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, and this mirrors reality in the United States and United Kingdom. But elsewhere, business groups can be the more important unit, for business strategy is often formulated at the business group level, not the firm level. In many countries, this is legally enshrined in corporate governance codes that assign officers and directors a duty to act for their business group, not their firm or its shareholders. Even where a duty to individual firms' shareholders exists, business groups often have pyramidal structures of intercorporate blockholdings that entrench controlling shareholders, usually wealthy families, who run their groups to maximize their utility. This can impose exacerbated agency problems. In either case, foreign joint venture partners who expect domestic firms to maximize shareholder value can be sorely disappointed. We explain agency behavior in business groups and how controlling insiders can divert resources between firms they control, including joint ventures, to enrich themselves; and highlight differences between this behavior and agency problems in freestanding firms. We then examine the telecoms industry in Brazil, a country in which most large businesses belong to pyramidal business groups controlled by wealthy families. We find that joint ventures between Brazilian telecoms firms and partners from countries where business groups are rarer have significantly elevated failure rates; while joint ventures with foreign partners from countries where pyramidal groups are more common are more likely to succeed. We then present clinical examples illustrating the mechanisms that drive such divergent performance in joint venture partnerships. While our results are based on a single industry in a single country, we believe they highlight a previously unexamined important issue in international business strategy.

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Introduction

The traditional strategy literature assumes the conventional viewpoint of microeconomics that the basic unit of business is the value-maximizing firm (Samuelson, 1947). More recently, the literature encompasses corporate governance issues formalized by Jensen and Meckling (1976), who highlight deviations from value maximization associated with hired managers' utility maximization. This framework may adequately characterize large listed American and British firms, which are almost always freestanding – they neither control nor are controlled by other listed firms, and are typically also widely held – predominantly owned by small shareholders, either directly or *via* institutional investors, such as mutual funds or pension funds.

Recent studies on international governance, including La Porta *et al*., (1999); Claessens *et al*., (2000); Faccio and Lang, (2002); Barca and Becht, (2001), and many others, reveal that the aforementioned governance structure as almost unique to the U.S. and U.K. Elsewhere, large listed corporations more typically belong to business groups. These usually have a pyramidal form: a controlling owner, usually a wealthy family, votes control blocks in one or more listed firms, which each votes control blocks in many other listed firms, which each votes control blocks in still more listed firms, and so on. These pyramidal groups are the tiered structures that let small handfuls of wealthy families control the greater parts of the large corporate sectors of many economies in Latin America and elsewhere. See Morck, Wolfenzon & Yeung (2005) for a review of the finance and economics based literature on pyramids.

The importance of pyramidal groups to strategy lies in the relationships between corporate control structures, institutional environments, firm behavior, and firm performance. In the strategy literature, initial steps towards exploring these relationships include Khanna & Rivkin (2001), Khanna & Palepu (2000) and Chang and Hong (2002), who report a positive link between business group control and individual firm performance.[1] This paper's stance is different. We demonstrate how a pyramidal

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[1] For a comprehensive survey on the relationship between pyramiding and firm and economy wide performance, see Morck, Wolfenzon, and Yeung, 2005.

group's governance structure can pose an expropriation risk to uninformed outsiders, including foreign managers guiding their freestanding firms into joint ventures with pyramidal group member firms.

Multinational enterprises (MNEs) frequently enter joint venture partnerships with local firms as a competitive strategy to internationalize; that mitigates their unfamiliarity with local ground rules, culture, and business practices, and their lack of local "connections" – which sum to their so-called "liability of foreignness."[2] However, this strategy can be a double-edged sword if the MNE fails to anticipate the governance issues that arise in business groups. 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 the firm's own shareholders. The controlling shareholder can sacrifice the interests of a group member firm to advance those greater goals, and 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, previously insufficiently explored in the strategy and international business literatures, for international joint ventures' remarkably high failure rates.[3]

As a first pass exploration of this possibility, 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

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[2] *Liabilities of foreignness*, a term coined by Zaheer (1995) and Zaheer & Mosakowski, (1997), captures the cost inefficiencies foreign firms face in host nations. This builds on the earlier foreign investment research by Hymer (1976) and Buckley and Casson (1976), which points out such liabilities of MNE's and calls the ensuing advantage of indigenous firms their *home court advantage*.
[3] Common explanations for joint ventures' remarkably high failure rates (see Kogut, 1989; Park, 1997) are: competitive pressure from outside the joint venture agreement (Park and 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 et al., 1996).

underperform and fail. For example, joint ventures of *widely held freestanding* firms with pyramidal group firms are the most at risk and ultimate failure[4]. 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 are necessary.

We then describe our field research. This entails case studies illustrating 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. Alternatively, 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 implications for strategy scholars and foreign investment practitioners.

The Mystery of the Pyramid

The Nature and Purpose 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.

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[4] Failure is defined as exit not due to acquisitions, regulatory shifts, geographic consolidation, etc.

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); and the literature refers to this corporate governance structure as a *family pyramid* (Morck, Wolfenzon & Yeung, 2005; Faccio and Lang, 2002; Claessens, Djankov & Lang, 2000) like the Carlos Slim Helú (the Mexican billionaire) pyramidal group.[5]

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. Let us illustrate: a rich family can split $1 billion 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 billions 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 Nth layer, $1/2^{N-2}$ in the $N-1^{th}$ layer, etc.[6] 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 supply additional equity to listed firms in each tier, allowing each tier to have a total capitalization much greater than the one above

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[5] Although the controlling shareholder is usually a wealthy family, pyramidal groups exist that are ultimately controlled by financial institutions, like the Deutsche Bank group in Germany. In Germany, public shareholders in German firms routinely sign over their voting rights to the banks that manage their stock accounts. Thus, large banks serve as *de facto* apex firms of pyramids. The large German banks are all widely held. Many listed Japanese firms belong to *keiretsu*, in which firms with no controlling shareholders each hold small stakes in one another that collectively sum to control blocks. Canada, France, and Italy also contain, or did contain, pyramidal groups without family firms at their apexes. In some cases the apex firm is widely held. In others, it is state-controlled, e.g., the Caisse de Dépôt et Placements du Québec in Canada. For more details, see the survey in Morck, Wolfenzon, and Yeung (2005). See also Fan *et al.* (2005) on SOE controlled groups in China.

[6] As an illustration, Tian (2007) describes the Edper Bronfman group in Canada in the mid 1990s comprising sixteen tiers of firms controlling firms, in chains of control culminating at the apex family trusts.

it. These injections of public equity at each tier are critical, and justify the term *pyramidal*. At each layer, an upper tier firm controls a multitude of lower tier firms, thence the word pyramidal group.[7]

For most group firms, the dominant shareholder's control is thus indirect: he controls a firm that controls another firm that controls another and so on. 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), and other control enhancing mechanisms can further leverage control. 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 mangers' 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 apex firm is effectively represented at all level.

Figure 1 illustrates these three distinct characteristics of pyramidal structures in the seven-tiered pyramid controlled by the Carlos Slim Helú and his family which includes seemingly unrelated firms spanning auto parts manufacturing and distribution, transportation, water treatment plants, commercial retail (such as Sears Roebuck of Mexico), music shops, eateries, and fixed line and wireless telecommunications services throughout the Americas. The top tiers are majority owned, controlled, and managed by the family members, while lower tiers have more outside investors with significantly higher equity participation and low voting stakes. The second tier firm *Grupo Carso* is managed by Slim Helú's

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[7] Clearly, we should not confuse pyramids with firms having many 100% owned subsidiaries, like real estate businesses in the US (which often incorporate properties separately for liability reasons).

three sons (Carlos, Marco Antonio, and Patrick Slim Domit)[8]. La Porta *et al.* (1999) document such family management in 69% of the pyramidal groups in their sample. More rarely, outside blockholders in pyramid member firms negotiate contracts with the dominant shareholder specifying a division of management positions. The third tier firms (Orient Star and Carso Global Telecom) are merely holding companies controlled by the Slim family. Via these holding companies set near the pyramid's apex, the family controls lower tier firms through dominant direct and indirect equity blocks.

INSERT FIGURE 1 HERE

Group Structures Other than Pyramids

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. 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 and Nakamura, 2005).

Pyramidal groups, plus other such corporate groups, are commonly denoted "business groups" (Khanna & Rivkin, 2001; Khanna & Palepu, 2000; Chang and Hong, 2002), and their inter-firm ties "group affiliations" (Chang, 2003). Business groups should not be confused with "conglomerates," which is a single freestanding firm with divisions active in many industries.[9] 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, large conglomerates in the United States 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.

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[8] Sourced from Hoovers online and company SEC filings, 2006
[9] A very recent innovation, so-called tracking stocks issued by US conglomerates, can cause them to resemble pyramidal groups in some ways. Tracking stocks are shares issued by one division of a conglomerate that pay dividends based on the earnings of that division. However, the owners of tracking stock are entitled to the same voting rights as the owners of ordinary common shares. This prevents a dominant shareholder from exercising control in the manner possible in a pyramidal group. See Hass (1996) for more detail.

