 2005
Congruence	Automotive-related firm dummy	NASCAR team sponsorship	0.028	2.33**	Pruitt, Cornwell, & Clark, 2004
Congruence	Automotive-related firm dummy	Sponsorship of an Indy 500 race winner	0.0281	1.42^	Cornwell, Pruitt, & Van Ness, 2001
Contract length	Years of agreement	Stadium naming rights sponsorship	0.16	2.36**	Clark, Cornwell, & Pruitt, 2002
Relative cost	Yearly payment divided by corporate cash flow	Stadium naming rights sponsorship	4.2E-05	1.09	Clark, Cornwell, & Pruitt, 2002
Local firm	Dummy	Stadium naming rights sponsorship	1.95	1.83*	Clark, Cornwell, & Pruitt, 2002

^ p<.10 (one-tailed test); \* p<.10; \*\* p<.05; \*\*\* p<.01 (two-tailed test)

**Table A.10:** Sponsoring firm characteristic variables used in prediction of cumulative abnormal returns in corporate sponsorship event studies.

<b>Independent variable</b>	<b>Operationalized</b>	<b>Context</b>	<b><math>\beta</math></b>	<b>Test statistic</b>	<b>Author(s)</b>
Agency conflict	Corporate cash flow divided by market value of equity	MLB, NBA, NFL, NHL, PGA sponsorship	1.95	0.15	Cornwell, Pruitt, & Clark, 2005
Agency conflict	Corporate cash flow per share	NASCAR team sponsorship	-0.0037	-2.31**	Pruitt, Cornwell, & Clark, 2004
High tech firm	Dummy	MLB, NBA, NFL, NHL, PGA sponsorship	11.08	3.12**	Cornwell, Pruitt, & Clark, 2005
High tech firm	Dummy	Stadium naming rights sponsorship	4.51	3.30***	Clark, Cornwell, & Pruitt, 2002
Market position	Market share	MLB, NBA, NFL, NHL, PGA sponsorship	-0.18	-2.03**	Cornwell, Pruitt, & Clark, 2005
Corporate size	Market value of equity	MLB, NBA, NFL, NHL, PGA sponsorship	-6.3E-05	-1.19	Cornwell, Pruitt, & Clark, 2005
Corporate size	Total corporate assets	NASCAR team sponsorship	4.93E-08	0.63	Pruitt, Cornwell, & Clark, 2004
Corporate size	Market value of equity	Stadium naming rights sponsorship	-3.8E-11	-1.98	Clark, Cornwell, & Pruitt, 2002
Corporate size	Market value of equity divided by total MVE for Dow Jones' 30 firms	Sponsorship of an Indy 500 race winner	-0.153	-0.29	Cornwell, Pruitt, & Van Ness, 2001

<b>Independent variable</b>	<b>Operationalized</b>	<b>Context</b>	<b><math>\beta</math></b>	<b>Test statistic</b>	<b>Author(s)</b>
Corporate size	Market value of equity and total assets	Various event sponsorships	Not reported	Not significant	Mishra, Bobinski, & Bhabra, 1997
Corporate name	Dummy for corporate name as opposed to product/brand name	NASCAR team sponsorship	0.029	2.90***	Pruitt, Cornwell, & Clark, 2004
Corporate return on assets	Firm operating income to total assets	Various event sponsorships	0.055	2.41**	Mishra, Bobinski, & Bhabra, 1997
Corporate advertising expenditure	Advertising expenditure as proportion of sales	Various event sponsorships	Not reported	Not significant	Mishra, Bobinski, & Bhabra, 1997

<sup>^</sup> p<.10 (one-tailed test); \* p<.10; \*\* p<.05; \*\*\* p<.01 (two-tailed test)

**Table A.11:** Promotional partner characteristic variables used in prediction of cumulative abnormal returns in corporate sponsorship event studies.

