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THE RIDDLE OF THE GREAT PYRAMIDS

Randall Morck

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ABSTRACT

Large pyramidal family controlled business groups are the predominant form of business organization outside America, Britain, Germany, and Japan. Large pyramidal groups comprising dozens, even hundreds, or listed and unlisted firms place the governance of large swathes of many countries' big business sectors in the hands of a few of their wealthiest families. These structures plausibly substitute for weak market institutions in economies undergoing rapid early-stage industrialization. They may also substitute for weak governments in coordinating Big Push growth programs to establish numerous interdependent simultaneously. However, no such role is evident in developed or in slowly growing developing economies, where such structures appear prone to agency problems and political rent-seeking. If sufficiently large, they may also add to economy volatility by rendering the risk of misgovernance systematic, rather than firm-specific.

Randall Morck
Faculty of Business
University of Alberta
Edmonton, CANADA T6G 2R6
and NBER
randall.morck@ualberta.ca

1. A Riddle

Business groups inspire much confusion. One of my fondest academic recollections is a conference of distinguished economists discussing capitalism. To the Americans and British, capitalism forced brisk competition – maximizing efficiency or tearing away civility, depending on the political leanings of the speaker. To everyone else, capitalism turned the economy over to a handful of old moneyed families. Neither side accorded the other much leeway: the Americans and Brits marveled at the conspiracy theories circulating in less enlightened parts of the world; the others marveled at the naivety of the Anglo-Saxons.

Only recently has either side taken the other seriously. It turns out both are right, and capitalism is different in different countries. Remarkably, this stems largely – primarily, I argue – from differences in corporate governance regarding pyramidal groups.

Economics assumes the business sector consists of corporations. The corporate governance literature assumes these are controlled by officers and directors. The management and business strategy literatures analyze how these top decision makers guide their corporations through different economic conditions.

For large listed firms in America and Britian, this roughly reflects reality (Morck et al. 1988; Franks et al. 2005; Villalonga & Amit 2008). But elsewhere in the world these assumptions are implausible. In most countries, large businesses come in groups (Granovetter 1994; La Porta et al. 1999; Bebchuk et al. 2000; Morck et al. 2000). Since the term "business group" is used in different ways by different authors (Khanna & Yafeh 2007), we must pause to clarify this.

Countries in which business groups are important often have articulated bodies of Business Group Law (Bermann & Pistor 2004), which law students learn alongside other subjects. These precisely define business group, group firms' officers' and directors' duties to the group versus their firms, one group firm's duties to another, controlling shareholders' duties to public shareholders, and so on.

Problems arise because these definitions, duties, and so on differ across countries. For example, Canadian governments define a group as two or more listed firms with a common controlling shareholder holding at least a 20% voting block, or exercising control via dedicated board positions and the like.[1] A threshold below 51% makes sense because most small shareholders seldom vote and most institutions vote routinely as management recommends. Korean law uses a similar definition, as do the legal systems of many European countries (Barca & Becht 2001). In contrast, China defines a business group as any set of legally distinct corporations, listed or not, under common control (Lee & Kang, chapter 9, this volume). Japanese bureaucrats, scholars, and businesses use conflicting and inconsistent definitions, causing some to despair that the term has no real meaning (Miwa and Ramaseyer, 2006). This permits a lively debate as to what constitutes a group, where group boundaries lie, and even whether definite boundaries exist (Khanna & Yafeh 2007). These issues of taxonomy lie beyond the scope of this study.

Further confusion arises because many countries lack formal Business Group Law altogether, leaving definitions to the definer. Since firms in many large business groups populate many different industries, some British and American authors mislabel business groups as conglomerates.

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[1] See Statistics Canada's *Directory of Intercorporate Ownership* (various years).

Following most of the finance literature (La Porta et al. 1999), we define a group as two or more listed firms under a common controlling shareholder, and presume to be the largest blockholder voting at least 20% or, alternatively, 10%.