Pyramids Everywhere

Recent empirical studies show widely held freestanding firms are common in only the United States, the United Kingdom, the Netherlands and Ireland (see the survey by Morck, Yeung, Wolfenzon 2005). Elsewhere, controlling shareholders prevail – usually very wealthy families and occasionally state-owned enterprises (SOE).[10] La Porta *et al.* (1999) examine 27 high-income countries and, using a 20% definition of control and, taking worldwide averages, find only 36% of large firms widely held, but 54% 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, Djankov and Lang (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. Faccio and Lang (2002) find similar results 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.[11] 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.[12]

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 (Perkins, 2008, Henisz, 2000). Corporate governance norms are an important part of a country's institutional

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[10] While families are important as dominant shareholders, pension funds also register as the largest owners of many of these firms. Pension funds typically avoid direct involvement in day-to-day management to avoid being classified as "insiders" for stock trading purposes.

[11] Fogel (2006) combines all the major firms in each pyramidal group into one composite entity. She then ranks these entities by their employment for each country.

[12] The table shows that Germany, Japan, and Demark have small family control. In Germany, small investors buy shares through banks, and banks vote on their behalf. Hence, many firms are *de facto* controlled by banks. In Japan, seemingly diffuse ownership obscures *keiretsu* groups, in which each firm holds tiny stakes in all other group firms, and these stakes sum to control blocks. In Denmark, charitable foundations control many large firms, since controlling shareholders can minimize taxes by bequeathing their wealth to a charity, which can employ their children, though not subsequent generations.

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-sections, we describe the basic corporate governance problems associated with pyramidal groups.

INSERT TABLE 1 HERE

Pyramids and their Secrets

The key in pyramiding is the leveraging of small cash flow rights into dominant and entrenched control rights of a multitude of firms. 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 string of literature (Berle and Means, 1932; Bonbright and Means, 1932; Bebchuk et al., 2000, Morck, Wolfenzon, Yeung 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 and Meckling, 1976) for understanding agency problems in several critical ways:

1. **Agency problems arise.** Despite each firm in the pyramid having a large shareholder in one (or more) firm in the tiers above, actual control vests with the dominate owner of the apex firm, whose real ownership stake in lower tiered firms can be miniscule (Bebchuk et al., 2000).

2. **Shareholders are heterogeneous.** Agency problems arise because of conflicts between a firm's public and controlling shareholders, and these overshadow the more standard agency problems between generic shareholders and hired managers described by Jensen and Meckling (1976).

3. **The insiders are entrenched.** The controlling shareholder, the *agent* in the *principal-agent* problem in a pyramidal group, is usually *entrenched*. In the US and UK, freestanding firms may have insider ownership of 5% or more, which Morck et al. (1988) argue can induce an economically significant alignment of their interests with public shareholder value. More critically, even these insiders do not have

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indisputable control over the board and firm because of the market for corporate control, which is comprised of takeover threats, proxy challenges at shareholder meetings, or any of the other mechanisms that occasionally depose underperforming professional managers of widely held firms (Morck *et al.* 1989). In contrast, in pyramids the controlling insider and his appointed managers cannot be dislodged by these mechanisms because the controlling shareholder votes a control block in each firm in his pyramid (Morck, Shleifer, and Vishny, 1988).[13] Without the 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 of the following point.

4. ***Insiders reap private benefits of control***. The controlling shareholder of a pyramidal group can glean as private benefits 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 he 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. In fact, the more astute the controlling shareholder is at extracting private benefits, the more expensive it is to buy him out. This adds an *adverse selection problem* to the already hearty brew of governance problems in pyramidal groups. Bebchuk, Kraakman, and Triantis (2000) argue that an *ensuing race to the bottom* ultimately entrusts the governance of pyramid member firms to "the most efficient thieves".

What are these private benefits of control that pyramidal groups can provide to their ultimate controlling shareholder, but not to other shareholders? They are clearly substantial (Bebchuk, Kraakman, and Triantis, 2000; Dyck and Zingales, 2004; Nenova, 2000). While other shareholders benefit from dividends and rising share prices, the controlling shareholder can also appropriate corporate assets for private use by simply directing firms he controls, but in which his real financial stake is slight, to pay for

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[13] In extreme cases, the entrenched managers are locked into coveted control position through *umbrella agreements*, which we explore further in section 3.5.

jets, country club memberships, extravagant accommodation in attractive locations, and the like. Also, intangible private benefits range from using corporate assets to advance the controlling shareholder's political or social agenda to enjoyment of the social status commensurate with membership in a tight oligarchy. The line between tangible and intangible private benefits can be blurred too as, for example, when firms low in the pyramid spend money to lobby politicians for policies beneficial to firms near the apex.

The extraction of private benefits of control by the controlling shareholder often requires that a given pyramidal group member firm deliberately pursue 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, officers and directors' fiduciary duty is to their business group, not to any particular firm (Johnson *et al.* 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, which could be joint venture partners. 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*[14] in the finance literature (Johnson *et al.* 2000) and *self-dealing* in corporation law.

Unforeseen Danger for Joint Venture Partners

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[14] 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.

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 little pyramidal groups.

Decision theorists (March & Simon, 1958) show managers to be bounded rationally by unforeseeable information voids. A substantial body of empirical work demonstrates that bounded rationality problems affect strategic decision making. Examples include disruptive technologies (Bower & Christensen, 1996), competitive decision making (Zajac & Bazerman, 1991), and misperceiving competition (Porac et al, 1995). Porter (1980; pg 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 & 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 US, do have such blind spots regarding agency problems in pyramidal groups, 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 partners from pyramidal groups.

The Double Edged Sword of Joint Venturing

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 and Mosakowski, 1997). 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. 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,

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Wolfenzon and Yeung, 2005), and especially in those with legal systems less protective of outside investors' property rights (Bebchuk, Kraakman and Triantis, 2000; Burkart, Panunzi and Shleifer, 2003).

Thus, joint venturing with local partners is advocated most energetically in precisely the environments that expose the foreign firm to another set of expropriation risks – by the controlling shareholder of the pyramidal group to which the local partner firm belongs. This trade-off may still render joint venturing economically sensible in many circumstances, especially given sufficient care to constrain or incentivize the controlling shareholder. But, multinational managers need to anticipate the pitfalls of partnering with a pyramid member firm.

Since joint venture partners are assumed sophisticated, the *caveat emptor* applies and the expropriation is generally perfectly 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. Since no laws are broken, 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.

Warning of Prevalent Unfortunate Partnering

Before we proceed further we need to advance further warnings. 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.

In addition, official government mandates can require joint ventures with pyramid member firms. In many countries, foreign multinationals must comply with national regulations and laws restricting foreign ownership or stipulating the conditions of foreign entry. A foreign entrant may thus be forced to

enter a joint venture with a local partner firm as a stipulation for entry into the local market. For example, the Brazilian Ministry of Communications restricted foreign ownership in the first privatization auction of state controlled mobile phone operators in mid-1997. Foreign firms thus had to form joint ventures to enter that market.[15]

If restrictions of this sort were imposed randomly across industries, there would be no additional upward bias in the likelihood of a foreign multinational partnering with a pyramid member firm. However, Morck and Yeung (2004) posit that pyramid controlling owners are especially adept at political rent-seeking – investing in political connections to distort regulations in ways that benefit them. Particularly troubling for managers from countries not familiar with pyramidal groups, privatizations and liberalizations necessarily affect industries with histories of state intervention – such as telecommunications, banking, and energy. Consequently, multinationals entering newly deregulated sectors may be especially likely to encounter pyramid group firms.

These considerations further raise the likelihood that foreign firms partner with pyramid member firms in situations where expropriation by controlling shareholders is likely. This consideration makes 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 telecommunication industry; our field research includes interviews of senior executives at key multinational subsidiaries in Brazil and at their parent headquarters (in the US, 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.

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[15] In 1998, the Brazilian government lifted this restriction for subsequent privatizations auctions and licenses.

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. 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.

These concepts of *parent combinations* and parent firms' *participation* in joint ventures clearly miss many important aspects of joint venture formations, dynamics, and terminations. However, they are well suited to our purpose – to study how parent firms' differing governance structures affect their continued participation in joint venture combinations.

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

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because almost all the entries occur after the privatization and liberalization policies were implemented. [16] 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 (Headd, 2003). 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[17]. 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.

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[16] Those three firms are Primus Telecommunications Group – entered in 1994; Matrix – entered in 1996; and Global One – entered in 1996.
[17] We drop these cases to be conservative. The other alternative is to keep them as continuing joint ventures with the same parent combinations. Doing so, our results are not changed.

Descriptive Statistics

Figures 2 and 3 summarize these data, indicating the distributions of joint venture parent combinations and of parent firm participation longevities.

