Innocents Abroad:

The Hazards of International Joint Ventures

with Pyramidal Group Firms

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ABSTRACT

The fundamental unit of production in microeconomics is the firm, which mirrors reality in the United States and United Kingdom. But elsewhere, business groups can be the more important unit for business strategy; not the firm. We examine international joint ventures in the telecoms industry in Brazil, where pyramidal groups are ubiquitous. We explain how corporate governance differences between agency behaviors in pyramidal groups versus freestanding widely held firms can lead to joint venture failures. We find joint ventures between pyramidal group-member firms and partners from countries where pyramids are rarer have significantly elevated failure rates; while joint ventures with partners from countries where pyramidal groups are ubiquitous are more likely to succeed. We provide clinical examples illustrating the mechanisms driving divergent partnership performance.

INTRODUCTION

Multinational enterprises (MNEs) frequently enter joint venture partnerships with local firms as a competitive strategy to internationalize. Foreign firms are not as familiar with local ground rules, culture (Kogut & Singh, 1988), politics (Henisz, 2000; Henisz & Delios, 2004), and are often not a part of an existing business network. Earlier writers accordingly said that indigenous local firms have a home court advantage and later writers said that foreign entrants have the liability of foreignness (Buckley & Casson, 1976; Hymer, 1976; Zaheer, 1995; Zaheer & Mosakowski, 1997). One response is for foreign entrants to seek joint ventures as a strategy to mitigate market hazards. This strategy can be a double-edged sword because the joint venture partner can behave opportunistically (Henisz, 2000; Henisz & Delios, 2004). This paper focuses on the hazards of partnering with a business group member firm that stem from an under appreciation of the partner's corporate governance behavior.

Recent studies on international governance, Barca and Becht (2001); Claessens, Djankov, and Lang, (2000); Faccio and Lang, (2002); La Porta, Lopez-de-Silanes, and Shleifer, (1999), and many others, reveal that the widely held stand alone firm governance structure theorized broadly by Jensen and Meckling (1976) is almost unique to the U.S. and U.K. Elsewhere, large listed corporations around the world typically belong to business groups. Initial steps towards exploring the relationships of business group affiliation, firm behavior and firm performance include Chang and Hong (2002), Khanna and Palepu (2000), Khanna and Rivkin (2001), and who report a positive link between business group control and individual firm performance.[i] More recently, others (e.g., Thomas and Khanna (2009); Villalonga and

Amit, (2009)) examine the strategies of controlling owners, relational network ties (i.e., board composition) and their effects on value creation.[ii]

This paper's stance is different. We tackle the under examined relationship of joint venture partnerships with differing types of corporate governance and ownership structures. We demonstrate how a pyramidal group's governance structure can pose an expropriation risk to uninformed outsiders, including foreign managers guiding their freestanding firms into joint ventures with pitfalls of expropriation. In essence, if the local partner firm belongs to a business group, it may be governed in the interest of the group as a whole or of the ultimate controlling shareholder, not in the interest of the firm's immediate shareholders. A foreign joint venture partner innocent of this can be blindsided by inexplicably devastating non-value maximizing behavior by its local partner. But the forewarned MNE manager is forearmed and can protect the joint venture accordingly.

This means the under informed MNE's *ex post* returns from joint ventures can be far lower than its managers expected *ex ante*. Once this risk becomes clear, the MNE may opt to abandon the joint venture. Thus, joint venture failure should correlate with managerial blind spots regarding the governance of partner firms belonging to pyramidal groups. Indeed, this may constitute an explanation of "unintended termination" (Makino, Chan, Isobe, & Beamish 2007), previously insufficiently explored in the related literatures, of international joint ventures.[iii]

We examine data on 96 multinational subsidiaries' entries into the Brazilian telecommunications industry from 1997 through 2004, and find evidence consistent with our conjecture that unfamiliarity with pyramidal groups leads to failure. Our data show that joint ventures between firms with certain combinations of governance structures are especially apt to underperform and fail. For example, joint ventures of widely held freestanding firms with pyramidal group firms are the most at risk for failure. In contrast, joint ventures of pyramidal group firms with other pyramidal group firms have the highest incidence of survival. We conclude that the latter pairs better understand their partner firms' governance, and employ such counter-measures as necessary.

Regression results of the above sort are necessarily circumstantial. To deepen our empirical effort, we conduct field research which entails several senior executive interviews with telecom managers and extensive research on each joint venture entry, including analysis of shareholder agreements. We consolidate this analysis into four clinical case examples to illustrate the causal mechanisms of international joint venture failure and success (Parkhe, 1993). This illustrates how *freestanding widely held* firms' unfamiliarity with pyramidal groups can lead to their losing control rights, suffering wealth expropriation by their joint venture partner, and ultimately exiting the underperforming joint venture. We then explore how foreign pyramid firms, which obviously understand governance issues inside pyramids, employ safeguards for their joint venture arrangements, and elaborate on the tactics they use.

This paper proceeds as follows. The next section defines pyramidal groups and discusses how pyramidal group firms differ from other corporate ownership structures, and why such a control structure is particularly problematic for a partnering firm unfamiliar with pyramidal groups. The third section presents empirical results linking joint ventures' statistical hazard rates in the Brazilian telecommunications industry to foreign managers' unfamiliarity with pyramidal groups. The fourth section uses case analyses and executive interviews to explore the underlying economics and confirm our interpretation of the causal relationships. Techniques for liberating wealth from foreign joint venture partners are described. Countermeasures adopted by joint venture partners familiar with pyramidal groups are described and again hazard rate analysis is used to gauge their effectiveness. We conclude with a discussion and implications for strategy scholars and foreign investment managers.

PYRAMIDAL OWNERSHIP STRUCTURE AND EXPROPRIATION RISKS

The Nature of Pyramids

Pyramidal groups are collections of firms with corporate governance structures that differ markedly from those of freestanding widely held firms in three primary ways. First, pyramidal groups have one apex firm, or very rarely a few apex firms, with one dominant owner controlling the apex firm and a group of tiered firms. Most often, the dominant owner is a wealthy family (La Porta et al., 1999). The literature

refers to this corporate governance structure as a *family pyramid* (Claessens et al., 2000; Faccio & Lang, 2002; Fogel, 2006; Morck, Wolfenzon & Yeung, 2005) like the Carlos Slim Helú (the Mexican billionaire) pyramidal group.

Second, the controlling owner typically effects control through chains of intercorporate equity blocks connecting the apex firm to each member firm in the group. The outcome is that pyramiding exponentially leverages a controlling owner's wealth into a vast amount of controlled corporate assets while having only limited equity participation in many of the controlled units, especially at the lower tiers. The key effect in pyramiding is the leveraging of small cash flow rights into dominant and entrenched control rights of a multitude of firms.

Let us illustrate: a rich family can split $1 billion of family money into two and let each be the equity participation of a public company of $1 billion. Assuming that 50% of equity shares is enough for control, the family now controls two public corporations with a total of $2 billion corporate assets. Repeating the act once the family leverages the $1 billion family wealth to control four $1 billion corporations while maintaining only 25% equity participation in each. Repeating the act multiple times, the family creates *N* layers of firms leverages the $1 billion to control in consolidation $2^{N-1} billion corporation assets while maintaining only 1/2^{N-1} equity participation in the N^{th} layer, 1/2^{N-2} in the $N\text{-}1^{th}$ layer, etc. The more tiers added, the greater the number of firms controlled and the smaller the equity participation in the firms on the added tiers. Clearly, public shareholders and joint venture partners supply additional equity to listed firms in each tier, allowing each tier to have a total capitalization much greater than the one above it. At each layer, an upper tier firm controls a multitude of lower tier firms, thence the term *pyramidal group*.

Not to confuse pyramidal group firms with seemingly similar entities, neither firms having many 100% owned subsidiaries, like real estate businesses in the U.S. which often incorporate properties separately for liability reasons nor U.S. family owned firms characterized by Villalonga and Amit (2009) are commonly classified as pyramidal groups. It is worth re-iterating that the controlling owner typically controls all the corporate members of the pyramidal group but in each has equity participation (often

termed as cashflow rights in the financial economics literature) that is not commensurate with his/her level of control; the gap is greater the lower the tier is a pyramidal group corporate member.

For most group firms, the dominant shareholder's control is further strengthened via additional means. The family can expand its voting power relative to its actual ownership stake by holding super-voting shares (more than one vote per share), golden shares (single shares carrying 51% of all votes), corporate charters limiting shareholders' voting rights (specifying, for instance, that the family appoints over half the directors), dual class shares (Almeida & Wolfenzon, 2006) and other control enhancing mechanisms. Cross-holdings – firms holding equity blocks in other firms at equivalent or higher tiers – can make the position (or membership) of a firm in a pyramidal group hard for outsiders to gauge, and its managers' actions hard to predict.

Third, pyramidal groups differ from widely-held firms and other forms of business groups in that the dominant owner of the apex firm essentially appoints the top management of every firm in his group. This is because the board of every firm is appointed by the board of its parent firm in the tier above. These appointees are usually the dominant shareholder himself, his close relatives, or his loyal associates. To further secure control throughout the pyramid, the dominant owner typically also appoints trusted associates and family members to key executive management positions in all significant firms. In essence, this means that the interest of the dominant owner of the apex firm is effectively represented at all levels. Thomas and Khanna's (2009) recent study on Chilean business groups demonstrates the strength of non-equity ties (e.g., director interlocks).

Although La Porta et al. (1999) show pyramidal groups to be by far the most prominent governance structures in most countries, other sorts of business groups also exist.[iv] The most well-known are the Japanese *keiretsu* – constellations of major firms, each holding tiny equity stakes in all the others. Collectively, these stakes sum to control blocks, so each firm is "controlled" by all the others, with no wealthy family or other single controlling owner in the picture. The major firms in the *keiretsu* then each serve as apex firms for their own pyramidal groups (Morck & Nakamura, 2005). Business groups should also not be confused with "conglomerates," which is a single freestanding firm with divisions active in

many industries. Conglomerates thus do not provide the scope for leveraging substantial family fortunes into undisputable control over corporate assets worth vastly more, as pyramids do. In fact, in the U.S. case, large conglomerates are generally widely held and professionally managed, not controlled by wealthy families. Our focus is on pyramidal groups, and all of our arguments may not apply fully to other less usual sorts of business groups.