Independent variable	Operationalized	Context	$\beta$	Test statistic	Author(s)
League	Dummies for NBA, NFL, NHL, PGA (MLB intercept)	MLB, NBA, NFL, NHL, PGA sponsorship	-7.91 (intercept); 9.35 (NBA); 7.07 (NFL); 12.76 (NHL); 9.58 (PGA)	-1.87* (intercept); 1.97* (NBA); 1.61 (NFL); 2.72***(NHL); 2.03**(PGA)	Cornwell, Pruitt, & Clark, 2005
League	Dummies for NBA, NFL, NHL (MLB intercept)	Stadium naming rights sponsorship	-10.72 (intercept); 1.73 (NBA); 1.96 (NFL); 1.37 (NHL)	-3.31*** (intercept); 1.27 (NBA); 1.16 (NFL); 1.07 (NHL)	Clark, Cornwell, & Pruitt, 2002
Market Population	Metropolitan statistical area (MSA)	Stadium naming rights sponsorship	-2.2E-07	-0.81	Clark, Cornwell, & Pruitt, 2002
Television	Dummy for televised event	Sponsorship of an Indy 500 race winner	0.006	0.255	Cornwell, Pruitt, & Van Ness, 2001
Team success	Total race series points in previous season	NASCAR team sponsorship	1.14E-05	3.62***	Pruitt, Cornwell, & Clark, 2004
Win percentage	Win percentage of past 2 years of tenant teams	Stadium naming rights sponsorship	12.02	2.48**	Clark, Cornwell, & Pruitt, 2002
Points earned	Points earned in race	NASCAR race effect on team sponsors	-1E-04	-5.0***	Sullivan & Dussold, 2003
Prize money	Prize money earned in race	NASCAR race effect on team sponsors	3.3E-05	2.75***	Sullivan & Dussold, 2003
Race win	Dummy for winning race	NASCAR race effect on team sponsors	-0.003	-0.6	Sullivan & Dussold, 2003



<b>Independent variable</b>	<b>Operationalized</b>	<b>Context</b>	<b><math>\beta</math></b>	<b>Test statistic</b>	<b>Author(s)</b>
Win margin	Race winner margin of victory in seconds	Sponsorship of an Indy 500 race winner	-4.85E-05	-0.49	Cornwell, Pruitt, & Van Ness, 2001
Qualifying speed	Percent of race winner's qualifying speed relative to fastest qualifying car	Sponsorship of an Indy 500 race winner	-1.16	-1.44 <sup>^</sup>	Cornwell, Pruitt, & Van Ness, 2001
New winner	Dummy if victory is driver's first Indy 500 win	Sponsorship of an Indy 500 race winner	0.042	2.35**	Cornwell, Pruitt, & Van Ness, 2001
Laps led	Laps led in race	NASCAR race effect on team sponsors	-1.9E-06	-0.08	Sullivan & Dussold, 2003
Race accidents	Number of race accidents involving sponsored team	NASCAR race effect on team sponsors	-0.005	2.60***	Sullivan & Dussold, 2003

<sup>^</sup> p<.10 (one-tailed test); \* p<.10; \*\* p<.05; \*\*\* p<.01 (two-tailed test)

**Table A.12:** Correlation matrix for terms in the primary event study model and the CAR values for event window (0,1)

	RComp	NatC	Lvl	Lvg	Size	CorpN	FirmExp	Agency	TeamP	DriverP	CAR	SigCAR
Resource Complementarity	1	0.071	0.037	-0.116	-0.174	-0.247 **	0.168	0.149	-0.004	-0.179	-0.016	0.130
Nationality Congruence	0.071	1	0.140	0.086	0.126	-0.033	0.179	0.018	0.081	0.099	0.225 *	-0.180
Level	0.037	0.140	1	-0.109	-0.402 ***	0.222 *	-0.166	-0.166	0.066	-0.065	-0.038	-0.009
Leverage Advertising	-0.116	0.086	-0.109	1	-0.038	-0.052	-0.164	0.165	0.217 *	0.212 *	0.070	-0.173
Size (employees)	-0.174	0.126	-0.402 ***	-0.038	1	0.052	0.126	0.060	-0.129	0.116	0.129	-0.062
Corporate Name	-0.247 **	-0.033	0.222 *	-0.052	0.052	1	-0.065	-0.051	0.112	0.239 **	0.089	0.089
Firm Experience in F1	0.168	0.179	-0.166	-0.164	0.126	-0.065	1	-0.049	0.040	0.180	0.163	0.026
Agency Conflict	0.149	0.018	-0.166	0.165	0.060	-0.051	-0.049	1	0.325 ***	0.055	0.134	-0.002
Team Perf. (recent)	-0.004	0.081	0.066	0.217 *	-0.129	0.112	0.040	0.325 ***	1	0.609 ***	0.005	0.055
Driver Perf. (historic)	-0.179	0.099	-0.065	0.212 *	0.116	0.239 **	0.180	0.055	0.609 ***	1	0.182	0.000
CAR (0,1)	-0.016	0.225 *	-0.038	0.070	0.129	0.089	0.163	0.134	0.005	0.182	1	-0.551 ***
Significant CAR	0.130	-0.180	-0.009	-0.173	-0.062	0.089	0.026	-0.002	0.055	0.000	-0.551 ***	1