Such a bright line rule, despite obvious costs, permits broader comparisons that reveal a startling importance of a remarkably few very large business groups in many countries. also It also neatly distinguishes business groups from conglomerates – single corporations with divisions in multiple industries – and from holding companies – parent corporations with subsidiaries. Thus, Singer, a conglomerate with renowned sewing machine and missile guidance systems divisions, is not a business group because it is a single listed corporation. Likewise, American apartment building businesses, often structured as a holding company fully owning separately incorporated properties, are not business groups because their subsidiaries are unlisted. For our purposes, more nebulous groupings of businesses tied together by product chains, common directors, or historical ties are also not business groups. Other definitions are better for other purposes; and no exclusive right is claimed.

2. Great Pyramids

At first glance, American and British economists are apt to think of a business group as an odd, but innocuous structure. What, after all, is especially interesting about two firms or more listed firms being controlled by a single person? This misapprehends the actual scope of business groups where they are most important.

The sheer scale of these groups often startles Anglo-American observers. The largest single business group in Sweden, controlled by the Wallenberg family, comprises dozens of large firms organized into tiers of listed firms controlled by other listed firms controlled by yet other listed firms, but ultimately controlled by the Wallenberg family firm, a closed-end fund called Investor. Remarkably, the market capitalizations of this group's member firms sum to over half the total value of the country's entire stock market (Högfeldt, 2005).

Sweden is extreme – usually it takes three, four, or even a dozen business groups to account for the bulk of a country's large business sector. But it is hardly unique. The Hees-Edper Group, controlled by a branch of the Bronfman family, was Canada's largest business group in the 1990s. It comprised several hundred firms, some listed and some unlisted, organized into sixteen tiers of firms with control blocks in other firms (Morck et al. 2000). Twelve such business groups included about 40% of the assets of the country's top 100 private-sector domestically controlled corporations at the time (Morck et al. 2005). An even more extreme example is the business group of the Naboa family, whose member firms roughly correspond to Ecuador's big business sector and provided the incomes of about 3 in 11 Ecuadorians in the 1990s (De Cordoba 1995). The Hong Kong billionaire Li Kashing sits atop a huge group spanning virtually every sector of the region's economy. Handfuls of wealth families dominate the economies of India (Sarkar, chapter 10, this volume), Korea (Hwang & Seo 2000; Bae et al. 2002; Kim, chapter 7, this volume), Spain (Sacristán-Navarro & Gómez-Ansón 2007), Turkey (Orbay & Yurtoglu 2006; Colpan, chapter 18, this volume), aother major European economies (Faccio & Lang 2002), and elsewhere. One, twelve, or twenty wealthy families, each controlling an empire of dozens – sometimes hundreds – of listed and unlisted corporations, is still remarkably askew the Anglo-American vision of capitalism.

Figure 1. Great Pyramids of the World
The importance of family pyramidal business groups in various Countries