Recent empirical studies show that pyramidal structure is prevalent on a global scale. Widely held freestanding firms are common in only the United States, the United Kingdom, the Netherlands and Ireland (see the survey by Morck et al., 2005). Elsewhere, controlling shareholders prevail – usually very wealthy families and occasionally state-owned enterprises (SOE). La Porta et al. (1999) examine 27 high-income countries and, using a 20% definition of control and taking worldwide averages, find that only 36% of large firms are widely held, but 54% are in pyramidal groups. Of these, two thirds are controlled by families and one third by SOEs. Morck, Stangeland, and Yeung (2000) report a high incidence of pyramidal group control in large Canadian firms. Claessens et al., (2000), examining 2,980 firms in nine East Asian countries, find a controlling shareholder in over 67% of the firms and report that pyramidal groups are commonplace. Similar results are found by Faccio and Lang (2002) in studying 5,323 Western European firms: 37% are widely held firms and 44% family controlled and pyramidal groups are again commonplace. Fogel (2006) confirms the preponderance of wealthy family control over the ten largest business entities (groups or freestanding firms) in most countries. In Brazil, Portugal, Mexico, and Argentina, the top ten entities are predominantly pyramidal groups, while in the U.S., U.K., and Australia, the top ten entities are predominantly widely held firms. Table 1 reproduces her results.

---Insert Table 1 about here---

Understanding this variation in corporate governance across countries is important for firms considering international joint ventures. Unfamiliarity with the host country's institutional environment – its regulations, laws, and business practices – has negative implications on firm performance (Henisz, 2000; Perkins, Morck, and Yeung, 2008; Siegel & Larson, 2009). Corporate governance norms are an important part of a country's institutional environment and often reflect other institutional constraints like

property rights protections and capital market development (La Porta et al., 1999). If joint venture partners misunderstand each other's governance, they are likely to misconstrue each other's behavior as well, and perhaps unwittingly expose themselves to avoidable expropriation risks. In the following sub-section, we describe the basic corporate governance problems associated with pyramidal groups and in a subsequent section we use clinical cases to illustrate how these problems unnoticed can lead to joint venture failure.

Pyramidal group agency issues

Berle and Means (1932) show that pyramids often generate far more extreme separations of ownership from control than occur in widely held freestanding firms. A long string of literature (e.g., Bebchuk, Kraakman, & Triantis, 2000; Berle & Means, 1932; Bonbright & Means, 1932; Morck et al., 2005) shows that such leveraged ownership structures induce corporate governance problems unfamiliar in countries whose corporate sectors are populated by freestanding widely-held firms. Pyramiding modifies our basic framework (e.g., Jensen & Meckling, 1976) for understanding agency problems in several critical ways that may place joint venture partners unfamiliar with such agency issues at risk.

The key in pyramiding is the leveraging of small cash flow rights into dominant and entrenched control rights of a multitude of firms. Despite each firm in the pyramid having a large shareholder in one (or more) firm in the tiers above, actual control vests with the dominant owner of the apex firm, whose real ownership stake in lower tiered firms can be **miniscule** as we have shown above and also pointed out in Bebchuk et al. (2000). Agency problems arise because of conflicts between member firms' public shareholders and the dominant owner of the apex firm. These conflicts overshadow the more standard agency problems between generic shareholders and hired managers described by Jensen and Meckling (1976).

Note that the dominant owners are most often also agents; they should serve the interest of member firms' shareholders, just like the managers in a simple principal-agent framework. However, the controlling interest of the dominant owner of the apex group is **entrenched** -meaning the owner and the manager are one and the same. The literature on the market for corporate control emphasizes that a

manager serves her principal better if her job security is on the line. In pyramids the controlling insider and his appointed managers cannot be dislodged because the controlling shareholder votes a control block in each firm in his pyramid (Morck, Shleifer, & Vishny, 1988). In extreme cases, the entrenched managers are locked into coveted control position through umbrella agreements, which serve to regulate future contractual clauses. Without penetrable external pressures, the insiders of pyramid member firms are essentially immune to challenges from minority shareholders that constrain the self-interest of professional mangers in widely held freestanding firms.

A logical strategic response to supervene a change in control in a pyramid member firm would require buying out the controlling shareholder. However, this rarely occurs because the controlling shareholder of a pyramidal group can glean substantial **private benefits of control** (Bebchuk et al., 2000; Dyck and Zingales, 2004; Nenova, 2000). These benefits are not only perks akin to those extracted by professional managers of widely held firms, but also tangible and intangible rewards uniquely attainable by controlling a vast group of firms. Since the dominant owner extracts *private benefits of control* as well as the normal returns due a shareholder, buying him out costs more than buying shares on the open market. The cost is higher the more astute the controlling shareholder. This adds an *adverse selection problem* to the already hearty brew of governance problems potentially present when partnering with pyramidal groups. We shall illustrate the point using clinical evidence in that section below. The extraction of **private benefits of control** by the controlling shareholder often requires that a given pyramidal group member firm deliberately pursues policies other than value maximization. In countries where officers and directors have a duty to act for the controlling shareholders of their firm, such behavior must be secret. In some countries, however, officers and directors' fiduciary duty is to their business group, not to any particular firm (Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000). In any case, the tight links of member firms' officers and directors to the pyramid's controlling shareholder, the complex web of cross holdings that often obscures the identity of the controlling shareholder, and the use of unlisted firms as intermediaries, can effectively obscure such policies; all these vastly facilitate self-dealing when compared to free standing firms.

The controlling shareholder at the pyramid apex then often shunts wealth away from outside investors, shifting resources between pyramidal member firms to shift profits away from firms mainly owned by outside investors and into firms mainly owned by the group's controlling shareholder. To this end, the controlling shareholder can direct group firms mainly owned by joint venture partners to enter disadvantageous agreements with firms in which his real ownership stake is large. Such transactions between seemingly independent firms that actually share a common ultimate controlling shareholder are called *tunneling* in the finance literature (Johnson et al., 2000) and *self-dealing* in corporation law. Tunneling tactics include transfer pricing, opportunistically adjusting invoice prices in intra-group trading of goods and services; as well as other forms of income shifting, such as providing artificial financial or insurance services.

The Double Edged Sword of International Joint Venturing

Multinational's managers may optimize foreign direct investment decisions by calculating risks and returns prior to entry; yet expropriation risks of the above sort could be unknown to them *ex ante*. We conjecture that this is especially likely if the multinational partners are from locations with few pyramidal groups. Like many known bounded rationality problems (March & Simon, 1958) that affect strategic decision making (i.e., disruptive technologies, Bower & Christensen, 1996; competitive decision making, Zajac & Bazerman, 1991; and misperceiving competition, Porac, Thomas, Wilson, Paton, & Kanfer, 1995), unknown pyramidal group governance behaviors show foreign investment managers to be bounded rationally by unforeseeable information voids. Porter (1980: 59) dubs such perceptual limitations *strategic blind spots*, and argues they occur where a competitor "will either not see the significance of events at all, will perceive them incorrectly, or will perceive them only very slowly." Zajac and Bazerman (1991) analogously link blind spots and judgment errors in managerial decision making. We posit that strategic blind spots not only distort managers' perceptions of reality, but can also undermine their strategic plans and cause suboptimal performance. If managers from countries of freestanding firms, like the U.S., do have such blind spots regarding agency problems, Porter's (1980) logic predicts that joint

venture parents with managers unaware of typical corporate governance in pyramidal groups are likely to suffer unexpected wealth expropriation at the hands of their pyramidal group partners.

FDI theory advises foreign firms to seek local partners to reduce their *"liability of foreignness"* – their risk of misstep, or even government expropriation, due to unfamiliarity with local institutions (Henisz, 2000; Zaheer & Mosakowski, 1997). However, this strategy may be a double edged sword. The modified agency problems intrinsic to pyramids are more extreme in economies with weaker legal systems (Morck et al., 2005), and especially in those with legal systems less protective of outside investors' property rights (Bebchuk et al., 2000; Burkart, Panunzi & Shleifer, 2003). This advice is most urgently proffered to firms entering economies with weak or corrupt institutions, where missteps are likely more costly and government expropriation is a more serious risk. Henisz (2000) demonstrates that joint venturing can be a volatile tradeoff between mitigating the exogenous institutional hazards of local politics versus mitigating the endogenous risks of possible contractual hazards related to joint venturing with local partners. Delios and Henisz (2000) - and others using a transactions costs approach (Gatignon & Anderson, 1988; Hennart, 1988; Teece, 1986) – discuss both public (e.g., government) and private (e.g., technology, reputation, information) risks of expropriation that can be mitigated through experience. In our context, joint venturing with partners who are pyramidal members exposes the foreign firm to a different form of expropriation risk by the controlling shareholder of the pyramidal group; the less experienced are more likely to get hurt.

Joint venture partners are often not naïve, the *caveat emptor* applies and the expropriation is sometimes legal. Foreign joint venture partners, unaware of these risks *ex ante*, surprised by unfamiliar agency problems, and unable to protect their interests *ex post*, are likely to exit prematurely. Often no laws are broken, so the foreign partner has little recourse but to cut its losses. Fully informed foreign firms would, of course, avoid these problems by avoiding such joint ventures or rationally negotiating contractual safeguards in advance. But if enough ill-informed foreign firms enter joint ventures with pyramid member firms, and if enough of the latter take advantage of that ignorance, we might detect

performance distortions in overall joint venture statistics. To study this, we examine joint ventures between foreign firms and pyramidal group member firms in Brazil.