\* Correlation significant at 0.10 level (2-tailed).

\*\* Correlation significant at 0.05 level (2-tailed).

\*\*\* Correlation significant at 0.01 level (2-tailed).

**Table A.13:** Various event window durations surrounding the announcement date of F1 promotional alliances.

Event Window	2-Step Market Model		Full Indicator Model	
	Mean CAR (%)	t-statistic	Evt. Wdw. Dummy $\beta$	t-Statistic
-5, +5	-0.6764	-0.81	-0.00077	-0.99
-2, +2	-0.4572	-0.94	-0.00084	-0.74
-1, +1	-0.5338	-1.51	-0.00172	-1.18
-1, 0	0.2483	0.82	0.00155	0.87
0	-0.1669	-0.97	-0.00110	-0.44
0, +1	-0.9442	-3.30***	-0.00468	-2.62***
0, +10	-1.8135	-2.22**	-0.00170	-2.19**
0, +20	-0.2978	-0.24	-0.00008	-0.14

\*\* p < .05; \*\*\* p < .01

**Table A.14:** Comparison by Sponsoring Firm of Event Indicator and Market Models for Event Windows (0,1) and (0,10).

Sponsor	Team <sup>^</sup>	Announce Date	Cumulative Abnormal Return [CAR] (0,1)			CAR (0,10)		
			Full Dates Indicator Model	Baseline Indicator Model	2-Step Market Model	Full Dates Indicator Model	Baseline Indicator Model	2-Step Market Model
3D systems	Renault	12/4/00	-0.0019	-0.0020	-0.0034	-0.2152	-0.2327	-0.2329*
Acer	Ferrari	1/20/06	-0.0184	-0.0198	-0.0197	-0.1315**	-0.1346**	-0.1354*
Alice	Ferrari	1/16/06	-0.0338**	-0.0340**	-0.0339	-0.0508*	-0.0502*	-0.0503
Allianz	Williams	5/19/00	-0.0107	-0.0122	-0.0121	-0.1168	-0.1125	-0.1125
AMD	Ferrari	2/6/02	-0.0553	-0.0543	-0.0543	0.0012	0.0069	0.0074
AT&T	Williams	10/20/06	0.0205	0.0200	0.0200	-0.0109	-0.0115	-0.0115
Barco	Honda	5/16/01	-0.0534	0.0583**	-0.0583	-0.0469	-0.0587	-0.0587
Battery	Williams	1/26/06	-0.0098	-0.0085	-0.0085	-0.0380	-0.0308	-0.0307
BMC Software	Toyota	7/2/04	-0.0167	-0.0183	-0.0183	-0.1549**	-0.1615**	-0.1646
BMW Group	BMW	6/22/05	0.0112	0.0114	0.0114	0.0491	0.0482	0.0481
Bridgestone	Multiple	12/14/05	-0.0414**	-0.0421**	-0.0420*	-0.0555*	-0.0614**	-0.0610
Charmilles	Honda	2/26/07	0.0033	0.0082	0.0073	0.0516	0.0530	0.0525
Credit Suisse	BMW	1/17/01	-0.0055	-0.0040	-0.0039	0.0017	0.0088	0.0087
Dell Computer	BMW	5/6/06	-0.0132	-0.0128	-0.0128	0.0198	0.0275	0.0282
Denso	Toyota	1/16/04	0.0307	0.0313*	0.0313	0.0261	0.0285	0.0283
DeWalt	Williams	2/6/06	-0.0071	-0.0066	-0.0066*	0.0040	0.0023	0.0022
EMC2	Toyota	2/26/01	-0.1020*	-0.0965**	-0.0964	-0.2462*	-0.2694**	-0.2718
Esprit	Toyota	1/9/07	-0.0389*	-0.0346	-0.0347	-0.0865	-0.0813	-0.0833
Exact	Spyker	1/17/07	-0.0172	-0.0157	-0.0157	-0.0469	-0.0361	-0.0361
FedEx	McLaren	1/16/07	0.0221	0.0219	0.0219	0.0047	0.0041	0.0044
Gatorade	Honda	2/26/07	-0.0127	-0.0146	-0.0156	-0.0094	-0.0091	-0.0113
Hilton International	McLaren	9/9/05	-0.0064	-0.0062	-0.0062	-0.0253	-0.0185	-0.0186
Honda	Honda	11/17/04 <sup>#</sup>	-0.0376**	-0.0382*	-0.0382*	-0.0690*	-0.0700	-0.0701**
Honda	Super Aguri	10/7/05	-0.0054	-0.0057	-0.0057	-0.0206	-0.0235	-0.0237
Honda	Honda	10/26/99 <sup>#</sup>	0.0041	0.0044	0.0044	0.0605	0.0444	0.0444