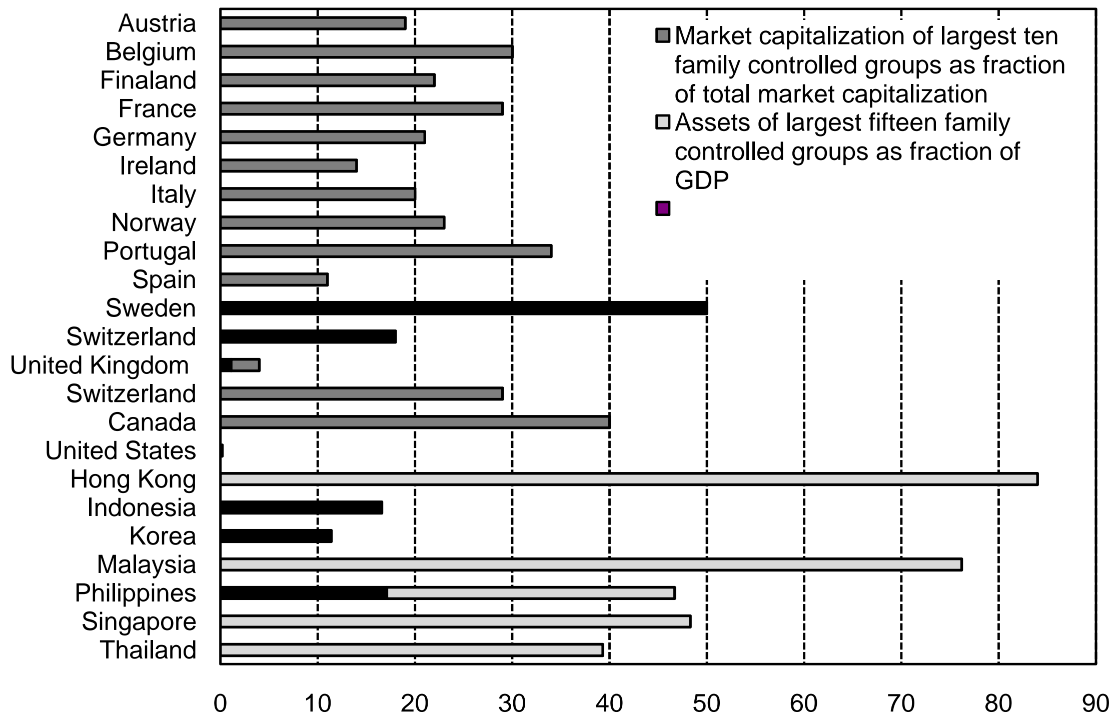


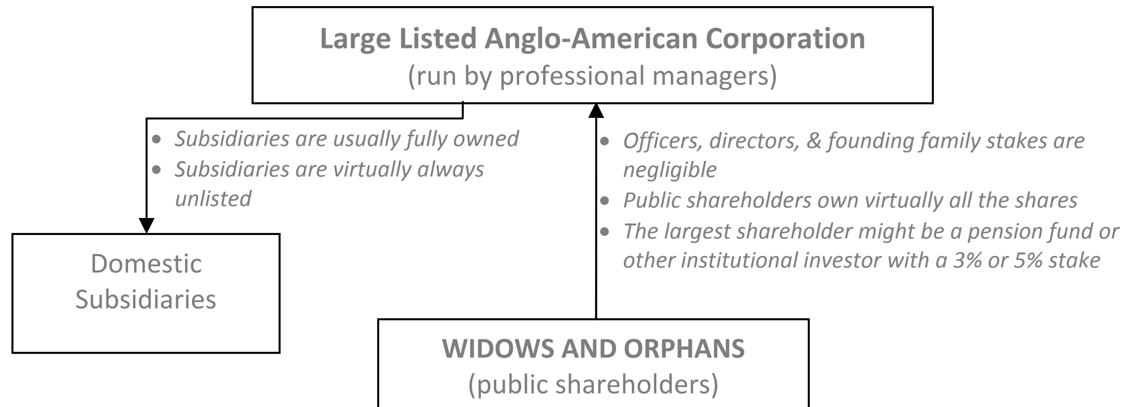
Figure 1 compares the assets or market capitalizations of the largest business one, ten, or fifteen businesses or business groups in each country to the size of the country's economy. Since the data come from various studies, all three figures are not available for all countries. Despite this incompleteness, the Figure should give pause to American or British economists attributing the views of people in other countries to conspiracy theories. Appreciable chunks of many countries' large business sectors really are controlled by tiny handfuls of wealthy families.

3. Pyramid Power

This proximate cause of this remarkable difference in the meaning of capitalism across countries is differences in corporate governance.

In the United States and United Kingdom, a corporation is a singular thing, as illustrated in Figure 2. Large corporations in those countries are almost always *freestanding* – that is, they neither control, nor are controlled by, other listed corporations. If they have subsidiaries, these are virtually always unlisted and, except for joint ventures, fully owned. Large corporations in these countries are also usually *widely held* – that is, they have no controlling shareholders, and are owned almost entirely by "widows and orphans" - public shareholders who bought their shares on the open stock market, either in their own investment accounts or via mutual funds, pension funds, and the like. These freestanding widely held companies are also usually professionally managed – key decisions are in the hands of a CEO and top executives, selected for their expertise and talent in a competitive job market.