Before we proceed further, we advance warnings of selection concerns. On the one hand, foreign firms unfamiliar with the governance problems intrinsic to pyramidal groups are likely to offer better joint venture deals to local firms in pyramid-rich economies, and are thus likely to be overrepresented in observed samples of joint venture partners. Coupled with this point official government mandates restricting foreign ownership, foreign entrants may be forced to enter a joint venture with a local partner firm as a stipulation for entry into the local market.[v]

Both considerations further raise the likelihood that foreign firms partner with pyramid member firms in situations where expropriation by controlling shareholders is likely. These considerations make the following exposition of the governance related problems in partnering with pyramidal group members particularly meaningful.

EMPIRICAL EVIDENCE FROM BRAZIL

We present empirical findings from both statistical and clinical analyses of joint ventures with pyramidal group members, the former in this section and the latter in the next section. We collect data on foreign investment in the Brazilian telecommunications industry; our field research includes interviews of senior executives at key multinational subsidiaries in Brazil and at their parent headquarters (in the U.S., Canada, Spain and Portugal). The sharp sectoral focus reduces the scope of our study, but also greatly cuts our information costs and lets us collect detailed clinical information on multiple companies in comparable situations. Results from one industry in one country clearly cannot generalize without careful caveats.

Joint Venture Data

Our data include the full population of foreign firms entering the Brazilian telecommunications industry from 1997 to 2004. These provide records for 96 joint ventures in which 66 foreign parents and 25

Brazilian parents participate. We define parent combination as each unique collection of parents in a joint venture and parent participation as a parent's presence in a given joint venture. A detailed explanation of measuring parent combinations and parent firm data is reported in appendix A. Since some parent firms take stakes in joint ventures that are already formed and others withdraw from on-going joint venture subsidiaries, our 96 joint ventures have 141 parent combinations in which both domestic and foreign firms participate. Joint ventures solely between Brazilian firms are excluded. Figure 1 indicates the distributions of joint venture *parent combinations* and of *parent firm* participation longevities.

---Insert Figure 1 about here---

Parent firms. We classify parents firms as freestanding (FS), members of *pyramidal groups* (PG), *or members of other sorts of business groups*, such as Japanese *keiretsu* (OG). To be designated a pyramidal group member, a parent firm must belong to a business group having the key characteristics detailed in section two: tiers of listed firms controlled by other listed firms culminating at an apex firm. We follow La Porta et al. (1998) in inferring control from an equity block of 10% or more in the absence of a larger equity block. The apex firm can be a wealthy family, government agency, financial institution, or widely held firm. Most Brazilian pyramidal groups are controlled by wealthy families, though a few are controlled by state-owned banks and pension funds. Ultimate controlling shareholder identities are obtained from public and private company records and from interviews with executives.

Table 2 summarizes parent firm control descriptive statistics. All freestanding firms' parents are foreign. This is consistent with La Porta et al. (1998), who find pyramidal business groups more common in countries with weaker investor property rights protection, like Brazil; and with Leal and Carvalhal da Silva (2005) and Fogel (2006) who document the rarity of dispersed ownership in Brazil.

---Insert Table 2 about here---

Parent firms combinations. The parent ownership combinations of our joint ventures are classified into five categories: (1) joint ventures between pyramidal group member firms (PG/PG), (2) joint ventures between pyramidal group member(s) and freestanding firm(s) (PG/ FS), (3) joint ventures between pyramidal group member(s) and members of other business groups (PG/OG), (4) joint ventures among

freestanding firms (FS/FS), and (5) Brazilian subsidiaries wholly owned by a single foreign parent (WO). None of our joint ventures have parents that are all members of "other business groups" nor that are "other business groups" and freestanding firms.

---Insert Table 3 about here---

To proxy for each parent firm's experience with pyramidal groups, we use the value of D_v, from Table 1, for the firm's home country – the labor weighted fraction of that country's ten largest business entities that are family controlled. Fogel (2006) notes that family control in her data is almost always effected via pyramiding, so this is a plausible proxy for familiarity with pyramidal group member firms and their attendant governance issues. We replicate our tests using the other columns of Table 1 instead, and all generate qualitatively similar results.

We classify a parent firm as among the most experienced with pyramids if its home country D_v is 75% or higher, among the second most experienced if its home country's D_v lies between 50% and 74%, among the third most experienced if D_v falls between 25% to 49%, and among the parents least experienced with pyramiding if its home country's D_v is below 25%. More elaborate proxies for a firm's exposure to pyramidal group governance problems can be defined – for example, tracking the parent firm's past foreign investment experiences in other countries. Such parent firm specific institutional measures are explored in Perkins, et al. (2008).

Research Methodology

Empirically, our primary focus is to examine the categorical variations in failure rates among differing combinations of ownership structure. The empirical specifications most widely used to examine organizational failure are parametric duration models (e.g., log logistic model, Hannan & Freeman, 1989) because of the strong assumptions related to the distribution of time to failure and the inclusion of relevant covariates. However, we specify a non-parametric cumulative hazard rate analysis for two primary reasons: 1) the emphasis on the count-data interpretations of the risk of hazard between differing types of ownership structure combinations and 2) the limited ability to include exhaustive covariates (e.g.,

dummy variable for fixed effects, institutional controls for JV's) given the inter-organizational relationship within a relatively small sample size of 131 observations. The inclusion of these variables significantly reduces the degrees of freedom which jeopardizes the reliability of the empirical results. However, for robustness and the curious classical positivist, we also conduct parametric survival analysis (using log-logistic, Weibull and Gompertz specifications) to rule out duration dependence and distribution of failure concerns that could be problematic in interpreting cumulative hazard rate (see appendix B). Here, we also examine the impact of alternative internationalization explanations and institutional distance variables (e.g., political hazards, Henisz, 2000; cultural distance, Hofestede, 1980; technology capabilities; regulatory experience, Perkins, et al. 2008) and find that the results remain significant controlling for these effects.

We estimate cumulative hazard rates for joint ventures with each parental combination category by summing the total number of failures (defined as exit not due to acquisitions, regulatory shifts, geographic consolidation, etc.) between July 1997 and Dec 2004 in the category, and then dividing this by the category's total time-to-failure – the sum of the years survived of all parent combinations in the category. For comparison, we report analogous statistics for the full sample, wholly-owned subsidiaries as a baseline, for joint ventures whose parents are partly Brazilian, and for joint ventures whose parents are all foreign. To test for statistical significane between categorical hazard rates, we use the Blossfeld and Rohwer (2002: 76-78) suggested methodology of comparing the standard errors and confidence intervals of the categorical stratified groups' hazard functions. For further validation, we additionally conduct log-rank homogeneity test for statistical significance.

Statistical Observations

Our data show parents whose home countries feature less pyramiding experience higher joint venture failure rates when partnering with pyramidal group members. Table 4 examines parent combination failure rates, given the parents' differing ownership structures. Columns 3 and 4 report successes (survivals) and failures (exits), with the total number of cases in the last column. Column 2 reports the

implied cumulative hazard rates. The descriptive statistics reveal 53 of the 131 subsidiaries failing within our 1997 – 2004 window, implying a cumulative 11% hazard rate. A few other points merit note.

First, joint ventures, with a 16% hazard rate, are four times more likely to fail than wholly owned subsidiaries, with a mere 4% hazard rate, and the difference is highly statistically significant. This is consistent with the well known joint venture instability (Kogut, 1988; Makino et al., 2007) and is also sensible, since stronger foreign parents are perhaps more likely to self-select to establish wholly owned subsidiaries. Hence their subsidiaries expectedly have a higher survival rate.

---Insert Table 4 about here---

Pyramidal group members partnering with other pyramidal group members (PG/PG parental combinations) have the lowest failure rate, only 8%, among all joint venture ownership structures; and this is statistically indistinguishable from wholly owned subsidiaries' hazard rate of 4%. This suggests that pyramidal foreign entrants are more aware of the expropriation risks associated with pyramidal schemes and strategically compensate to mitigate the foreseeable pitfalls revealed to these informed managers.

Interestingly, however, all other parent combinations feature markedly higher hazard rates: 26% for FS/FS combinations, 27% for PG/FS combinations, and 20% for PG/OG combinations.

The elevated hazard rate for FS/FS combinations is perhaps unsurprising. All freestanding parents but three are from the U.S. and UK (two from Canada and one from Japan). These parents' home countries have stable public policy regimes and high property rights protection, which is not the case in Brazil. These institutional discrepancies are the sources of the liabilities of foreignness well known in the international business literature (Zaheer, 1995).

However, parents that are the PG type themselves ought to be familiar with such institutional environments. The law and finance literature, e.g., La Porta et al. (1998), Morck et al. (2005), and Stulz (2005), points out that pyramidal groups are prevalent in locations with poor property rights. Indeed, some of these PGs type owners are local Brazilian firms. The PG/FS combination, however, has the most

alarming hazard rates of .27 (almost 4 times the rate of PG/PG partnerships). Their cumulative hazard rate is very similar to the FS/FS joint ventures.

These results show that firms may well form joint ventures to pool capabilities, including to deal with poor local institutions, but that need not always end well. In particular, joint venturing with a pyramidal group member firm may expose the partner to a different problem – a set of corporate governance problems – and unfamiliarity with those problems can portend failure. Parents belonging to pyramidal groups clearly ought to be familiar with pyramiding, and thus ought not to be surprised by the strategies of other pyramidal group member firms. The low hazard rates of PG/PG combinations thus indicate that partners familiar with pyramiding can effectively counter potential problems, and thus realize the benefit of joint ventures – pooling capabilities and leveraging complementary strengths.

Finer parsing of the sample of joint ventures in which a non-pyramiding parent matching with a pyramiding parent shows that having a Brazilian firm in the parental combination does matter. Note that all Brazilian parents are pyramidal group members; hence the comparison reveals the impact of the presence of a Brazilian parent given the matched parents are pyramidal *vs.* non-pyramidal. The combinations that include a Brazilian parent have hazard rates of only 22% versus 44% for those that do not. Still, the 22% figure also significantly exceeds ($p < 0.01$) the 12% hazard rate for PG/PG combinations with a Brazilian parent. In contrast, PG/PG combinations containing no Brazilian parents have failure rates of only 2%. Nevertheless, the PG/PG combination with and without Brazilian partners are not significantly different, and neither differs significantly form the 4% hazard rate for wholly owned subsidiaries. This suggests that although the Brazilian parent can help in countering poor local institutions, the foreign non-pyramiding parent's unfamiliarity with pyramidal corporate governance problems is another source of liabilities.