INSERT FIGURES 2 AND 3 HERE

Parent Firms

We classify parents firms as freestanding, members of *pyramidal groups, or members of other sorts of business groups* (such as Japanese *keiretsu*). 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 Carvalho da Silva (2005) and Fogel (2006) who document the rarity of dispersed ownership in Brazil.

INSERT TABLE 2 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

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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 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 value 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 firm specific institutional measures are explored in Perkins (2006, 2008).

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) 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, 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 I). In addition, we also examine the impact of environmental variables (e.g., cultural distance, Hofestede, 1980; political hazards, Henisz, 2000; technology) 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 (in our time window 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, for joint ventures whose parents are partly Brazilian, and for joint ventures whose parents are all foreign.

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.[18] 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.

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[18] Appendix I reports parametric regression based relation between joint venture survival and parent firm pyramidal status.

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.[19] This is consistent with the well known joint venture instability (Kogut 1988) 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 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 pooling resources lets weaker foreign entrants overcome their *liabilities of foreignness* enough to compensate for their infirmity relative to foreign firms strong enough to enter alone.

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 US 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 PG types 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.

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[19] Throughout, we test for statistically significant hazard rates as in Blossfeld and Rohwer (2002, pg 76-78).

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.[20] The 22% figure also significantly exceeds (p < 1%) the 12% hazard rate for PG/PG combinations with a Brazilian parent.[21] 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 exposure 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 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

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[20] Using the Blossfeld and Rohwer (2002, pg 76-78) suggested methodology to compare hazard rate statistical significance, we compare the standard errors and confidence intervals of the two categorical stratified groups' hazard functions. Additional log-rank homogeneity test for survival analysis revealed a similar result of statistical significance at the .01 level.

[21] In contrast, PG/PG combinations containing no Brazilian parents have failure rates of only 2% while similar combinations containing a Brazilian parent post 12% hazard rates. However, these are not significantly different, and neither differs significantly form the 4% hazard rate for wholly owned subsidiaries.

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 that a quarter of the big business sector have the highest hazard rate – 19%. Hazard rates for the other categories increase monotonically across groups of parent firms from countries with decreasing family domination of big business. Thus, 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 US, where pyramidal groups are virtually absent, exhibit high hazard rates and their participation tends to be brief.

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. 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.

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Standard 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; using only limited observations makes traditional statistical techniques ineffective. We resort to clinical studies to reveal causal mechanisms in our hazard rate observations.

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 case even fail to comprehend the importance of control rights at the outset.[22] 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 entered a joint venture with a member of a Brazilian pyramidal group, *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. In 1998, when this joint venture was formed, *TIW* was controlled by its founder Charles Sirois with a 40% voting stake and an actual ownership stake of 18%. *TIW*'s other major shareholder, the *Caisse de Depot et Placement du Quebec*, a government

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[22] Each of the cases presented (except case 4) highlights the unscrupulous 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.

controlled pyramidal group, owned 11% stake and voted 8%. Although the *Caisse* had a prior history of imposing value-destroying political agenda on its listed member firms, this had largely ended by 1998, after a series of highly publicized scandals forced the Caisse to become a largely passive sovereign investment fund (Arbour, 1993). We classify *TIW* as freestanding firm (FS) because the largest voting block holder controls no other firms of consequence.[23]

Canada's big business sector is a mixture of pyramidal groups firms and freestanding widely held firms, with D_v= 45% in Table 1.[24] 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 intercorporate 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 intragroup 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 naively 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 4 sketches this structure.

INSERT FIGURE 4 HERE

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[23] TIW was a pyramid member firm in 1998, but by 2002 was freestanding. Re-classifying TIW as a pyramidal group does not materially change the statistics reported in Table 2.
[24] Table 1 here and in Fogel, K. 2006

Then within weeks of the privatization, the Brazilian ground suddenly shifted beneath *TIW*. *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*.[25] *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 people 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 *Opportunity* to court in Brazil repeatedly, but to no avail.[26] 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 did not expect their erstwhile partner to seize control and shut *TIW* out. Further, *TIW* did not expect 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

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[25] Interestingly, the heads of the pension funds were replaced within weeks after the agreement was signed. The ease with which *Opportunity* manipulated the state pension, however, remains unexplained.
[26] Two major pension funds also took legal action.

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 evaporated from R$13 million in the black to $R7 million in the red in less than a year. By 2002, their combined losses bottomed out at $R30 million. 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, fed up with 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 US$70 million, a fraction of its total capital infusions estimated at US$390 million.[27]

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]*"*[28]. A third interviewee stated that, *"TIW was squeezed out by their partner, Opportunity. Wrestling control of*

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[27] The estimated initial investment is derived from total price paid for the joint venture – $813 million at the time of privatization. Source: Reuters News Agency, *TIW snares Brazil cell phone deal leads consortium that wins control of two companies spun off as part of $19 billion privatization*, July 30, 1998. Had *TIW* held out, they might have done better, for a new government took power later that year and the pension funds ultimately succeeded against *Opportunity* in the Brazilian courts.
[28] The sources of the above information: Gazeta Mercantile, Toronto Star and *TIW* company annual report.

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.

Citigroup and Opportunity

Our second case is another joint venture involving *Opportunity* – this time with the American *Citibank.* The U.S. bank, through its wholly owned subsidiary, *International Equity Investments, Inc.* (*IEII*)., sunk US$748 million into a consortium organized by *Opportunity*, and jointly owned by *Citibank*, *Opportunity* and several large Brazilian pension funds. *Citibank*'s money is contributed by *Citigroup Venture Capital International Brazil, L.P.* (*CVC Fund*), an offshore fund wholly owned by *Citibank*.[29] A Brazilian entity based in the Azores, *Investidores Institucionais – Fundo de Investimento em Ações* (*II-FIA*), contributed capital on behalf of the pension funds. The *Opportunity* pyramidal group contributed its share of the joint venture's capital through its member firm, *Opportunity Equity Partners, LTD*. The consortium supposedly owned and controlled *Brasil Telecom*, the country's third largest telecommunication company. The original ownership structure of the consortium was a single class of securities with voting rights proportional to capital invested. The investments of *Citibank* and the pension funds, 44.86% and 45.85%, respectively, dwarfed *Opportunity*'s 9.29% stake. However, the consortium was a partnership, in which *Citibank* and the pension funds delegated control to *Opportunity,* the general partner.[30]

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[29] IIFIA was formerly named the CVC/Opportunity Equity Partners Fundo de Investimento em A v.es – Carteira Livre.

[30] According to the Limited Partnership Agreement, the CVC Fund was governed by the general partner, Equity Partners, an Opportunity family firms, which was responsible for "management, control, operation, and policy" of

From the outset, the joint venture was remarkably opaque. Neither *Citibank*'s managers nor the Brazilian telecommunications regulatory authority, *ANATEL*, fully understand the six tiers of holding companies, obscured by various crossholdings that hid *Brasil Telecom*'s ultimate controlling shareholder. The control chain begins with *Zain S.A.,* a holding company owned by the three contributors of the joint venture's capital as mentioned above. A U.S. District Court ultimately unraveled the chain, noting that *Zain* "holds 68.28% of the voting shares in *Invitel S.A.*, which in turn holds 99.99% of the voting shares in *Techold*, which owns 61.98% of the equity stakes in *Solpart*. Of the remaining shares in *Solpart,* 38% are held by *Telecom Italia* and .02% by *Timepart*. *Solpart* holds 51% of the voting shares in *Brasil Telecom Participaçoes* (BTP) and *BTP*, the preferred and common shares of which are traded publicly in Brazil, holds 99.07% of the voting shares in *Brasil Telecom*".[31] This cumbersome structure is reported in Figure 5.

INSERT FIGURE 5 HERE

Unbeknownst to *Citibank* and the other partner, *II-FIA*, *Opportunity* controlled *Brasil Telecom* via a 62% voting stake of *Solpart* owned by *Timepart*, despite the fact that *Timepart* owns only .02% of *Solpart*'s equity. In 2004, the Brazilian telecommunications regulatory authority *ANATEL* ordered *Brasil Telecom* to disclose the ownership structure of *Timepart* because they suspected the company was indirectly controlled by Citibank's CVC Fund.[32] In fact, the investigation revealed that *Timepart* was owned by the father of Daniel Dantas, the controlling shareholder of the *Opportunity* pyramidal group; Luiz Dantas, a business partner of Dantas, and a third apparently related company.[33] A senior pension fund investor reported "None of us knew that our partner [*Opportunity*] had additional control through another route. The people running *Brasil Telecom* are not the people that invested money in it".[34]

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the fund and acknowledged its status as a fiduciary for the limited partner (US District Court for the Southern District of New York, 2005).

[31] United States District Court for the Southern District of New York, Case 407F Supp 2d 483, 2005 U.S. Dist., Lexis 10468, page 4; Decided June 2, 2005.

[32] "Regulator seeks clarification on BrT shareholding", *Business News Americas*, March 9, 2004.