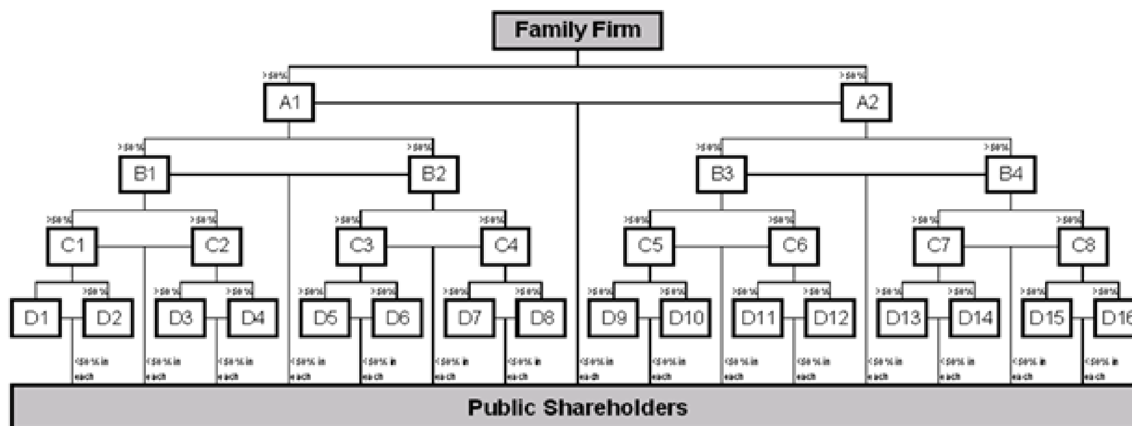
Figure 2. A Stylized Anglo-American Corporation
Large listed corporations in America and Britain are almost always freestanding (they neither control, nor are controlled by, other listed corporations) and are usually widely held (they have no controlling shareholders, and are owned almost entirely by small investors, called "widows and orphans" by investment managers. This ownership can be either direct or indirect, via mutual funds, pension funds, and the like. Subsidiaries are virtually always unlisted and are usually fully owned.



Elsewhere, this governance model is displaced to varying extents by another, the pyramidal group depicted in Figure 3. A business family's family firm controls a first tier of listed firms, each of which controls yet more listed firms, each of which controls still other listed firms – in a broadening cascade of control. In each case, one firm controls the other with a large block of shares, and the controlled firm's remaining shares are sold to public shareholders. Obviously, a 51% block bestows control, but in practice small shareholders often do not vote, so much smaller blocks – twenty, ten, or even five percent, suffice to let the executives of the upper tier firm appoint the directors and officers of the lower tier firm.

The most immediate importance of pyramidal .business groups is their remarkable power to magnify merely large family fortunes into control over corporate assets worth vastly more, and in some cases adding up to substantial fractions of a national economy. To see how this works, assume the family firm in Figure 3 is worth one billion dollars, and that this firm is all the family owns. Though a billion dollars constitutes a substantial fortune, it is miniscule compared to the total gross domestic products of even relatively small nations. However, pyramiding can magnify this paltry billion into control over a noticeable swathe of a national economy. Suppose the family firm controls B1 and B2, also worth firms a billion dollars each, by owning a fifty percent block plus one share in each. This puts two billion dollars worth of corporate assets to the family's control. The next tier multiplies control over these two corporations into control over four billion dollar corporations, and the next tiers multiply this into control over eight, then sixteen, and then thirty-two billion dollar corporations. By adding addition tiers, the family can lever its billion dollar fortune into control over the assets of an arbitrarily large group of operating companies in the lowest tier.

Figure 3. A Stylized Pyramidal Business Group
Large listed corporations in many countries are organized into pyramidal groups. In these structures, a family firm controls a first tier of listed firms (here, firms A1 and A2), each of which controls other listed firms (for example, A1 controls A1 and B2). Each of these controls yet more listed firms, and so on. A control block of every firm's shares is held by the firm above it, with remaining shares sold to public investors. At the apex, the family controls the family firm, and hence all the firms spreading out beneath it.



Structures like Figure 3 – sometime augmented by supervoting shares, special director appointment rights, and cross holdings – let one family control half the Swedish economy by market capitalization (Hogfeldt, 2005); let two families control close to half of Indian big businesses by assets (Sarkar, chapter 10, this volume); and so on.

Pyramidal business groups like these let mere handfuls of wealthy families control national economies. They are why capitalism looks so different in different countries. Capitalism truly does entrust the governance of large swathes of a nation's economy to handfuls of elite families in many countries. And it truly does induce fierce competition between rival corporations in others. It all depends on whether corporations are freestanding and run by profit-motivated professionals, or family-controlled pyramidal groups.