We also gauge the relationship between a parent's prior exposures to pyramiding by the corporate governance structures prevalent in its home economy, as set forth in Table 1, to the failure rates of joint venture partnership with pyramidal groups in Brazil. The results are reported in Table 5.

---Insert Table 5 about here---

The table shows substantially lower hazard rates for parent firms whose home countries' big business sectors are more fully controlled by wealthy families, something virtually always accomplished via extensive pyramiding (La Porta et al., 1998; Morck et al., 2005; Stulz, 2005). Parent firms from countries whose wealthiest families control three fourths or more of their big business sectors exhibit the lowest hazard rate – only 2%. At the other extreme, those from countries whose wealthy families control less than a quarter of the big business sector have the highest hazard rate – 19%. Thus, hazard rates for the other categories increase monotonically across groups of parent firms from countries with decreasing family domination of big business. In other words, parent firms from economies dominated by pyramidal groups – like Mexico, Argentina and Portugal – have low hazard rates and their participations in joint ventures in Brazil tend to endure. In contrast, parent firms from the U.S., where pyramidal groups are virtually absent, exhibit high hazard rates and their participation tends to be brief[vi].

Finally, agency problems in pyramidal group firms should be greater the lower the cash flow rights of the controlling shareholder (Bebchuk et al., 2000; Claessens et al., 2002), and this usually occurs in firms in a pyramid's lower tiers. Consequently it would be useful to see if foreign firms exit partnerships with lower tier pyramidal group firms more frequently or sooner. Unfortunately, our sample precludes testing this because all our freestanding and non-pyramidal group foreign firms, without exception, partner with firms in the bottom-most layers of pyramids; which is quite revealing. Joint ventures between member firms of pyramidal groups present more variety, and we make use of this in the following section.

Clinical Evidence

Our statistical results suggest that parent firms with less prior exposure to pyramidal groups who enter a joint venture with a pyramidal group member firm tend to exit from these ventures earlier. We conjecture that the former are taken by surprise when governance problems associated with pyramidal groups occur, reevaluate their likely returns from continuing the joint venture, and decide to cut their losses by withdrawing. However, the hazard rate correlations do not necessarily imply this chain of causation. For

example, joint ventures between freestanding firms and pyramidal group members might perform abnormally well, accomplishing their objectives sooner and thus permitting an earlier exit.

Standard empirical techniques to detect such chains of causation are inherently ineffective. They are thwarted by the fact that contextual information is hard to thoroughly collect and codify for all the involved cases. We resort to clinical case studies to reveal causal mechanisms in our hazard rate observations. Parkhe (1993) suggests such a case approach is helpful when trying to solve "messy" puzzles of interfirm managerial behavior in international joint ventures (IJVs) which are otherwise not fully explained from the more traditional empirical positivist research approach. Unlike many other organizational case studies which use grounded theory methodologies to generate theory (Eisenhardt, 1989; Eisenhardt & Bourgeois, 1988; Glaser & Strauss, 1967), we take a deductive reasoning hypothesis testing approach to provide a deeper level of analysis of our preexisting hypotheses. Consistent with our approach, Parkhe (1993: 254-255) also points out that "case study research can similarly be a useful method to build on existing knowledge…, to test and refine theories and to provide theoretical explanations and normative guidelines for IJVs." Other international joint venture case studies have shown usefulness in similar approaches (Ariño and de la Torre, 1998; Parkhe, 1993). Based on Yin's (2003) case methodology, we use a multi-case design to capture the variations in hazardous outcomes shown in tables 2-5. We select cases based on "replication logic" (Yin, 2003) and "theoretical sampling" (Glaser & Strauss, 1967) that illustrate our theory, provide examples of polar strategies and are representative of the population's joint venture ownership combinations.

Our interviews with senior executives and industry experts generate illuminating information. The clinical information shows that parents from host countries where pyramidal groups are rare or absent indeed have blind spots and misjudge the likely strategies of their partners from pyramidal groups. Innocent of the links between their immediate partner firm and other seemingly independent firms that actually all belong to the same group, and have the same ultimate controlling shareholder, foreign parents misgauge the agency problems and fail to anticipate their partner firm sacrificing its own joint venture's interest for its pyramidal group, or its controlling shareholder. In many cases, they are vulnerable to

partners' expropriation of their contributions to a joint venture because they fail to protect their control rights and in some cases even fail to comprehend the importance of control rights at the outset. Finally, we also learn how parents familiar with pyramidal groups mitigate these risks. We report these cases in the following.

TIW and Opportunity. *Telesystem International Wireless* (*TIW*), a Canadian telecommunications firm which we classify as a freestanding firm (FS), entered a joint venture with a member of a Brazilian pyramidal group (PG), *Opportunity*, controlled by the Brazilian financial tycoon Daniel Dantas and his family. Dantas and his group acted as general partners and managers for several private equity funds set up in Brazil and the Cayman Islands. The Brazilian partnerships had as their investors, various pension funds for state-owned enterprises.

Canada's big business sector is a mixture of pyramidal groups firms and freestanding widely held firms, with D_v= 45% in Table 1. However, the country also has a highly efficient Common Law judiciary overseeing business law (though a Civil Code governs most other legal areas in Québec). Canadian pyramidal groups must disclose all their inter-corporate equity blocks and the identities, voting stakes, and ownership stakes of their ultimate controlling shareholders. Transactions between group member firms must be disclosed promptly, and large intra-group transactions, in which significant tunneling might be possible, require the approval of a majority of disinterested public shareholders. The officers and directors of Canadian pyramidal group member firms have an unambiguous fiduciary duty to their firm, not its pyramidal group or controlling shareholder. Canadian firms entering Brazil might innocently expect analogous checks and balances and thus misjudge the actual business environment there.

TIW established the joint venture *Telpart Participaçoes* (*Telpart* for short) amidst the Brazilian telecommunications privatization from former assets of *Telebras*. The initial joint venture agreement deemed *TIW* the largest shareholder, with a stake just under 49% and joint control of the board. The Brazilian partner, *Opportunity*, had a clear minority position – a 27% equity stake, and pension funds for state-owned companies owned the remaining 24%. According to *TIW's* company reports, their equity

block put them at the helm of the joint venture and thus in charge of a multitude of controlled Brazilian subsidiaries. Figure 2 depicts this structure.

---Insert Figure 2 about here---

Then within weeks of the privatization, the corporate governance and ownership structure suddenly shifted. *Opportunity* used a holding company, *Newtel*, to acquire and consolidate control over *Telpart*. *Opportunity* convinced the pension funds to exchange their 24% in *Telpart* for a 49% holding in *Newtel*. As a result of the transfer the pension funds would hold 49% and *Opportunity* would own 51% of *Newtel* which would in turn hold 51% of *Telpart*. This transfer was made in secret; *TIW* was not informed of the terms and substance of the arrangement until December 1998. The terms were remarkable, for the pension funds delegated their voting rights to *Opportunity* appointees and relinquished any veto rights and liquidity rights which they would have had had they remained direct investors in *Telpart*. *Newtel* was now firmly ensconced in the *Opportunity* pyramidal group's control structure. This pyramidal structure gave *Opportunity* a majority voting block (51%) controlling *Telpart* despite its minority ownership stake, which is 27% in terms of equity participation. As soon as this restructuring was complete, *Opportunity* inserted its own management into *Telpart* as top managers, ignoring *TIW*s protests. The joint venture was now a fourth tier member firm in the *Opportunity* pyramid, and *TIW* was now a minority shareholder of a pyramidal group member firm.

TIW took *Opportunit*y to court in Brazil repeatedly, but to no avail. According to the *Gazeta Mercantil*:

"After no success with battling Opportunity over the new structure, TIW … secured an injunction annulling Newtel, forcing the re-instatement of the original Telpart contract". The *Toronto Star* reported "*Over the next two years, as many as 20 lawsuits in and outside of Brazil were launched. Walkouts became common at the Telpart board meetings. Opportunity repeatedly made offers to TIW* [but] *were rebuffed as inadequate. Meanwhile, Dantas* [the controlling shareholder of Opportunity's apex firm] *was calling the shots. The Brazilian was choosing management, appointing directors and approving questionable non-operating expenses. TIW's influence was quickly waning".*

TIW's top managers clearly expected neither their erstwhile partner to seize control and shut *TIW* out, nor the weak protection local judiciaries offered it. *TIW*, *Opportunity* and the pension funds had a *Memorandum of Understanding* outlining certain rights and obligations, including rights of first refusal,

tag-along rights, veto rights and rights to proportional representation, all supplemental to the original agreement between *TIW* and *Opportunity*. *TIW*'s management was astounded that the Brazilian courts were not on its side to enforce these rights.

With *TIW* thus disconnected, *Opportunity* sent *Telpart* down a radically new path seemingly not in the best interest of the joint venture. Amid the ongoing court battles, the joint venture's performance deteriorated rapidly. From 1998 through 2000, under *TIW* control, all the joint venture's subsidiaries posted positive net incomes. But as soon as *Opportunity* seized control, profits declined from R$13 millions to -$R7 millions in less than a year. By 2002, their combined losses debased at -$R30 millions. One insider suspected *tunneling*; note though we obtained no concrete proof that wealth was transferred from *Telpart* to *Opportunity* or to Dantas, its new controlling shareholder. In 2003, *TIW*'s main shareholders, exhausted by the draining of energy and capital, discontinued its capital infusions to the joint venture, and negotiated an exit – it sold its stakes to *Opportunity* for U.S. $70 million, a fraction of its total capital infusions estimated at U.S. $390 million (Reuters News Agency, 1998).