[33] Wheatley, Jonathan. 2004. "Citigroup faces more pressure in Brazil", *Financial Times*, March 7, 2004.

[34] Wheatley, Jonathan. 2004. "Funds enter ownership dispute", *Financial Times*, March 8, 2004.

Not only did Dantas maintain effective control through his opaque shareholding structure[35] (and his managerial responsibilities for the other funds), he also called the shots through family members and close associates appointed to the boards of strategically placed holding companies. For example, the three person boards of the pyramid group member firms *Zain*, *Invitel* and *Techold* all include Daniel Dantas, his sister Verônica Valente Dantas, and an *Opportunity* employee, Maria Amalia Delfim de Melo Coutrim. Four of the six *Brasil Telecom Participaçoes* board members have Dantas family ties: Dantas' sister, Veronica Valente Dantas; his brother-in-law, Arthur Joaquim de Carvalho; his former brother-in-law, Carlos Bernardo Torres Rodenburg; and an Opportunity attorney, Luis Carvalho de Motta Veiga, the Chairman.[36] Four out of the seven *Brasil Telecom* directors are similarly affiliated with *Opportunity*. In general, *Opportunity* controlled its pyramid with a dense network of strategically placed voting blocks that summed to control blocks wherever necessary. An *Opportunity* manager explained that Dantas strategy was "Simply to stage large battles between his partners to squeeze out value for himself. He was the swing vote on the top of the pyramid. He took advantage of this position as the controlling general manager of the chain. He would run from one side to the other to maneuver control".

Citibank, by then the world's largest bank, was entirely unprepared. On March 9, 2005, the bank tried to remove Dantas as the consortium's managing partner, citing inappropriate use of funds and other irregularities. According to one report, *Citibank* alleged that "*Mr. Dantas and Opportunity engaged in self-dealing and wrongful conduct in order to misappropriate* (Citibank's) *CVC/Opportunity Fund assets and enrich themselves at IEII's* [a Citibank subsidiary] *expense*".[37] Citibank found the Brazilian courts reluctant to eject Dantas, who quickly set up an *umbrella agreement,* whereby "if either the *CVC Fund* (Citibank) or *II-FIA* (the Brazilian pension funds) removed *Opportunity* as general partner or manager, that fund would lose its voting rights in *Zain*"[38]. Dantas remained in control of *Brasil Telecom* until May 2005.

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[35] "Citigroup does not control operator", *Business News Americas*, March 14, 2004.
[36] United States District Court for the Southern District of New York, Case 407F Supp 2d 483, 2005 U.S. Dist., Lexis 10468, page 4; Decided June 2, 2005.
[37] Wheatley, Jonathan. 2005. "Citigroup in $300m Brazilian lawsuit", *Financial Times*, April 13, 2005.
[38] Mimeo

During this period, and without *Citibank's* consent, *Opportunity* arranged extensive tunneling that depleted the value of *Citibank's* investment in *Brasil Telecom*. Even as *Citibank* attempts to dismiss him, Dantas sought to sell the joint venture's cellular assets to *Telecom Italia,* another *Brasil Telecom* minority shareholder, at an allegedly inadequate price; while simultaneously brokering a deal to sell *Opportunity*'s stakes in *Brasil Telecom* to *Telecom Italia* for "hundreds of millions of dollars in excess of the actual value".[39] He also allegedly signed agreements, as the general partner of Citibank's *CVC Fund* and without the knowledge of *Citibank*, containing provisionary clauses proscribing the fund (Citibank's *CVC Fund)* from selling 5% or more of its interest in *Zain* unless the purchaser bought all *Brasil Telecom Participaçoes* shares held by *Opportunity* entities as well. This agreement, effective until 2028, effectively reallocated any prospective buyer's gains from acquiring *Citibank*'s *CVC Fund* stake to various member firms of *Opportunity*'s pyramidal group.

On March 10 2005, the day after its unsuccessful attempt to fire Dantas, *Citibank* sought an injunction from the U.S. District Court in New York to bar him from stripping the joint venture's assets. A preliminary injunction was granted on March 17, and the courted granted *Citibank* a restraining order to remove Dantas from the business on March 17. The Brazilian courts originally followed, granting a preliminary injunction on May 11, 2005 to suspend the *umbrella agreement*. *Citibank* obtained a further injunction in the U.S stopping further asset sales and equity transfers. Even armed with all these rulings, *Citigroup* fought an uphill battle to remove Dantas' board of directors from the joint venture and the various holding companies, but succeeded in effectively installing new boards by August 23, 2005.

U.S. District Court Judge Kaplan, ruling for *Citibank*, agreed that "the defendants, without [Citibank's] knowledge or approval, commenced an attempt to auction off simultaneously equity in the holding company with indirect control [over other assets owned by Citibank's *CVC Fund*];" that "the auction was a gambit by *Opportunity* to reap for itself ... a control premium that rightfully belonged to the *CVC Fund*;" and that "It strongly appears that *Opportunity* is attempting to use advantages that it enjoys

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[39] United States District Court for the Southern District of New York, Case 407F Supp 2d 483, 2005 U.S. Dist., Lexis 10468; Decided June 2, 2005. According to this court proceeding on page 28, the monetary values of the Opportunity shares planned buyout from Telecom Italia was $443 million and the value of the cellular assets was also overvalued at $198 million.

purely because of the former fiduciary responsibility to reap enormous gains for itself at the expense of those whom it owes fiduciary duties."[40]

This case is instructive because it highlights one of the governance problems discussed above that tempt the controlling shareholder of any pyramidal group – *tunneling* wealth from one firm in the group to another to benefit the controlling shareholder at the expense of other investors. *Citibank* sued *Opportunity* for US$300 million for siphoning wealth from the *Brasil Telecom* joint venture to other members of the Opportunity pyramidal group.[41] One part of the complaint claims *Opportunity* used the joint venture's assets to pay for *Opportunity* employees, furniture, legal fees totaling $48 million in unrelated disputes, and even to finance the "purchase and inappropriate use of three private airplanes valued at $30 million." To facilitate further tunneling and rights to assets of Citibank's *CVC Fund*, *Opportunity* "transferred custody of share registers relating to shares owned by the *CVC Fund* from a bank recognized for custodial services to an *Opportunity* entity".[42]

The case also highlights the importance pyramidal groups' controlling shareholders attach to control, as opposed to ownership, in countries where public investors have little protection. In court, *Opportunity* conceded that its goal was to retain control and, failing this, it desired to extract over US$1 billion – its valuation of *Opportunity*'s stake in the joint venture plus a US$544 million "control premium" for managing Citibank's *CVC Fund*, despite *Opportunity* not holding a *de jure* control block.[43] The ambiguities in Brazilian law regarding such "control premiums" are evident in the abundance of unaddressed complaints to the CVM, the Brazilian counterpart to the SEC. American courts are unambiguous in deeming such behavior "blatant self-dealing".[44] *Opportunity* was also accused by their former partners of making side deals with major suppliers worth over $1 billion. To date, the court has yet to rule on these claims.

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[40] DeJuana, Carlos 2005. U.S. Judge favors Citigroup in Opportunity dispute, Reuters News, June 2, 2005.
[41] Wheatley, Jonathan. 2005. "Citibank in $300 million Brazilian lawsuit", *Financial Times*, April 13, 2005.
[42] United States District Court for the Southern District of New York, Case 407F Supp 2d 483, 2005 U.S. Dist., Lexis 10468, page 7; Decided June 2, 2005.
[43] United States District Court for the Southern District of New York, 2006 U.S. Dist. Ct. Motions, 2006 U.S. Dist., Lexis 6776, page 9-10; Motion of Temporary Restraining Order, May 16, 2006; United States District Court for the Southern District of New York, 441 F. Supp. 2d 552., Lexis 50884, page 13-14; July 26, 2006
[44] United States District Court for the Southern District of New York, 2006 U.S. Dist. Ct. Motions, 2005 U.S. Dist., Lexis 6776, page 2; Motion of Temporary Restraining Order, May 16, 2006.

In general, the disputes remain far from resolved. In April 2006, the Brazilian courts overturned their prior decision to annul the umbrella agreement, letting *Opportunity* reassert control over *Brasil Telecom*.[45] The U.S. District courts then ruled in favor of *Citibank* again by definitively voiding the umbrella agreement on July 26, 2006.[46] The U.S. Courts have yet to enforce their ruling in Brazil.

Again in this example, what causes what is abundantly clear. *Citibank* entered Brazil thinking the rules would resemble those in America, and found itself battling unfamiliar governance problems. *Citibank*'s victory in American courts may accomplish little more than subtracting lawyers' fees from the bank's bottom line. Unless the Brazilian courts enforce the US ruling, which they show no sign of doing, *Opportunity* retains de facto control and *Citibank* can do little about it.

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%. By its 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 naïve hope that a consensus would always emerge. The Safra brothers were to "approve business plans and agree upon decision making as to the timing and amount of cash disbursements."[47]

Former top executive at *Bell South* 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."[48] The *Safras*

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[45] Stewart, A. and Jelmayer, R. 2006."Brazil's Opportunity wins ruling in Brasil Telecom case", Dow Jones International News, April 11, 2006.