The latter bring leave undiversified the risk of corporate misgovernance. The intelligence to run a great business group is probably no more hereditary than general intelligence (Herrnstein & Murray 1994; Kincheloe et al. 1996), motivating the American tycoon, Warren Buffet, to remark (Whyte 2007)

> *"if we were to pick our United States Olympic team based on the eldest son and the eldest daughter of those who represented us in all the events 24 years ago, we would think that was asinine; but to hand the resources of society, and the resources to command the labour of society and the materials of society, to a bunch of people simply because they happen to have the right last name strikes me as just as foolish."*

The American robber baron Andrew Carnegie famously argued it was worse than foolish, positing that growing up rich virtually disqualifies one as an effective CEO (Carnegie 1891) This

so-called Carnegie Conjecture (p. 56) is that:

> *"the parent who leaves his son enormous wealth generally deadens the talents and energies of the son, and tempts him to lead a less useful and less worthy life than he otherwise would"*

This has support in studies of estate taxes and subsequent careers (Holtz-Eakin et al. 1993).

Even with a competent heir, family feuds can seriously undermine a business (Bertrand et al. 2008). If such disputes destabilize one firm, this is no great matter. But if they destabilize the governance of a huge group of firms constituting an appreciable portion of a country's economy, such disputes can attain macroeconomic importance (Morck et al. 2005c).

All of this is consistent with findings that inherited corporate control bodes ill for firm performance in America (Villalonga & Amit 2006), Canada (Morck et al. 2000; Smith & Amoako-Adu 2005), Denmark (Bennedsen et al. 2007), and other developed economies (Morck & Yeung 2004; Bertrand & Schoar 2006).

4. A Balm for All Ills

Large pyramidal business groups are not clearly bad for a developing nation's economy, though. Numerous studies, many on specific developing countries like India or Chile, others across many developing economies, find business group member firms outperforming freestanding firms (Khanna 2000; Khanna & Palepu 2000b, a, c; Khanna & Rivkin 2001; Khanna et al. 2005; Khanna & Yafeh 2005, 2007).

This literature, as a whole, suggests business group firms have an advantage in emerging economies, which they lose in developed countries. The precise economics underlying these findings are unclear. However, most of these studies postulate business groups circumventing market failures.

Certainly, many developing economies' capital, labor, and product markets malfunction. Corrupt or sclerotic courts that render arm's-length contracts unenforceable magnify costs of doing business by, for example, rendering loans or bills effectively uncollectable. Corruption in schools and universities can render well-trained graduates effectively indistinguishable from those who bribe or intimidate their way to certification.

Business groups can sidestep these problems. If one group firm owes money to another, the family controlling both simply tells the debtor to pay. A family-controlled firm gains little cheating another run by the same family. This nicely bypasses clogged or unreliable courts. In a country with inadequate business schools, the best training may be apprenticeship. Business groups let talented people rise and move from firm to firm without relying on an arm's-length job market rife with fraudulent certifications. The best business school in such a country might well be the dinner table of a powerful business family.

These considerations help explain some of the features of business groups.

First, business groups are usually highly diversified: containing firms from numerous seemingly unrelated industries. This is observed in India (Sarkar, chapter 10, this volume), Mexico (Hoshino, chapter 16, this volume), Taiwan (Chung & Mahmood, chapter 8, this volume), Thailand (Suehiro & Wailerdsak, chapter 12, this volume) and other developing economies (Khanna & Yafeh 2005, 2007). Wide diversification makes sense if a group must contain most firms that might need to do business with each other, borrow or lend to each other,

or hire each other's employees. A broader spectrum of firms permits a fuller intragroup simulation of developed economies' arm's-length markets.

In borrowing and lending especially, default is important. If each group firms lends to other group firms in a wider range of industries, its overall default risk is better diversified and therefore mitigated (Heaney & Holmen 2008). Firms with excess retained earnings can also subsidize firms encountering bad luck, or capitalize new controlled subsidiaries (Almeida & Wolfenzon 2006a) adding additional layers to the pyramid. Of course, the highest value use of those retained earnings might well be investments outside the group, so this is clearly a second best capital allocation (Almeida & Wolfenzon 2006b). Nonetheless, it might dominate in countries with deeply dysfunctional arm's-length markets.