Some executives at competing telecommunications firms were willing to comment on the *TIW* dispute with *Opportunity*. One interviewee, an executive at another firm successfully operating a joint venture in Brazil explained that:

"It is always about ownership structures. It is all about how to structure the deals. Telemig (one of TIW's Brazilian subsidiaries) failed in Brazil because they did not know how to work with the Brazilians. They did not understand the ownership laws and how to work this system." A second executive offered the following perspective: *"TIW chose the wrong partner and got ripped off … They did not know how to fight for control the right way like Telecom Italia, who took their battle to the government and the telecom regulators for control* [of Telecom Italia's Brazilian subsidiary]*"*[vii].

A third interviewee stated that, "*TIW was squeezed out by their partner, Opportunity. Wrestling control of Telpart from Dantas* [Opportunity's owner] *has become too costly, and the uncertainty around the battle was hurting TIW."*

This case clearly illustrates the direction of causation and the reasons for the joint venture's failure. *TIW*, an otherwise seemingly well managed firm, failed to appreciate the complex machinations and obscure chains of control manipulations possible for pyramidal groups in Brazil. Once it lost control, *TIW* found that the Brazil judiciary offered no effective redress, despite terms in its agreements with *Opportunity* that it had relied upon. Again, this illustrates that *TIW* was under informed and made

judgment based on its home experiences. The sharp deterioration of *Telpart*'s financial performance after *Opportunity*'s stealth attack suggests that some form of tunneling might have occurred.

Bell South and Safra Family. The freestanding widely held American firm *Bell South* and *Verbier*, a holding company in Brazil's *Safra* pyramidal group established a joint venture, called *BCP*, to provide cellular service in the Sao Paulo region, one of the most competitive markets in Brazil. *Bell South* held 45.4% of *BCP*, leaving the *Safra* firm with 44%. According to the shareholder agreement, *Bell South* delegated control to Moises and Joseph Safra, the controlling shareholders of the *Safra* pyramid's apex firm. An internal *Bell South* document reveals a remarkable internationalization strategy that intentionally granted decision-making authority to foreign partners, apparently in the hope that a consensus would always emerge. The Safra brothers gained rights to "approve business plans and agree upon decision making as to the timing and amount of cash disbursements" (Bell South Annual Report, 1999).

Former top executive at *Bell South* in Brazil recalled that "[at] first we started off as the decision maker in the partnership. But then, things started to reveal that we did not have the right partner. This was a problem we were nervous about because things all of a sudden started to change." The *Safras* routinely rejected *Bell South's* plans for enhancing *BCP*'s value; nixing, for example, a mass marketing strategy for recouping the $2.6 billion telecom license cost. Instead, *Safra* explored niche markets, which forestalled the need for additional capital. *Bell South* proposed a consolidation after the 1999 Real devaluation; but the *Safra's* refused. The joint venture grew increasingly inefficient, accumulating an overwhelming $R4.8 billion in losses. Bell South proposed a 95% equity offering to recapitalize *BCP*; but the Safras arranged debt financing – adding over $R4.8 billion in debt by 2001.

In each case, the Safras' focus was control. Accepting outside equity financing or further injections from the parent firms would have imperiled their control rights. A capital conserving strategy, augmented by debt financing, ran no such risk.

The importance to Brazilian controlling shareholders of extracting private benefits from the businesses they control readily explains this strategy. Following Bebchuk et al., (2000), the Safras can be

thought of as maximizing their wealth, which is the sum of the fraction of firm value it owns and private benefits it obtains by having high level of control. While injecting outside capital may raise firm value and thus the fraction of firm value it owns, doing so dilutes Safras' control and thus may deplete its private benefits. Safras' total wealth may actually decline as a consequence. Unfamiliar with this reasoning, Bell South's managers remained mystified by their partner's seemingly economic irrationality.

Unsurprisingly, trust between the partners eroded quickly, but *Bell South* had few options. It offered to buy all of *BCP* in 2001, but the brothers declined each of the increasingly generous offers. Clearly, *Bell South* failed to appreciate the magnitude of *private benefits* in the brothers' calculations, and may well have failed to account for it at all.

In 2002, when *BCP* fortuitously missed a $R375 million debt payment, *Bell South* seized the opportunity to force it into bankruptcy. The *Financial Times* reported in April 2002 that the default occurred after a disagreement between shareholders over future capitalization plans. In 2003, *BCP* was liquidated and its assets sold to *America Movil* of Mexico. The final agreement stated that "*Bell South* will transfer its entire 45.4% stake in *BCP* (to creditors), while Brazil-based *Verbier* [a Safra's holding company] will retain an undisclosed minority stake in the wireless operator (Espicom Business Intelligence, 2003)."

This example highlights two issues. First, *Bell South*, worse than *TIW*, failed to value direct control – assuming that all the partners would gain by running the joint venture efficiently. Second, when the pyramids seized control, they ran the joint ventures in ways perfectly rational from their controlling shareholders' perspectives, but incomprehensible to the managers of a freestanding firm. To them, the value of the private benefits controlling shareholders can extract via tunneling or other mechanisms in a developing economy was an "unknown unknown."

Sunkyong and Algar. In 1998 *SunKyong (SK) Telecom* partnered with a bottom tier firm of the *Algar* Group, a Brazilian pyramid, as illustrated in Figure 3. The joint venture, *ATL*, planned to bring *SK*'s proprietary CDMA-based cellular technology to Brazil.

---Insert Figure 3 about here---

SK provided technology and capital, but held only 30% of the joint venture, effectively delegating control to *Algar*. *SK* executives apparently assumed that *Algar* would seek to maximize the value of its stake in *ATL* by applying *SK*'s technology quickly, widely and efficiently, and evidently saw no need for a majority stake. *SK* executives subsequently learned that *Algar*'s controlling shareholder was involved in another joint venture to bring TMDA, a rival cellular technology, to Brazil. *SK* not only wasted its capital, but found its joint venture partner's true financial incentives to be diametrically opposed to the success of its technology in Brazil. Deprived of information about the joint venture's operations and profits, *SK* withdrew by early 2000.

While this case is extreme, several other examples feature seemingly sophisticated foreign firms – such as *SBC* and *Bell Canada* – signing joint venture agreements with Brazilian pyramidal group firms and leaving control rights tenuously defined.

Each of the cases presented highlights the unscrupulous agency behaviors of the pyramidal partners in the joint venture. What remains a challenge to disentangle is whether the pyramidal owners' unscrupulous behavior is endogenous to the pyramidal structure or vice versa. This causal chain is unclear.

Countermeasures

Not all joint ventures with pyramidal group member firms fail. We find the most lasting joint ventures to be those formed by higher tier firms of two pyramidal groups. In these cases, both parent firms' managers presumably understand corporate governance issues associated with pyramids. In such cases, the parents often build safeguards into the joint venture to prevent the sorts of problems described in the previous cases. One way of doing this is to arrange "multiple points of competition and interaction." These instill

both parents with ongoing incentives to be trustworthy partners by giving each multiple opportunities to retaliate if the other acts opportunistically. Thus forewarned and forearmed, the partners maintain a high level of reciprocal trust.

This is consistent with Harrigan (1988), who suggests joint venture partnerships are more effective when their parents' bargaining power is evenly matched. It also exemplifies the reasoning of Bernheim and Whinston (1990), who show *multiple simultaneous games* to heighten the players' incentives to cooperate by raising both the punishment for cheating and the reward for cooperation.

Telefonica and Portugal Telecom. An illustrative case is the success of Spain's *Telefonica and Portugal Telecom* in Brazil. Both are members of formerly state-controlled pyramidal groups established long before telecoms privatizations in their respective home countries and both based in countries where pyramiding is commonplace. Three key distinctions differentiate their joint ventures: (i) cash flow and voting rights are always split exactly 50/50, and both parents always had equal say in the joint venture's strategy; (ii) decision making control is assigned to each parent, property-by-property, not allocated overall to one parent or the other; and (iii) each parent takes equity stakes in several firms in the other's pyramidal group, including the apex. This strategy creates multiple points of contact between the two pyramidal groups and provides each with abundant ammunition to retaliate if the other breaks faith.

Portugal Telecom and *Telefonica* have eight joint venture subsidiaries in Brazil, including the *Vivo* brands and *Brasilcel*. Combined, these have a 60% market share. As each joint venture expanded, both parents injected capital in step to preserve precisely their 50/50 ownership split. Each parent also appointed direct representatives in each joint venture's management team. And each pyramidal group acquired and held equity blocks in the other, as illustrated in Figure 4.

---Insert Figure 4 about here---

In each case, control was split – for example, their 2001 joint venture *Brasilcel* had a *Portugal Telecom* appointed CEO and a *Telefonica* appointee chaired its board. As part of the joint venture

agreement, *Telefonica* increased its stake in Portugal Telecom to 10% and Portugal Telecom increased its stakes in *Telefonica* to total 1.5%.

Commitment intensity

To see if joint ventures between two pyramidal groups are less prone to failure when their parents make matching commitment, we require a measure of *relative commitment intensity*. In this section, we thus restrict our attention to joint ventures all of whose parents are pyramidal group member firms. As a rough first pass, we measure this by the difference in the positions of the two parents in their respective pyramidal groups.

To illustrate, the joint venture between *Algar Group* of Brazil and *SK Telecom* sits in the bottom tier of the *Algar* pyramid, five tiers below the apex firm, but rests only one tier below the apex firm in the *SK Telecom* pyramid. The tier difference between the two parents is thus four (five tiers minus one), and is the most extreme disparity in commitment intensity in our sample. We calculate this measure for each joint venture, and find those whose parents have the greatest commitment disparity have the highest cumulative hazard rates (1). Joint ventures whose parents make matching commitment have the lowest hazard rate (0.01). Table 6 displays these findings.