Sponsor	Team^	Announce Date	Cumulative Abnormal Return [CAR] (0,1)			CAR (0,10)		
			Full Dates Indicator Model	Baseline Indicator Model	2-Step Market Model	Full Dates Indicator Model	Baseline Indicator Model	2-Step Market Model
IBM	Honda	2/26/07	-0.0103	-0.0083	-0.0078	-0.0141	-0.0145	-0.0137
Infineon	Ferrari	3/5/03	-0.0120	-0.0081	-0.0081	0.0910	0.0814	0.0766
ING	Renault	10/16/06	-0.0041	-0.0055	-0.0055	-0.0246	-0.0291	-0.0292
Intel	BMW	12/15/05	-0.0033	-0.0048	-0.0048	-0.0390	-0.0448	-0.0450**
Johnnie Walker	McLaren	2/22/05	0.0117	0.0105	0.0105	-0.0215	-0.0205	-0.0206
KDDI	Toyota	3/3/03	-0.0298	-0.0326	-0.0326	-0.0192	-0.0213	-0.0208
Kingfisher Airlines	Toyota	1/12/07	-0.0580	-0.0567	-0.0564	-0.0667	-0.0380	-0.0385
Koni	McLaren	11/30/06	-0.0121	-0.0112	-0.0112	-0.0313	-0.0257	-0.0255
Kyoto Tool	Toyota	10/25/01	-0.0600	-0.0628	-0.0628	-0.1275	-0.1374	-0.1367
Lenovo	Williams	1/16/07	0.0019	0.0012	0.0012	-0.0788	-0.0847	-0.0847
Mercedes Benz	McLaren	10/26/94	0.0120	0.0122	0.0121	0.0011	-0.0003	0.0004
Mobil 1	McLaren	10/28/94	0.0032	0.0042	0.0040	-0.0412	-0.0372	-0.0373
Nescafe Xpress	McLaren	10/21/04	-0.0032	-0.0039	-0.0039	0.0189	0.0154	0.0157
NetApp	Renault	1/20/03	0.0380	0.0380	0.0380	0.0621	0.0657	0.0660
NGK	Honda	4/28/06	-0.0104	-0.0135	-0.0135	-0.0963*	-0.1052*	-0.1056*
Nippon Oil Eneos	Honda	2/24/05	0.0034	0.0047	0.0047	-0.0029	0.0029	0.0025
NTN	Honda	1/16/05	-0.0102	-0.0107	-0.0107	-0.0133	-0.0156	-0.0155
Oerlikon	Red Bull	1/23/07	-0.0073	-0.0068	-0.0068	-0.0256	-0.0220	-0.0222
Panasonic	Toyota	7/1/01	-0.0171	-0.0168	-0.0168	0.0244	0.0242	0.0241
Perkin Elmer	Honda	2/26/07	-0.0095	-0.0091	-0.0094	-0.0236	-0.0174	-0.0186
Phantom Works	Renault	6/17/04	-0.0055	-0.0037	-0.0037	-0.0063	0.0033	0.0031
Philips	Williams	12/6/05	-0.0063	-0.0059	-0.0060	0.0634**	0.0635**	0.0635
Puma	Ferrari	9/8/04	0.0095	0.0076	0.0076	0.0242	0.0135	0.0135
Puma	Renault	1/7/04	-0.0166	-0.0162	-0.0162	-0.0550	-0.0511	-0.0511
Puma	Williams	12/8/03	-0.0159	-0.0149	-0.0149	-0.0077	-0.0027	-0.0027
Randstad	Williams	1/20/06	-0.0100	-0.0078	-0.0077	0.0366	0.0500	0.0496
Ray-Ban	Honda	6/18/04	0.0145	0.0150	0.0151	0.0416	0.0423	0.0425