This default risk mitigation might endow group firms with higher debt capacities than otherwise similar freestanding peers – a substantial tax advantage in some countries. Group firms' leverage is elevated in Canada (Daniels et al. 1995), Italy (Bianco & Nicodano 2006), and perhaps elsewhere. However, evidence that risk spreading across business groups mitigates the damages of recessions. Such an effect is disputed in Japan (Hoshi et al. 1990, 1991; Hayashi 2000), not evident in Thailand (Chutatong et al. 2006), and goes the wrong way in Korea and other East Asian economies, where low tier pyramidal group firms fare worst around the 1997 crisis (Lemmon & Lins 2003; Baek et al. 2004).

Second, business groups are usually pyramids of listed firms under a family-controlled apex firm. Perhaps amid ambient corruption and mistrust, the controlling family ensures good behavior, making sure all group firms honor contracts, debts and bills; and treat employees, managers, customers, and suppliers fairly (Khanna & Palepu 2000b, a; Khanna & Rivkin 2001; Khanna & Yafeh 2005, 2007). A pyramidal structure lets the family wield control over all the firms in the group – a necessary condition for enforcing such norms.

Third, business group member firms are relatively strong performers in developing economies – Chile (Khanna and Palepu, 2000a), India (Khanna & Palepu 2000b), Russia (Guriev & Rachinsky 2005), and others – but mediocre-to-weak performers in developed economies like Canada (Morck et al. 2000), Israel (Kosenko & Yafeh, chapter 17, this volume), and Sweden (Högfeldt 2005). This pattern, also evident in cross country studies (Khanna & Rivkin 2001), too makes sense, for if pyramidal groups' primary advantage lies in circumventing weak institutions, that advantage should evaporate in economies with sound institutions that enforce contracts, educate employees, and provide capital. Thus, (Sarkar, chapter 10, this volume) finds that the superior performance of Indian group member firms, reported in earlier studies (Khanna & Palepu 1999, 2000c, b), fades as liberalization strengthened market institutions.

5. May Pharaoh Rest in Peace

Developing economies often have both weak markets and weak governments. Another possibility is that large family pyramidal groups might also substitute for dysfunctional governments. This thesis unites into one theory all the various ways business groups substitute for dysfunctional markets and institutions, discussed above. This is thus a synthesis of these other proposals, not an alternative hypothesis.

In the mid-twentieth century, state-led development became fashionable. Its strongest proponents was perhaps Paul Rosenstein-Rodan (1943), who describes how every firm in a developed economy depends critically on scores of other firms for inputs and complementary outputs; for building, maintaining and operating transportation and communications systems; for employing the firm's consumers; and for innumerable other services that fit together like a

jigsaw puzzle. A steel mill in a primeval jungle – without suppliers, customers, transportation, or communications – is essentially valueless. Each firm needs not just one firm filling each such niche, it needs many competing firms. A steelmaker dependant on one mine for ore, or one railroad for market access can be "held up" . The mine could hike its ore price, or the railroad its freight rates, to bleed the steelmaker – keeping it barely alive, as any rational parasite treats its host. Or the mine might provide low grade ores and the railroad shoddy service, each knowing the steelmaker had no alternative.

By merely existing, competing mines, railroads, phone companies, and shipping firms make the steelmaker financially viable. If enough pieces of this jigsaw puzzle are missing, the steel mill is unviable and is not built. Entrepreneurs founding mines, railroads, phone companies and shipping firms confront similar problems; for each relies on the existence of countless other firms scattered throughout the economy. Rosenstein-Rodan saw this logjam blocking initial development: no rational entrepreneur dares build and then wait for the rest of the economy to form in its own good time, paying exorbitant prices to monopolistic suppliers until competition develops.

Rosenstein-Rodan therefore prescribed centrally planned development, a Big Push, to break this logjam. State planners, financed with foreign aid, could coordinate the development of firms across sectors, so that steelmakers, mines, phone companies, and railroads all appeared and grew as needed. State control would prevent hold-ups and ensure all provided quality goods and services. The state could use one firm's profits to finance another's expansion, train workers or managers for other firms, or build infrastructure for all – hospitals, roads, bridges, telecom systems, and even schools and universities.