---Insert Table 6 about here---

We next explore the multiple points of contact reciprocity strategy. We say two parent firms' pyramids have multiple points of contact if any of their member firms hold equity blocks in member firms of the other pyramid, or if the two pyramidal groups have joint ventures in other markets. Table 7 summarizes our findings. Multiple points of contact are associated with a hazard rate of only 1%, while joint ventures whose parents lack multiple points of contact confront a 21% hazard rate. Joint ventures whose parents have more points of contact are more likely persist.

---Insert Table 7 about here---

DISCUSSION

This paper explores common corporate governance problems in pyramidal group member firms, and shows how under informed and under prepared managers of freestanding firms are exposed to governance related expropriation risks in joint ventures. Pyramidal groups, the ubiquitous corporate governance and ownership structure globally, with the exception of the U.S. and U.K. which are dominated by freestanding firms, are incentivized to maximize the wealth and wellbeing of the pyramidal group's controlling shareholder, not firm value. A clear distinction must thus be drawn between the corporate governance problems common in pyramidal group firms and those in freestanding firms. While governance problems in both cases arise from information asymmetry and incentive misalignments between insiders and public shareholders, there are important differences in the way these play out.

In both pyramidal group firms and freestanding firms, insiders often have miniscule equity holdings. But in the former, these problems are compounded by the insiders typically having uncontestable control over all the firms in the pyramidal group. Governance in pyramidal groups is further complicated by a single controlling shareholder ruling many distinct and separately listed and unlisted firms. This creates increased opportunities for self dealing (i.e., tunneling, asset shifting) once the corporate veil has been drawn.

The coupling of impregnable control to miniscule real ownership by the controlling shareholder makes pyramidal group firms prime territory for exploiting naïve outside investors. Otherwise sophisticated top managers of foreign firms based in countries where pyramiding is rarer or public shareholders are better protected can be blindsided by these governance problems when entering joint ventures with pyramidal group firms. Auspiciously, top managers of foreign firms based in countries where pyramiding is common and little legal protection against controlling shareholders is provided appear to anticipate these governance problems, and mitigate against expropriation of controlled firms more heavily.

We argue that this failure to appreciate local partners' likely governance problems constitutes an economically significant expropriation risk. We demonstrate this by analyzing joint ventures in the

Brazilian telecommunications industry, and showing that failure rates are higher if a foreign parent's managers are unfamiliar with the governance problems of pyramidal groups. We also produce clinical cases that replicate our theory and describe the causal mechanisms of the joint ventures performance. If our findings prove more generally applicable, they may provide a new explanation for the markedly high failure rates of IJVs (Makino et al., 2007), and perhaps even suggest useful refinements to our current theories of foreign direct investment. Existing theories suggest IJVs strategically reduce a foreign firm's *"liability of foreignness"* by mitigating expropriation risks in institutional environments (Delios & Henisz, 2000; Henisz, 2000; Kogut & Singh, 1988). However, such strategies potentially have their own inherent contractual risks as pointed out by transaction cost theorists (Delios and Henisz, 2000; Henisz, 2000; Hennart, 1988). Our findings illuminate the duality of risk assessment in forming partnerships in markets that are rife with pyramidal group structures; henceforth, the *dual edged sword* of international joint venturing.

Implications

We offer the following as discussion points only for strategy scholars and freestanding firm managers contemplating joint ventures with pyramidal group firms. First, assuming the local partner is the immediate local parent firm of the joint venture can be a fatal flaw. In locations where pyramids are prevalent, the firm's ultimate controlling shareholder is often a politically connected and very wealthy local family. Thus it is important to know the local partner's true *span of control*.

Another lesson gleaned from the cases is to focus on maintaining control rights. Pyramidal groups are first and foremost about subjecting a huge constellation of seemingly distinct firms to the control of a single ultimate controlling shareholder. That controlling shareholder is thus necessarily highly savvy at strategically seizing and locking in control. The foreign partner should always make its control rights explicit. If a majority voting stake cannot be secured, a 50/50 split is a viable alternative. Accepting a minority voting interest is risky unless the local partner's incentives to make the joint venture a success are unambiguous.

There is more than one way to control a joint venture. In many cases, majority equity ownership is not an option because of local ownership regulations. In such cases, one interviewee from *Portugal Telecom* stated: *"when we do not have equity control, we obtain management control through separate management contracts. We never just forfeit to be financial investors."* The agreement establishing the joint venture can allocate rights to appoint the CEO, chair, or a majority of directors, regardless of the equity stakes held by the joint venture's parents.

We find joint ventures between pyramidal group member firms persist longer if their partners are more equally committed and if each has opportunities to retaliate for any bad faith shown by the other. Foreign partners thus cannot blindly rely on a local partner to maximize the value of a joint venture. Rather, foreign partners need to understand their local partners' incentives, protect their control rights over the joint venture, and arrange opportunities to retaliate. If these countervailing strategies are credible, they ensure trustworthy behavior by the local partner and need never be used.

How freestanding firms can achieve this when partnering with pyramidal group member firms is less clear. In industries where highly specialized *"know-how"* is a critical competitive advantage, a freestanding foreign parent can withhold critical knowledge to elicit trustworthy behavior from its local pyramidal group partner. In the case of telecoms and other territorial licenses, credible threats of retaliation entailed facing multipoint competition.

Lastly, we acknowledge that our findings are preliminary, and offer these suggestions in hope of stimulating more extensive debate in the management, strategy, and international business literatures on the implications of dissonant corporate governance regimes. We also acknowledge our analysis covers only one industry (telecommunications) in one country (Brazil). Further work is needed to confirm the generality of both our results and the mitigating strategies we find to be effective in this setting. Beneficial future extensions of this research could explore the organizational learning patterns of MNCs in their sequential investment behaviors with pyramidal group firms. We enthusiastically invite further work along these lines, and welcome both supporting evidence and alternative explanations of our findings.

[i] For a comprehensive survey on the relationship between pyramiding, firm and economy wide performance, see Morck, Wolfenzon, & Yeung, 2005.
[ii] Villalonga & Amit (2009) focus on U.S. family firms which are mostly stand alone, not pyramidal.
[iii] Common explanations for joint ventures' remarkably high failure rates (see Kogut 1989; Park 1997; Makino et al. 2007) are: competitive pressure from outside the joint venture agreement (Park & Russo 1996), concerns about protecting intellectual property rights (Kogut 1989), and dissolution once organizational learning ends, or when the general usefulness of the joint venture ends (Nakamura, Shaver, & Yeung 1996).
[iv] Pyramidal groups, plus other such corporate groups, are commonly denoted "business groups" (Khanna & Rivkin, 2001; Khanna & Palepu, 2000; Chang & Hong, 2002; Khanna & Yafeh, 2007), and their inter-firm ties "group affiliations" (Chang, 2003).
[v] During the period of this study, the Brazilian Ministry of Communications restricted foreign ownership in the first privatization auction of mobile phone operators in mid-1997. Entering foreign firms had to form joint ventures until the regulation was lifted in 1998.
[vi] We find no statistically significant difference between the hazard rates of firms with at least one Brazilian joint venture partner versus firms with all non-Brazilian joint venture partners.
[vii] The sources of the above information: Gazeta Mercantile, Toronto Star and *TIW* company annual report.

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TABLE 1
Family control indexes

Family control indices are based on the largest ten private sector business entities (freestanding firms or business groups) in each of 41 economies. Size is total employees, allowing unlisted firms, for which assets, sales and other financial data are unavailable, to be included. The data are fractions of these entities controlled by families in 1996. D_V and D_E are based on the largest ten domestically controlled entities, and are labor and equal-weighted, respectively. P_V and P_E include foreign subsidiaries in the top ten list, and are analogously weighted.

	D_V	D_E	P_V	P_E		D_V	D_E	P_V	P_E
Argentina	85.2	70.0	74.9	60.0	Mexico	100.0	100.0	88.7	90.0
Australia	6.1	10.0	0.0	0.0	Netherlands	19.8	30.0	19.8	30.0
Austria	83.9	80.0	58.8	60.0	New Zealand	39.1	50.0	14.1	20.0
Belgium	89.5	90.0	73.8	70.0	Norway	33.4	50.0	28.6	40.0
Brazil	91.3	90.0	55.1	50.0	Pakistan	100.0	100.0	100.0	100.0
Canada	41.5	60.0	41.5	60.0	Peru	100.0	100.0	32.4	50.0
Chile	100.0	100.0	53.0	60.0	Philippines	100.0	100.0	68.1	70.0
Colombia	85.2	80.0	73.2	70.0	Portugal	96.0	90.0	86.9	70.0
Denmark	6.3	10.0	6.3	10.0	Singapore	15.8	30.0	0.0	0.0
Finland	25.0	30.0	25.0	30.0	South Africa	56.8	50.0	55.5	50.0
France	38.2	40.0	38.2	40.0	South Korea	61.4	50.0	61.4	50.0
Germany	6.6	10.0	6.6	10.0	Spain	46.8	50.0	41.4	40.0
Greece	100.0	100.0	95.9	90.0	Sweden	73.2	60.0	73.2	60.0
Hong Kong	42.7	70.0	36.7	60.0	Switzerland	14.5	30.0	14.5	30.0
India	96.3	90.0	91.7	80.0	Taiwan	72.8	70.0	65.5	60.0
Indonesia	69.9	90.0	65.1	80.0	Thailand	100.0	100.0	72.7	60.0
Ireland	27.9	20.0	27.9	20.0	Turkey	100.0	100.0	100.0	100.0
Israel	78.6	70.0	78.6	70.0	United Kingdom	15.9	20.0	15.9	20.0
Italy	67.1	50.0	67.1	50.0	United States	18.8	10.0	18.8	10.0
Japan	0.0	0.0	0.0	0.0	Venezuela	100.0	100.0	70.3	70.0
Malaysia	100.0	100.0	94.8	90.0					

Source: Fogel (2006)

TABLE 2
Parent firm control

Incidence of parent firms classified as freestanding, pyramidal group members, or other group member firms.