[46] Valentti, Graziella. 2006. " Justica de NY volta do Opportunity ao Comando da BrT", Agencia Esado, July 26, 2006.

[47] Source : Bell South 1999 Annual report

[48] Extracted from an executive interview with the former Bell South President of Brazil.

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 brothers refused. The joint venture grew ever more inefficient, running up 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, Kraakman, & Triantis (2000), the Safras can be thought of as maximizing their wealth, $W = \alpha V(\mathbf{s}) + B(\mathbf{s})$ where V is the joint venture's value, B is the private benefit they obtain from controlling it, α is their ownership stake, and $\mathbf{s}$ is a vector of feasible strategy choices. Their optimal strategy is to choose $\mathbf{s}^*$ to maximize W; and this clearly need not maximize V. An outside capital injection to raise V would lower α, and even if the Safra's investment, αV, ended up larger, a lower voting stake α imperiled their control and risked cutting B to zero. 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 B 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."[49]

This example highlights two issues. First, *Bell South*, worse than *TIW* and *Citibank*, failed to value 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, in Donald Rumsfeld's words, 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 6. The joint venture, *ATL*, was to bring *SK*'s CDMA-based cellular technology to Brazil.

INSERT FIGURE 6 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's* would seek to maximize the value of its stake in *ATL* by applying *SK*'s technology quickly, widely and efficiently, and so 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 leave control rights tenuously defined.

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[49] Source: *Espicom online*, "BellSouth, Verbier hand over control of Brazilian venture to banks", April 15, 2003

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. 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 7.

INSERT FIGURE 7 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* upped its stake in Portugal Telecom to 10% and Portugal Telecom increased its stakes in *Telefonica* to total 1.5%.

Quantifying Trust

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 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 a greater commitment disparity have higher cumulative hazard rate. Joint ventures whose parents make matching commitment have the lowest hazard rate – one percent – and those with the greatest disparity in commitment have the highest. Table 6 displays these findings.

INSERT TABLE 6 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 HERE

Conclusions and Discussion

This paper explores corporate governance problems in pyramidal group member firms, and shows how under informed and under prepared managers of freestanding firms can run afoul of them in joint ventures. Pyramidal groups are structures in which a controlling shareholder, usually a wealthy family, controls an apex firm, which holds control blocks in several lower tier listed and unlisted firms, each of which holds control blocks in a even lower tier firms, and so on – *ad valorem*. Pyramidal groups are prevalent globally, while freestanding firms (unlisted subsidiaries do not count as pyramiding) are virtually the only game in the United States. While governance problem 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 firms. This creates opportunities for tunneling – shifting resources between pyramidal member firms via transfer pricing or other income shifting techniques – to shift profits away from firms mainly owned by outside investors and into firms mainly owned by the group's controlling shareholder.

The coupling of impregnable control to miniscule real ownership by the controlling shareholder makes pyramidal group firms prime territory for exploiting naïve outside investors. Local shareholders

appear to anticipate these governance problems, and discount the public floats of controlled firms more heavily in countries that provide public shareholders little legal protection against controlling shareholders (Dyck and Zingales, 2004).

However, 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. We argue that this failure to appreciate local partners' likely governance problems constitutes an economically significant "liability of foreignness." 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 less likely to have past experience with the governance problems of pyramidal groups – either because their firms are not in such groups or because their home countries either feature few such groups or protect public shareholders strongly enough to curb these governance problems.

If our findings prove more generally applicable, they may provide a new explanation for the markedly high failure rates of international joint ventures, and perhaps even suggest useful refinements to our current theories of foreign investment. Those theories currently view international joint ventures as strategies to reduce a foreign firm's *"liability of foreignness"* (e.g., Kogut and Singh, 1988) and, in particular, to mitigate expropriation risks in institutional environments where those risk are high (Henisz, 2000). Our findings show that, while joint ventures can indeed accomplish these objectives, they can also expose naïve foreign parents to unfamiliar agency problems. Blindsided by these, and hemorrhaging money, the foreign parents may, with some justification, view these agency problems as expropriation by their foreign partners. A more cynical view, also not entirely without justification, is that they should have done their homework better and should view their losses as tuition for remedial learning, rather than expropriation.

Therefore, we risk belaboring the obvious to state the following warnings:

1. Pyramidal group firms, in countries with weak public shareholder protection, are run to maximize the wealth and wellbeing of the pyramidal group's controlling shareholder. Pyramidal groups firms

do not maximize firm value, nor even the wealth and well-being of their top managers. A clear distinction must thus be drawn between the corporate governance problems common in pyramidal group firms and those in freestanding firms.

2.   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 are credible, they ensure trustworthy behavior by the local partner and need never be used.

More specific constructive recommendations are difficult because 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. Thus, we offer the following as discussion points only for freestanding firm managers contemplating joint ventures with pyramidal group firms.

1.   *Know your partner.* The local partner is not the immediate local parent firm of the joint venture, but that firm's ultimate controlling shareholder. This is usually a politically connected and very wealthy local family.

2.   *Know what else your partner controls.* In one of the cases reviewed above, the local partner's controlling shareholder controlled several minority investors in the joint venture, and seized control by consolidating these stakes. In another, the local partner's controlling shareholder entered joint ventures with two rival cellular technology providers, and thus had financial incentives to undermine one to advance the other. These cases underscore the importance of appreciating the local partner's true span of control. In many countries, the full sweep of a wealthy old-moneyed family's control can be astounding.

3.   *Focus on 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 can be made to work. Accepting a minority

voting interest is risky unless the local partner's incentives to make the joint venture a success are unambiguous.

4. ***Find alternative mechanisms for corporate control***. 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 or chair, or a majority of directors, regardless of the equity stakes held by the joint venture's parents.

5. ***Escalate commitment through reciprocity***. We find joint ventures between pyramidal group member firms to persist longer if their partners are more equally committed and if each has opportunities to retaliate for any bad faith shown by the other. 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. This was not a significant factor in Brazilian telecoms, perhaps because rival foreign technology providers were anxious to secure market shares. But this and like strategies might nonetheless have been useful in this and other settings

We acknowledge that our findings are preliminary, and offer these suggestions in hope of stimulating more extensive debate in the strategy literature on the implications of dissonant corporate governance regimes. We enthusiastically invite further work along these lines, and welcome both supporting evidence and alternative explanations of our findings.

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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	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	15.9	20.0	15.9	20.0
Italy	67.1	50.0	67.1	50.0	United	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[50]	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
Relationship to the Joint Venture's Parent Firm Combination Control Structure

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[51]	36	47	83
Wholly Owned Subsidiary (WO) of foreign parents	0.04	41	7	48
Total (joint ventures & wholly owned subsidiaries)	**0.11**	**78**	**53**	**131**

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[50] Note that freestanding firms include both widely held firms, like MCI, and firms with controlling shareholders. This is because our focus is the problems that arise in a joint venture when one parent is unaware that the other belongs to a business group or the possibility of the other's controlling shareholder tunneling wealth out of the joint venture. 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).

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

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 [52]	*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[53]	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

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[52] Countries with % top ten firms are controlled by a pyramid; Source: Table 1 here and obtained from Fogel, 2006.
[53] Using the Blossfeld and Rohwer (2002, pg 78) suggested methodology to compare hazard rate, there is 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.