Sponsor	Team <sup>^</sup>	Announce Date	Cumulative Abnormal Return [CAR] (0,1)			CAR (0,10)		
			Full Dates Indicator Model	Baseline Indicator Model	2-Step Market Model	Full Dates Indicator Model	Baseline Indicator Model	2-Step Market Model
RBS	Williams	1/6/05	0.0023	0.0023	0.0023	-0.0113	-0.0097	-0.0097
Renault	Renault	3/17/00	0.0139	0.0050	0.0050	0.0754	0.0659	0.0670
Reuters	Williams	1/12/00	0.0071	0.0153	0.0153	0.1148	0.1480*	0.1506
Samsung	Spyker	5/5/05	0.0066	0.0058	0.0058	0.0547*	0.0531*	0.0530**
Santander	McLaren	8/28/06	-0.0009	-0.0011	-0.0011	-0.0084	-0.0085	-0.0084
Seiko	Honda	1/16/05	-0.0167	-0.0171	-0.0171	0.0071	0.0041	0.0041
Shell	Ferrari	7/31/95	0.0047	0.0040	0.0040	-0.0114	-0.0144	-0.0144
Showa	Honda	6/7/04	0.0139	0.0194	0.0197	0.0877	0.0987*	0.0986
Snap On	Honda	1/9/06	0.0114	0.0112	0.0112	0.0012	0.0001	0.0004
Standex	BMW	5/13/06	0.0118	0.0125	0.0125**	-0.0240	-0.0202	-0.0205
Symantec	Renault	7/28/03	0.0252	0.0247	0.0188	-0.0195	-0.0207	-0.0385
Tata	Williams	1/27/06	-0.0041	-0.0005	-0.0005	0.0570	0.0692	0.0691
Time Inc	Toyota	12/17/01	-0.0422	-0.0452	-0.0452	-0.0791	-0.0909	-0.0910
Toyota	Williams	7/27/06	-0.0051	-0.0028	-0.0028	0.0216	0.0235	0.0236
Toyota Motor Corp.	Toyota	6/30/00	-0.0546*	-0.0561	-0.0561	-0.0178	-0.0274	-0.0274
Universal Music Group	Honda	2/26/07	0.0020	0.0018	0.0018	-0.0080	-0.0078	-0.0075
Vodafone	McLaren	12/14/05	0.0081	0.0059	0.0058	-0.0043	-0.0123	-0.0127
Xansa	Renault	10/13/05	-0.0464**	-0.0450**	-0.0450**	-0.0544	-0.0433	-0.0473
			Event Window $\beta$		CAR Mean (SD)	Event Window $\beta$		CAR Mean (SD)
<b>Full Sample</b>			-0.0047	-0.0047	-0.0094 (0.0239)	-0.0017	-0.0017	-0.0181 (0.0684)
t-stat			-2.6150**	-2.6477**	-3.3017**	-2.1950**	-2.1708**	-2.2162**
p-value			0.0089	0.0081	0.0015	0.0282	0.0300	0.0300

\* p < .10; \*\* p < .05 (two-tailed tests)

<sup>^</sup> Team names are circa 2007

<sup>#</sup> Honda announced a title sponsorship in 1999 and announced an equity stake in 2004.

**Table A.15:** Logistic regression model analysis of sponsoring firms demonstrating significant negative returns (DV) for the alliance announcement window (0,1).