Control Classification	Symbol	Brazilian	Foreign	Total
Freestanding[viii]	FS	0	37	37
Pyramidal group member	PG	25	22	47
Other group member	OG	0	7	7
Total		25	66	91

TABLE 3
Parent combination control structures

Parent Combination	Symbol	Foreign	Mixed	Total
All parents are freestanding firms	FS/FS	7	0	7
All parents belong to pyramidal groups	PG/PG	17	25	42
Freestanding and pyramidal group parents	PG/FS	6	22	28
Pyramidal and 'other group' parents	PG/OG	4	2	6
Total joint venture parent combinations		34	49	83
Wholly owned subsidiaries of a foreign parent	WO	48	0	48
Total parent combinations		**82**	**49**	**131**

TABLE 4
Categorical hazard rate estimates

Ownership Structure	Hazard Rate	Successes	Failures	Totals
All parents are pyramid members (PG/PG)	0.08	31	12	43
Brazilian and foreign parents	0.12	15	10	25
All parents are foreign	0.02	16	2	18
All parents are freestanding (and foreign) (FS/FS)	0.26	2	4	6
Freestanding and pyramid member parents (PG/FS)	0.27	2	26	28
Pyramid and other group member parents (PG/OG)	0.20	2	4	6
Brazilian PG and foreign non-PG parents	0.22	3	21	24
Foreign PG and foreign non-PG parents	0.44	1	9	10
All joint ventures	0.16[ix]	36	47	83
Wholly Owned Subsidiary (WO) of foreign parents	0.04	41	7	48
Total (joint ventures and wholly owned subsidiaries)	**0.11**	**78**	**53**	**131**

TABLE 5
Categorical hazard rates

Wealthy families typically exercise control over very large business entities via pyramiding, and so is a plausible proxy for familiarity with pyramiding.

Control of home country's top ten business entities	Hazard Rates	Successes	Failures	Total
75% or more family controlled	0.02	31	2	33
50 to 74% family controlled	0.03	20	3	23
25 to 49% family controlled	0.11	17	13	30
Below 25% family controlled	0.19	21	31	52
Total parent level observations	**0.11**	**89**	**49**	**138**
Brazilian parent(s)	0.13	36	29	65
Foreign parents	.09	53	20	73

TABLE 6
Cumulative hazard rates by parental commitment disparity
Parental commitment disparity is proxied by the difference in the number of tiers of pyramided firms between the joint venture's immediate parents and their pyramids' apex firms.

Tier Difference	Hazard Rate	Successes	Failures	Total
0	0.01	25	1	26
1	0.14	6	10	16
2	0.28	1	17	18
3	0.32	0	9	9
4	1.00	0	1	1
Total parent-level observations		32	38	70

TABLE 7
Cumulative hazard rates by multiplicity of pyramids' points of contact
We say two parent firms' pyramids have multiple points of contact if any of their member firms hold equity blocks in member firms of the other pyramid, or if the two pyramidal groups have joint ventures in other markets.

Multiple Points of Contact	Hazard Rate	Success	Failures	Total
No	0.21	14	37	51
Yes	0.01	19	1	20
Total parent level observations		33	38	71

[viii] Note that freestanding firms include both widely held firms, like MCI, and firms with controlling shareholders. Of the 37 freestanding parents, 34 are American and all have only one-vote-per-share common equity. Of the others, one Canadian and one Japanese parent are private, and one Canadian parent is listed and has multiple classes of common shares. Dropping observations involving these few firms does not qualitatively change our results. Sixteen out of the 66 parent firms are widely held (14 are stand alone firms and 2 are part of groups).

[ix] This figure represents the hazard rate for all joint ventures combined (PG/PG, PG/FS, PG/OG, and FS/FS).

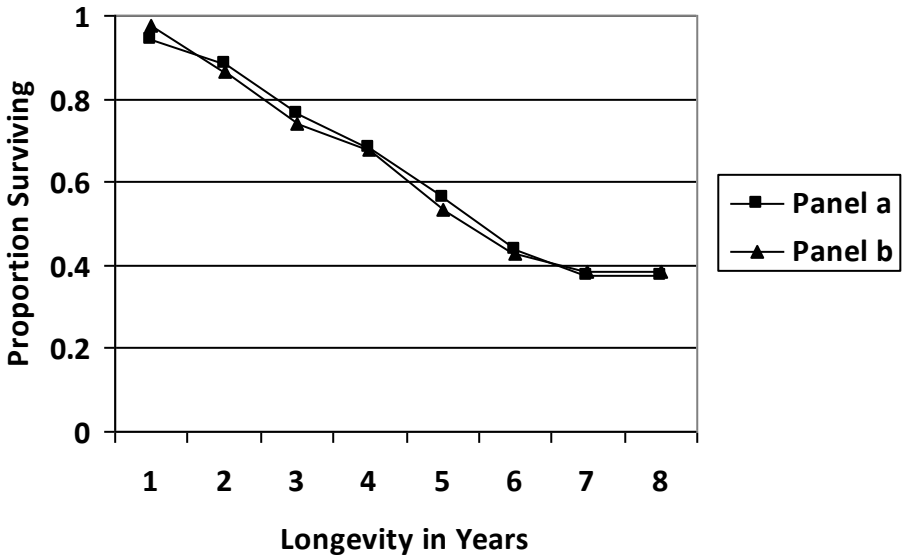

FIGURE 1
Joint venture parent combination survival rates
Histogram showing the proportion of (a) joint venture parental combinations and (b) parent firms participation surviving, by year.

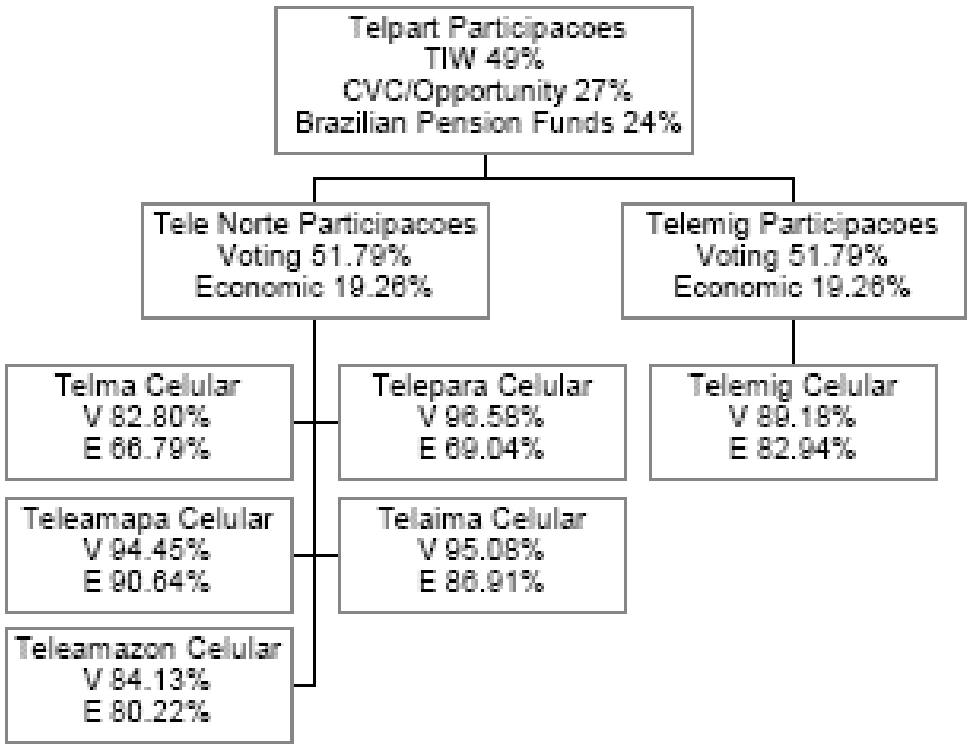

FIGURE 2
The structure of TIW's joint venture with Opportunity in 1998
Source: Company reports; Equity stakes are denoted by E or no notation; voting stakes are denoted by V.

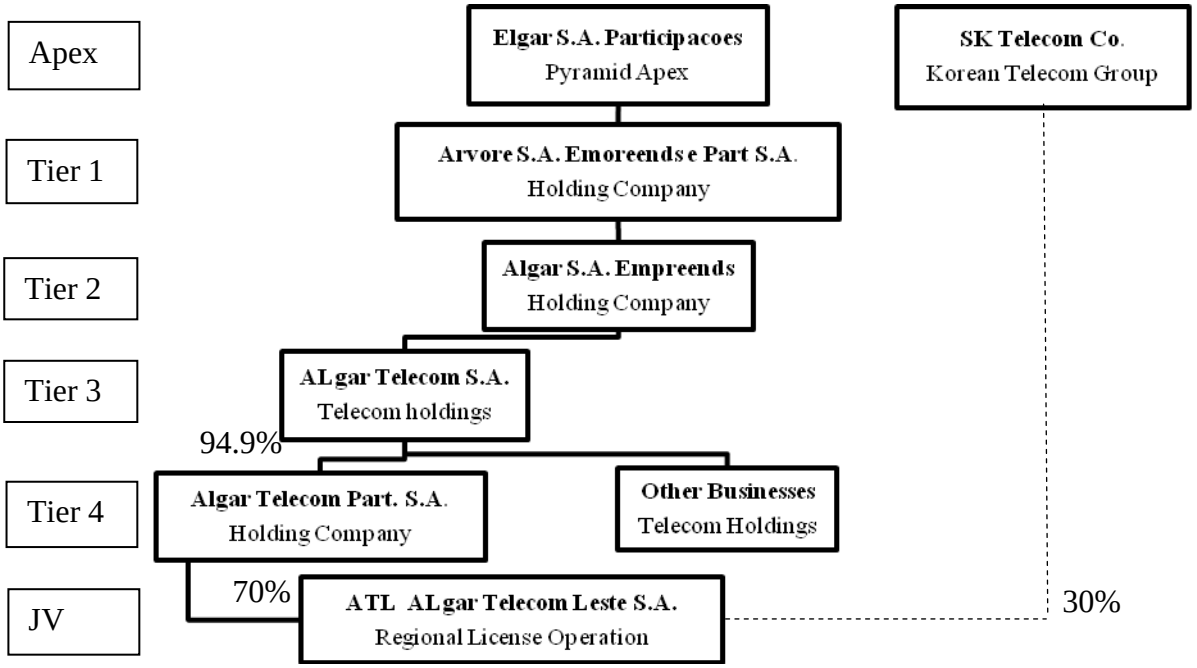

FIGURE 3

The position of the joint venture ATL within the Algar Pyramid

Source: Valores Grandes Grupos (2002)