Figure 1. The Slim Helu Pyramidal Group in Mexico
Each box represents a pyramidal firm. Lines and percentages indicate equity control block held by the firm above in the firm below.
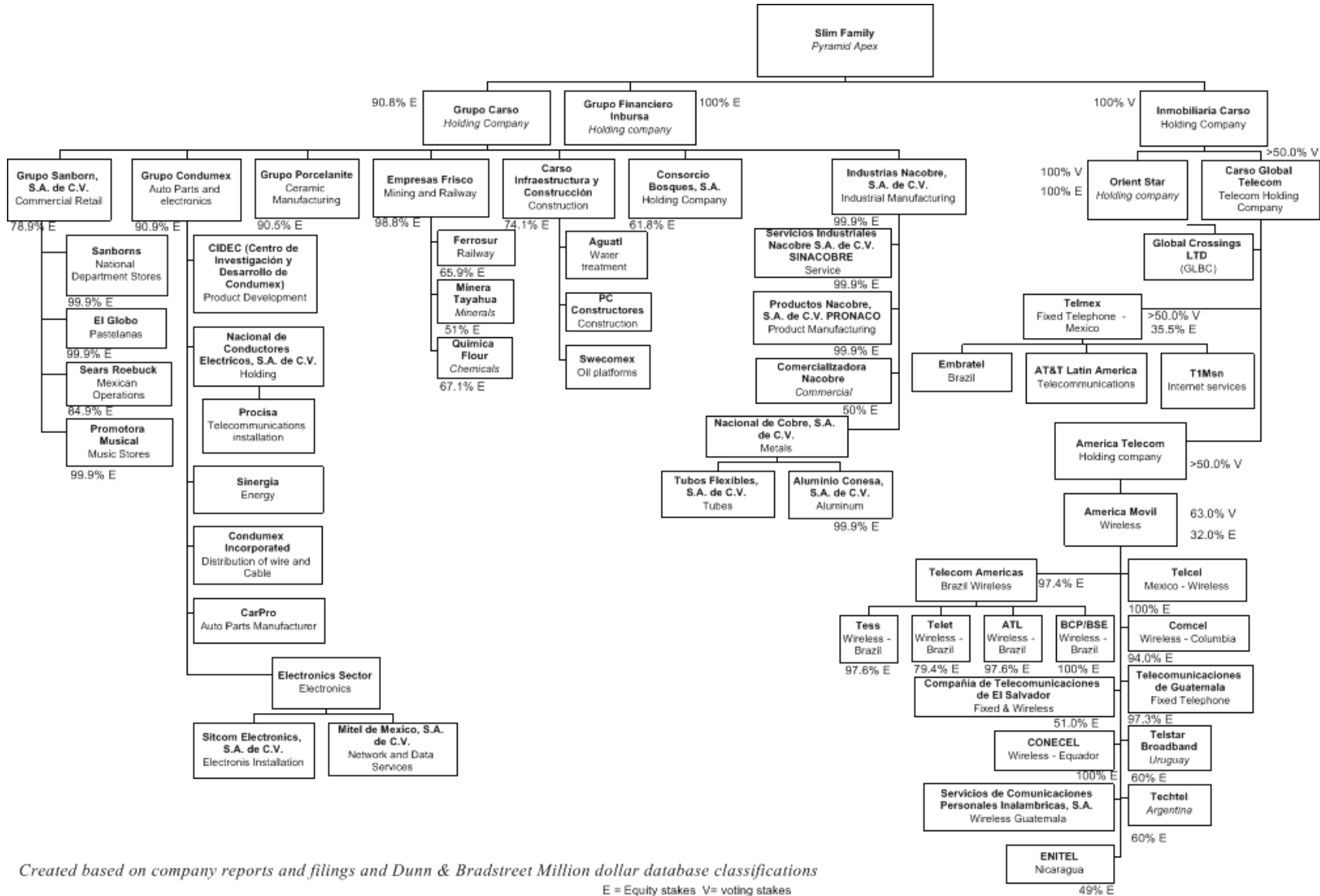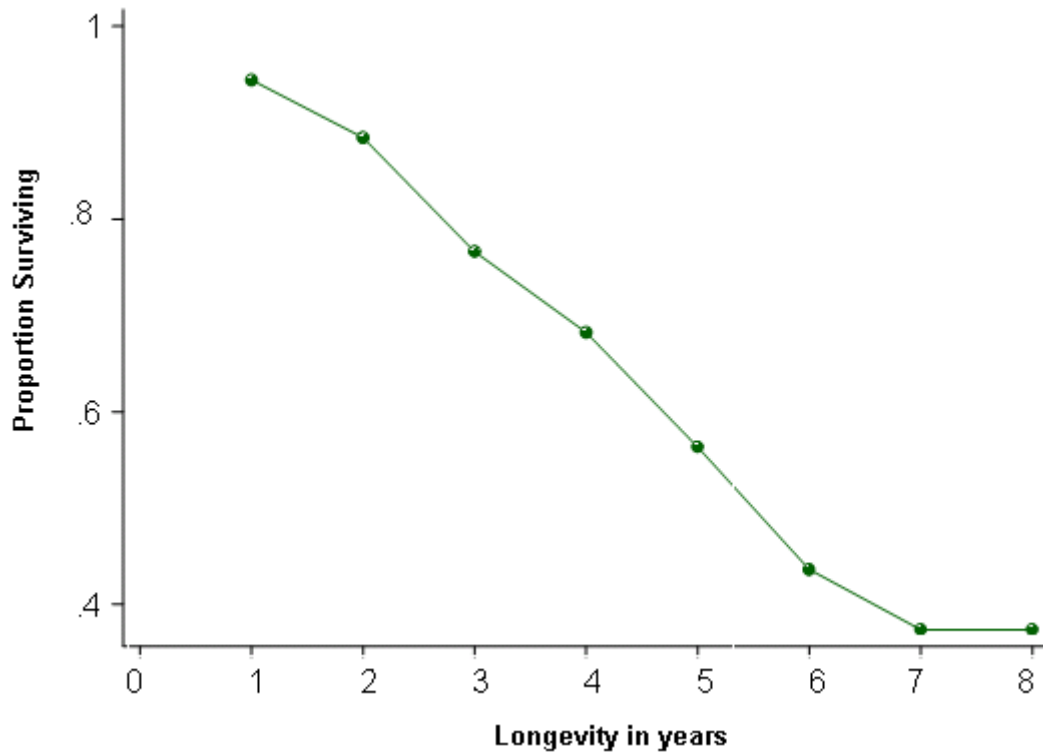
Figure 2. Joint Venture Parent Combination Survival Rates
Histogram showing the proportion of joint venture parental combinations surviving, by year, and underlying data.
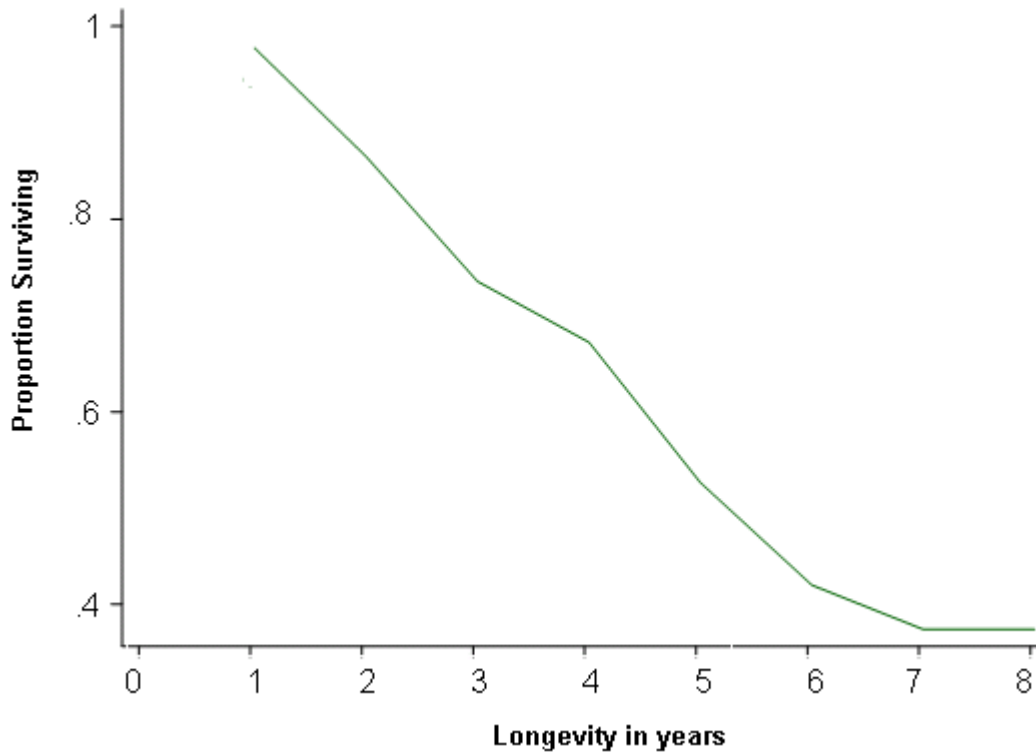

Year	Beginning of year total[54]	Joint Venture deaths	Observations lost	Proportion surviving	Standard error	95% confidence interval	
1	131	7	10	0.9444	0.0204	0.887	0.9731
2	114	7	7	0.8846	0.0291	0.8128	0.93
3	100	13	6	0.7661	0.0396	0.6772	0.8334
4	81	8	16	0.6821	0.045	0.5847	0.7613
5	57	9	11	0.5629	0.0518	0.4554	0.6572
6	37	7	12	0.4358	0.0583	0.3202	0.5456
7	18	2	8	0.3735	0.0645	0.2495	0.4974
8	8	0	8	0.3735	0.0645	0.2495	0.4974

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[54] In Figures 2 and 3, 'Beginning of year total' represents the number of observations at the beginning of the time interval. This number of episodes, N, is recursively defined across intervals t such that $N_t = N_{t-1} - E_{t-1} - Z_{t-1}$, where E_t equals the 'Joint venture deaths' or failures in interval t and Z_t represents the 'Observations lost' or censored observations in interval t. We treat censored observations with the standard methodological assumption that the observations were withdrawn half way through the interval. Thus, one half of the censored observations should be contained (Blossfeld and Rowher, 2002; pg 58). Therefore, the risk set in interval t noted as $R_t = N_t - .5E_t$ and the conditional probability, p, of surviving the interval equals $1-E_t/R_t$. For example, in year 1, the survival rate equals 1- 7/126 - .9444, where 126 is 131, the beginning of the year total minus half to the 10 lost observations. Further, the cumulative survival function $G_t = p_{t-1} \, x \, p_{t-2} x ....x p_l$, where $G_t=1$.