	Model 1					Model 2					Model 3				
	$\beta$	Wald's / $\chi^2$	df	p	$e^{\beta}$ (odds ratio)	$\beta$	Wald's / $\chi^2$	df	p	$e^{\beta}$ (odds ratio)	$\beta$	Wald's / $\chi^2$	df	p	$e^{\beta}$ (odds ratio)
Constant	-2.948	5.002	1	0.025	0.052	-3.322	3.139	1	0.076	0.036	-3.135	27.032	1	0.000	0.043
Resource Complementarity	0.075	0.005	1	0.942	1.078	0.369	0.089	1	0.766	1.446					
Nationality Congruence Level (Owner/Title)	1.986	4.041	1	0.044	7.284	1.680	2.285	1	0.131	5.366	1.689	5.903	1	0.064	5.412
Level (Top)	0.826	0.493	1	0.483	2.285	3.021	1.765	1	0.184	20.521					
Level (Supplier)	-1.031	0.783	1	0.376	0.357	-0.080	0.004	1	0.952	0.923					
Leverage Advertising Size (employees)		2.455	2	0.293			2.484	2	0.289						
	-0.541	0.188	1	0.665	0.582	-0.817	0.245	1	0.621	0.442					
Corporate Name						1.751	1.440	1	0.230	5.759					
Firm Experience in F1						-0.066	0.192	1	0.661	0.936					
Agency Conflict						-0.001	0.271	1	0.603	0.999					
Team Perf. (recent)						3.049	0.196	1	0.658	21.088					
Driver Perf. (historic)						-0.106	0.278	1	0.598	0.899					
<b>Model</b>		<b>6.443</b>	<b>5</b>	<b>0.266</b>			<b>9.341</b>	<b>11</b>	<b>0.590</b>			<b>3.693</b>	<b>1</b>	<b>0.017</b>	
-2 Log likelihood	34.328					30.679					37.078				
Cox & Snell R-square	0.089					0.134					0.052				
Nagelkerke R-square	0.200					0.291					0.117				
Hosmer & Lemeshow Goodness-of-fit		2.728	7	0.909			9.098	7	0.246			NA			

**Table A.16:** Logistic regression model analysis of the impact of investment magnitude and alliance nationality congruence on the likelihood of significant negative returns (DV) for sponsoring firms announcing an F1 alliance.

	Model 1					Model 2				
	$\beta$	Wald's / $\chi^2$	df	p	$e^{\beta}$ (odds ratio)	$\beta$	Wald's / $\chi^2$	df	p	$e^{\beta}$ (odds ratio)
Constant	-2.870	6.270	1	0.000	0.057	-4.100	2.484	1	0.000	0.017
Firm Alliance Investment	0.011	3.745	1	0.015	1.011	0.013	2.285	1	0.012	1.013
Nationality Congruence						2.199	0.089	1	0.053	9.016
<b>Model</b>		<b>5.718</b>	<b>1</b>	<b>0.005</b>			<b>10.415</b>	<b>2</b>	<b>0.005</b>	
-2 Log likelihood	34.869					30.172			0.030 <sup>^</sup>	
Cox & Snell R-square	0.081					0.142				
Nagelkerke R-square	0.179					0.316				
Hosmer & Lemeshow Goodness-of-fit		15.165	7	0.034		7.809	8	0.452		

<sup>^</sup> Chi-square test of difference in -2LL between models 1 & 2.



**Table A.17:** Logistic regression model estimations of the probability of negative shareholder returns based on the magnitude of investment and nationality congruence between the sponsoring firm and a sponsored F1 racing team.

Investment (millions US\$)	Sample designation	p(Significantly Negative Returns) [%]		
		Investment alone	Nationally incongruent	Nationally congruent
0.05	minimum (incongruent)	5.3679	1.6320	NA
0.3	minimum (congruent)	5.3816	1.6372	13.0488
1		5.4201	1.6521	13.1533
2.88	median	5.5248	1.6926	13.4375
10		5.9389	1.8552	14.5614
27.23	mean	7.0642	2.3148	17.6037
50		8.8535	3.0955	22.3607
100		14.2680	5.7979	35.6876
260	maximum (congruent)	48.2466	33.4184	81.9014
350	maximum (incongruent)	71.0753	62.0379	NA

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