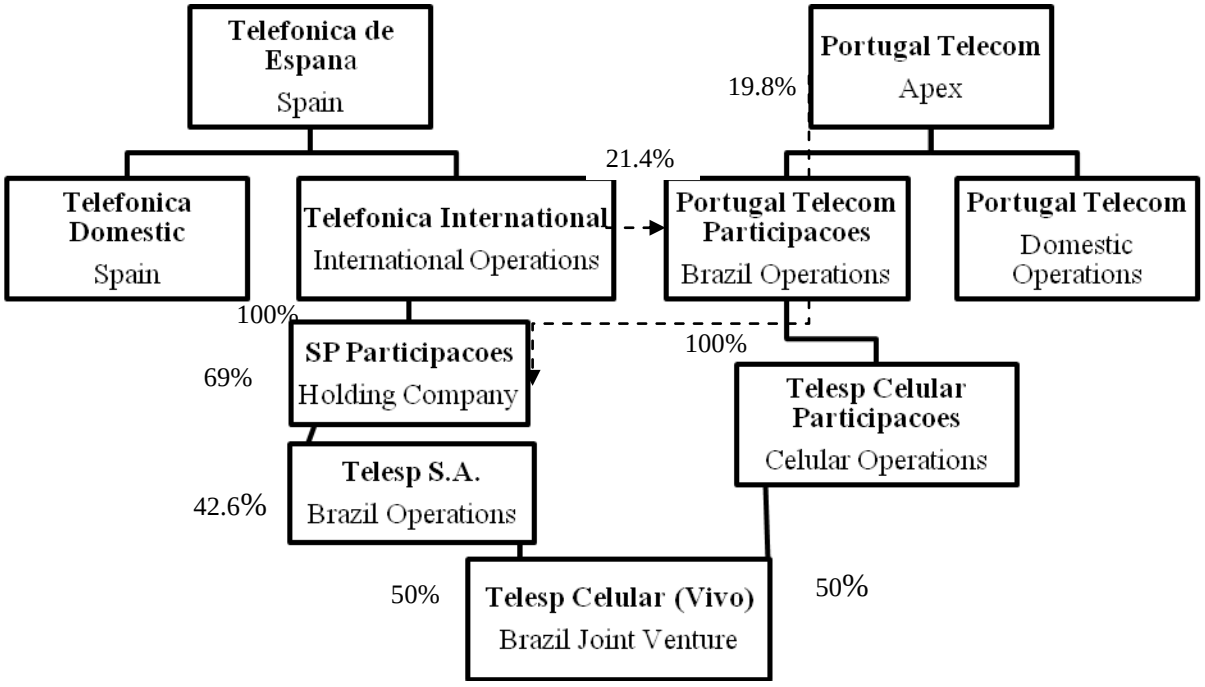

FIGURE 4

Interpyramidal equity blocks associated with Brazilian joint ventures between *Portugal Telecom* Pyramidal Group and Spain's *Telefonica* Pyramidal Group

Source: ANATEL

APPENDIX A

Joint ventures usually have a clear set of parent firms, well defined beginnings, and unambiguous termination dates. However, ambiguities occasionally arise, so we require a clear set of rules for dealing with them. The following example encompasses all the sorts of ambiguity we encounter, and explains their resolutions. Consider three parent companies, A, B, and C that jointly own a subsidiary S in 1998. Suppose C sells its stake to B in 2002, and B sells its stake to A in 2003. Then, A exits the market in 2005. We record the joint venture's *parent combination* ABC as formed in 1998 and ended in 2002, the *parent combination* AB as formed in 2002 and ended in 2003, and (for completeness) the *parent combination* A (wholly owned) as formed in 2003 and ended in 2005.

We further record the *participations* of the parent companies A, B, and C in the joint venture S as lasting from 1998 to 2005, 1998 to 2003, and 1998 to 2002, respectively. Note that if S was formed prior to 1997 (the first year of our data), we record it as beginning in 1997. This only affects three observations because almost all the entries occur after the privatization and liberalization policies were implemented. [x] Before that, the telecommunications industry was entirely state owned enterprises.

We further assemble all company press releases, analyst reports, and public press articles (from ISI Emerging Markets, Lexis-Nexis, and Factiva) that mention any of our joint ventures to determine the beginning and end of each parent firm's *participation*, and the *parent combinations* in effect at each point in time. In almost all cases (88%), we can assign precise dates. In the remaining cases, we can determine only the month in which the parent firm's participation begins or ends; we therefore take the last day of that month as the relevant date. The news records often also provide explanations of why each firm exited, which let us double check the explanations we obtain from executive interviews. This is useful because not all exits indicate failures. This procedure identifies ten observations as exits not clearly due to failures of the joint venture, which we drop. In five out of these, one parent firm is replaced by another that is a member of the same business group due to intra-group equity crossholding restructurings. Since both the old and new parent firms have the same ultimate controlling shareholder, these are not clearly exits. We therefore drop these observations[xi]. Three exits are induced by the Brazilian telecom regulator, ANATEL, which limits ownership in each of twelve geographic regions to forestall potential monopoly problems. In these three cases, the regulator orders a parent firm to reduce its ownership in one region as a precondition to expanding in another. While these forced withdrawals may be failures in that the parent failed to foresee and block the regulatory action, they are also arguably qualitatively different from all the others, which result from strategic decisions by the parent firms' managers as regards to the joint venture in question. Finally, we drop two cases where the parent firm divests in what appear to be profit-taking sales. Deleting these observations leaves us with 131 *parent combinations*. In the remaining cases, our searches through public news records and interviews with executives concur that the early withdrawal of a parent firm reflects its managers' disappointment regarding its share of earnings, control rights, or intellectual property utilization.

APPENDIX B

Parametric Hazard Models

We can more formally examine the relationship between survival in joint venture partnership and joint venture partner's pyramidal structure. For example, we can determine the likelihood of a parent's survival if it has experience with pyramids, is a pyramidal group itself, if its partner is a pyramidal group, or if its partner is a Brazilian firm. We could specify a log-logistic accelerated time to failure (AFT) model to estimate the instantaneous hazard rates. This model is appropriate because of its monotonically increasing and decreasing distributional assumptions fit most well with dynamic industry lifecycle effects suggested by Hannan and Freeman (1989). Using the model, we have a direct interpretation of the sign of the regression coefficients β for covariate X_i. $E[\ln(t)/X_i] = X_i'\beta$, where t is the expected duration of survival, hence a significant negative sign means a covariant lowers the expected duration of survival. Given the comparability among time dependent parametric methodologies and the possible distribution assumptions of organizational lifetimes, we also test our theory of pyramiding with two other commonly explored distributions of time dependence used by organizational theorists: the Gompertz model, which assumes a monotonically decreasing transition rate with time (Freeman, Carroll and Hannan, 1983; Carroll and Delacroix, 1982) and the Weibull model which assumes either monotonic increasing or falling rates of survival (Carroll and Hannan, 2000). Counter to the log-logistic (AFT) model, both of these proportional hazard models, Gompertz and Weibull, coefficient interpretation is opposite the direction of the sign; meaning a positive and significant coefficient has a negative effect on the hazard.

To use these methodologies properly, we need to include enough firm level information, e.g., explicit measures for a firm's financial, marketing, and general managerial strengths. Also, we need to deal with the correlations among observations issue as some parent have multiple investment in Brazil. For example, if a parent A has subsidiaries I and II, the failure or success of I and II are correlated. Moreover, if these subsidiaries have other parents, these other parents' successes and failures as subsidiary owners are also all correlated. Currently, we do not have enough firm level information and a large enough sample to handle the problems. Hence, such investigation is relegated to future work. However, if we are willing to turn a blind eye to these problems and just proceed, we find the following results shown below.

TABLE B1 Parametric Survival Analysis

Variables	**Log Logistic**		**Gompertz**		**Weibull**	
Sales Revenue (log)	0.008	*	-0.122		-0.122	
	(0.00)		(0.11)		(0.11)	
POLCONV Distance (Henisz, 2000)	-0.474	**	12.139	**	12.133	**
	(0.15)		(4.16)		(4.16)	
Cultural Distance (Hofestede, 1980)	-0.025	**	0.561	**	0.56	**
	(0.01)		(0.19)		(0.19)	
Geographic Distance	0	***	0.001	***	0.001	***
	0.00		0.00		0.00	
Regulatory Distance (Perkins et al., 2008)	-0.002	+	0.036	*	0.037	*
	(0.00)		(0.02)		(0.02)	
Parent Combination - PG/PG	-0.047	+	0.757		0.773	
	(0.03)		(0.86)		(0.87)	
Parent Combination - PG/SA	-0.077	***	1.681	*	1.685	*
	(0.02)		(0.67)		(0.67)	
Parent Combination - PG/OG	0.034		0.754		0.763	
	(0.04)		(0.77)		(0.77)	
Parent Combination - SA/SA	Omitted		Omitted		Omitted	
SIC Code Fixed Effects	Yes		Yes		Yes	
N	138		138		138	
Log Likelihood	81.814		77.805		78.196	

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001; Constant not reported for brevity.

[x] Those three firms are Primus Telecommunications Group – entered in 1994; Matrix – entered in 1996; and Global One – entered in 1996.

[xi] We drop these cases to be conservative. The other alternative is to keep them as continuing joint ventures with the same parent combinations. By doing so, our results are not changed.