Figure 3. Parent Participation Survival Rates
Histogram showing the parent firms participation longevities, by year, and underlying data.

Year	Beginning of year total	Parent firm withdrawals	Observations lost	Proportion surviving	Standard error	95% confidence interval	
1	138	3	14	0.9771	0.0131	0.9307	0.9926
2	121	13	12	0.8666	0.0311	0.7914	0.9162
3	96	13	15	0.7393	0.042	0.6461	0.8116
4	68	5	18	0.6767	0.0469	0.5752	0.7589
5	45	9	5	0.5334	0.0563	0.4176	0.6361
6	31	5	11	0.4288	0.0617	0.3069	0.545
7	15	1	11	0.3837	0.0698	0.2491	0.5167
8	3	0	3	0.3837	0.0698	0.2491	0.5167

Figure 4. Structure of TIW's Joint Venture with Opportunity in 1998

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                    ┌──────────────────────────────┐
                    │     Telpart Participacoes     │
                    │          TIW 49%              │
                    │    CVC/Opportunity 27%        │
                    │  Brazilian Pension Funds 24%  │
                    └──────────────────────────────┘
                       │                        │
        ┌──────────────────────────┐    ┌──────────────────────────┐
        │  Tele Norte Participacoes │    │   Telemig Participacoes   │
        │     Voting 51.79%         │    │      Voting 51.79%        │
        │    Economic 19.26%        │    │     Economic 19.26%       │
        └──────────────────────────┘    └──────────────────────────┘
          │                                          │
┌──────────────────┐  ┌──────────────────┐   ┌──────────────────┐
│  Telma Celular   │  │ Telepara Celular │   │  Telemig Celular │
│   V 82.80%       │  │   V 96.56%       │   │    V 89.18%      │
│   E 66.79%       │  │   E 69.04%       │   │    E 82.94%      │
└──────────────────┘  └──────────────────┘   └──────────────────┘
┌──────────────────┐  ┌──────────────────┐
│ Teleamapa Celular│  │  Telaima Celular │
│   V 94.45%       │  │   V 95.06%       │
│   E 90.64%       │  │   E 86.91%       │
└──────────────────┘  └──────────────────┘
┌──────────────────┐
│Teleamazon Celular│
│   V 84.13%       │
│   E 80.22%       │
└──────────────────┘
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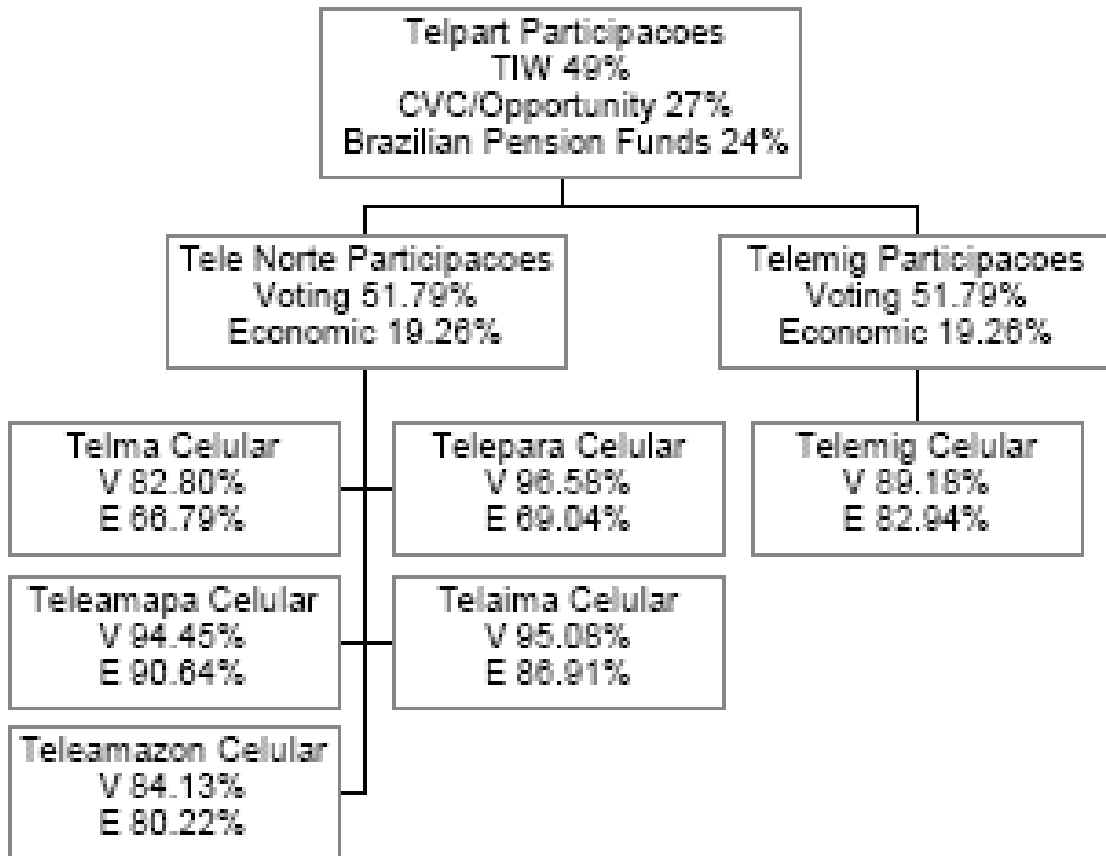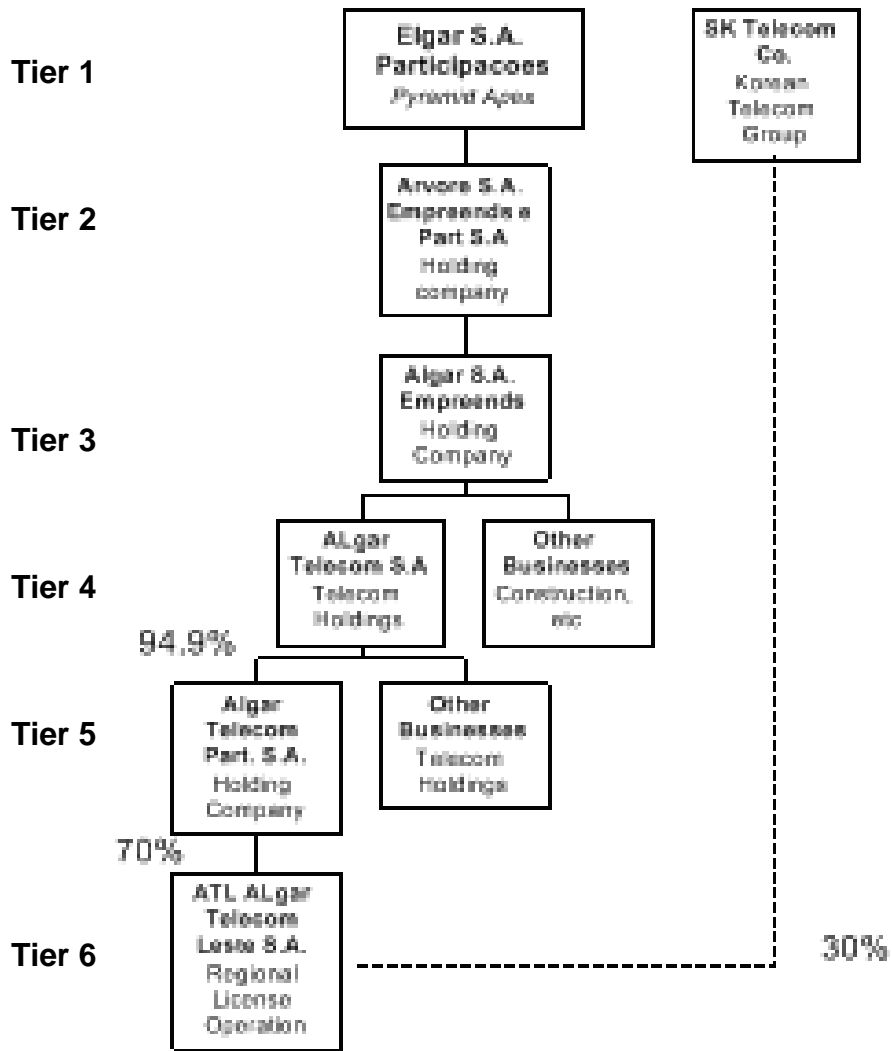
Source: Company accounts.