Rosenstein-Rodan saw a state-directed Big Push as the only option because economics describes stock markets and private-sector banks as financing individual firms, not the industrializations of whole countries. Financing tailored to individual firms was, he rightly concluded, unable to account for externalities and unable to provide the needed coordination. Thus, he concludes "There has never been a [private sector] scheme of planned industrialisation comprising a simultaneous planning of several complementary industries."

He was right about the problem, but wrong about the solution. Many countries mounted massively expensive aid-financed state-run Big Push programs, and none brought successful development.

Meiji Japan is illustrative (Morck & Nakamura 2007). The country established state-owned enterprises in every modern sector in the 1870s, seeking to replicate the whole ensemble of a state-of-the-art industrial economy. Lacking hard budget constraints, the SOEs hemorrhaged money; lacking competitors, they produced expensive shoddy products; and run by political appointees, they were ill-managed. A decade later, the government was mired in foreign and domestic debt, the currency was evaporating in an accelerating near-hyperinflation, and the economy had grown little. In the 1880s, a liberal government organized the world's first mass privatization, auctioning off scores of SOEs to private buyers. Most SOEs ended up in coalescing pyramidal groups resembling Figure 3. These groups, called zaibatsu, each spanned all major sectors. Each was run by either a great business family – Mitsui, Sumitomo, Suzuki, Iwasaki (Mitsubishi) – or a tycoon like Nissan's Yoshisuke Ayukawa. By the 1920s, Japan was pulling abreast continental Europe in both industrial composition and per capita gross national product.

Postwar South Korea is another striking example (Lim and Morck, 2009). After the Korean War, the dictator Syngman Rhee used American foreign aid to establish a constellation of SOEs. Learning from Rosenstein-Rodan, rather than Japanese history, Rhee entrusted these to

political appointees and charged government planners with coordinating their expansion. The result was a lost decade. After Rhee's demise, a mass privatization, and a government fiscal crisis, President Park Chunghee increasingly distanced government from business, though he continued subsidizing exporters. Under Park, and especially after him when Korea attained democracy, huge family-controlled pyramidal groups (*chaebol*) arose, acquiring failed SOEs and establishing scores of new businesses across all major sectors.

In both Korea and Japan, rapid development occurs after governments abandoned state-run Big Push plans. Rapid development corresponds to business groups expanding across industries, with profitable firms tunneling money to nascent firms or to individually unprofitable firms necessary to the group's prosperity.

These historical narratives prove Rosenstein-Rodan right about the need for a Big Push, but wrong about the need for state control. A large pyramidal business groups is precisely a private sector "scheme of planned industrialisation comprising a simultaneous planning of several complementary industries."

That such groups privatized Big Push coordination is evident in biographies and zaibatsu archives (Morck & Nakamura 2007). Even more direct evidence comes in the recollection of Koo Cha-kyung, Chair of Korea's LG *chaebol* (Kim and Lee, 2007):

> *"My father and I started a cosmetic cream factory in the late 1940s. At the time, not company could supply us with plastic cups of adequate quality for cream jars, so we had to start a plastics business, Plastic caps alone were not sufficient to run the plastic molding plant, so we added combs, toothbrushes, and soap boxes. This plastic business also led us to manufacture electric fan blades and telephone cases, which in turn led us to manufacture electrical and electronic products and telecommunications equipment. The plastics business also took us into oil refining, which needed a tanker shipping company. The oil refining company alone was paying an insurance premium amounting to more than half the total revenue of the largest insurance company in Korea. Thus, an insurance company was started. This natural step-by-step evolution through related businesses resulted in the Lucky-Goldstar (LG) group as we see it today."*

Further work to see if family business groups ran Big Push efforts in other countries, now and historically, is needed. The thesis is plausible for several reasons:

First, although group firms might subsidize each other, the group as a whole has a hard budget constraint. Mismanagement cannot be tolerated long by a profit maximizing business family. In contrast, SOEs abide remarkable mismanagement (Shleifer & Vishny 1992; Shleifer & Vishny 1994; Boycko et al. 1996; Dyck 1997; Lopez-de-Silanes et al. 1997; Shleifer 1998; Claessens & Djankov 1999; Morten 2000; Claessens & Djankov 2002; Cragg & Dyck 2003).