**Figure 5: <u>Structure of Citibank's Joint Venture with Opportunity in 1998</u>**
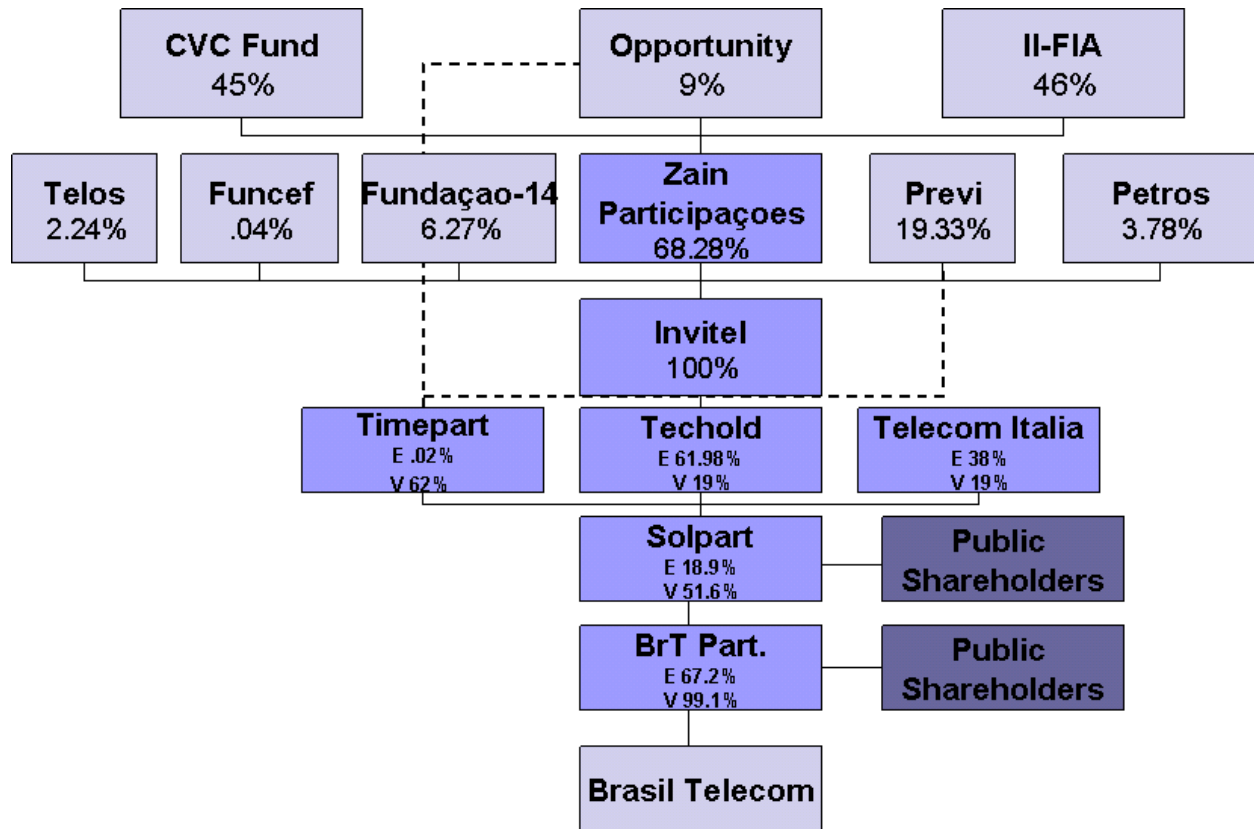
Source: Company reports. Note: Equity stakes are denoted by E or no notation; voting stakes are denoted by V.

Figure 6. The position of the joint venture ATL within the Algar pyramid.

Tier 1

Elgar S.A. Participacoes
Pyramid Apex

SK Telecom Co.
Korean Telecom Group

Tier 2

Arvore S.A. Empreende e Part S.A
Holding company

Tier 3

Algar S.A. Empreends
Holding Company

Tier 4

ALgar Telecom S.A
Telecom Holdings

Other Businesses
Construction, etc

94.9%

Tier 5

Algar Telecom Part. S.A.
Holding Company

Other Businesses
Telecom Holdings

70%

Tier 6

ATL ALgar Telecom Leste S.A.
Regional License Operation

30%

Source: Valores Grandes (2002)

Figure 7.   Inter-pyramidal equity blocks associated with Brazilian joint ventures between *Portugal Telecom* **pyramidal group and Spain's** *Telefonica* **pyramidal group.**
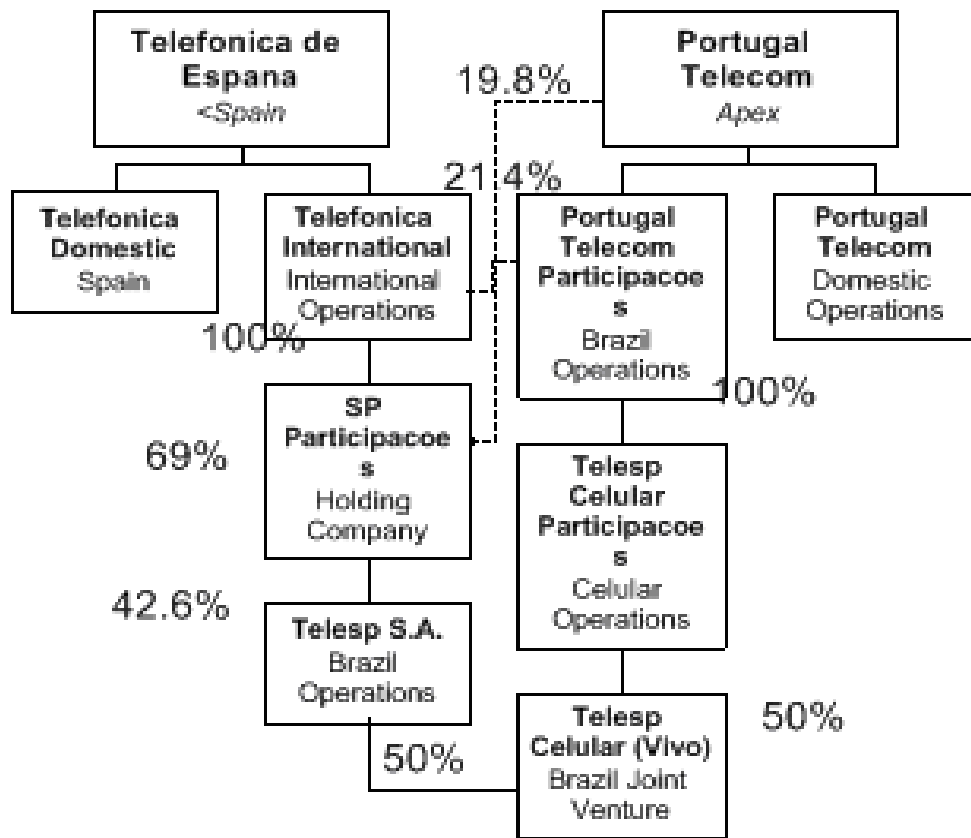
Source: ANATEL.

APPENDIX I

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 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 & 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 (risk of an event).

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: (i) the dummy variable indicating having a Brazilian joint venture partner and the dummy variable indicating that the parent itself is a pyramidal unit do not affect the expected duration of survival; (ii) a dummy variable indicating that a joint venture partner is a pyramidal unit reduces the expected duration of survival; (iii) a cross term dummy variable capturing that both parents are pyramidal units more than nullifies the effect (ii) and in the net raises the expected duration of survival. These results are shown below.

Parametric Survival Analysis						
Variables	**Log-logistic Model**		**Weibull Model**		**Gompertz Model**	
Brazilian Partner	0.0065229		-0.3263057		-0.3257365	
	(.0203397)		(.3673564)		(.3670746)	
Pyramidal Partner	-0.0698812	*	1.643532	**	1.638878	**
	(.0357184)		(.6305797)		(.6306209)	
Pyramid	-0.0618063		0.7594624		0.7588693	
	-0.0457457		(.9217228)		(.9218289)	
Pyramidal Partner x Pyramid	0.1046112	*	-2.293742	*	-2.292532	*
	(.0496432)		(.9687336)		(.9690163)	
Technology	0.0056977		-0.1023779		-0.1026776	
	(.0035069)		(.0575719)		(.0575978)	
Cultural Distance -IDV	0.1145917	***	0.1320579		0.1335201	
	(.0371605)		(.3606151)		(.3601898)	
Cultural Distance -MAS	-0.1167081	***	1.147808		1.141406	
	(.0311216)		(.6117619)		(.6107732)	
POLCON 2002	-1.718116	***	4.710626		4.739197	
	(.4111745)		(2.677625)		(2.678417)	
Constant	3.941704		-66.87184		-20.31247	
	(.0643231)		(14.71537)		(4.16843)	
/ln_gam/ln_p/gamma	-3.338775		2.828083		0.3747882	
	(.1832736)		(.2258434)		(.090238)	
gamma/p	0.0354804		16.91301			
			(3.819691)			
1/p			0.0591261			
			(.0133532)			
No. of observations	138		138		138	
No. of failures	49		49		49	