Second, both Meiji Japan and postwar Korea hosted numerous business groups, each spanning most sectors. These, in theory at least, competed to develop new ventures faster and more efficiently than each other -= and thus than a monopoly group or central planner would have. For example, had LG not found additional profitable uses for its plastic, other business groups that achieved optimal economies of scale faster would have outpaced it. In contrast, state-led Big Push efforts typically capitalize one SOE per sector, as in 1870s Japan and Syngman Rhee's Korea, with competition between SOEs dismissed as wasteful duplication. (Krueger 1978; Ranis 1995; Krueger 1998).

Third, Meiji Japan and, to a lesser extent, postwar Korea were open economies with economically liberal governments, their guiding hands badly burned by fiscal crises. Openness let imports replace missing jigsaw pieces, at least for easily transported goods. Trade openness let firms with excess capacity, like LG's plastics factory, achieve economies of scale exporting. Their earlier state-led Big Push efforts, and analogs elsewhere, entailed massive state subsidy and import substitution programs (Prebisch 1979). Soft SEO budget constraints undermined competition and tariffs left gaps in industrial jigsaw puzzles gaping. Trade barriers may be inevitable in state-led Big Push programs because they reduce performance pressure on the bureaucrats running the SOEs.

A notable exception is Singapore, whose initial state-led Big Push was successful (Tsui-Auch & Yoshikawa, chapter 11, this volume). Perhaps openness to global competition and multiple business groups competing can neutralize the downside of state involvement. Or perhaps Singapore had uniquely sound public sector governance, a lucky chance other countries cannot hope to replicate. The extent to which state firms accelerated Singapore's Big Push remains disputed, and its government foresees withdraw from the economy as its Big Push growth phase ends (Tsui-Auch & Yoshikawa, chapter 11, this volume).

6. Diverging Tunnels

Section 23.5 explains large pyramidal business groups in developing economies, and section 23.6 explain how they might even substitute for governments coordinating Big Push growth. But large pyramidal groups persist in highly developed economies, such as Canada, continental Europe, and parts of East Asia. Why do they not die out as economies develop?

One possibility, called *tunneling* in the finance literature (Johnson & et al. 2000) occurs when the controlling family, instead of acting impartially, favors one group firm over another. Orchestrating a Big Push necessarily involves tunneling resources between group firms, so profitable firms can subsidize individually unprofitable firms whose existence is nonetheless necessary to the group as a whole. Sidestepping weak markets can also involve transferring resources between group firms that buy, sell, finance, or hire from each other.

However, tunneling can also enrich the controlling shareholder. To see this, recall Figure 3, where each firm is controlled by the firm above it via an equity stake of 50% plus one share. Suppose firm D1 pays out a million dollars in dividends. Half of this, or $500,000, goes to firm C1 and the rest goes to widows and orphans. Suppose C1 passes its receipts along to its shareholders: half of $500,000, or $250,000, goes to B1 and the rest goes to widows and orphans. If B1 forwards half of its receipts to its shareholders, A1 gets $125,000 and the family firm gets $62,500. Of the one million dollars paid out by D1, a paltry $62,500 goes to the controlling family; while $937,500 goes to the widows and orphans who own stock in the chain of firms leading upwards through the pyramid from D1 to the family firm.

The family only gets 6.25% of firm D1's cash flows, despite wielding over 50% of the votes in its shareholders meetings. Early writers on corporate governance understood how pyramiding induces extreme separations of ownership from control (Berle & Means 1932; Bonbright & Means 1932). To illustrate, consider a chain of control through the Bronfman family's Hees-Edper pyramid in the mid 1990s. The family owned Broncorp Inc., which controlled HIL Corporation with a 19.6% equity stake. HIL owned 97% of Edper Resources, which owned 60% of Brascan Holdings, which owned 5.1% of Brascan, which owned 49.9% of Braspower Holdings, which owned 49.3%t of Great Lakes Power Inc, which owned 100% of First Toronto Investments, which owned 25% of Trilon Holdings, which owned 64.5% of Trilon

Financial, which owned 41.4% of Gentra, which owned 31.9% of Imperial Windsor Group (Directory of Intercorporate Ownership, 1998). Multiplying these out reveals the family's ownership of Imperial Windsor's cash flows to be 0.03%. That is, a million dollars of extra dividends paid by Imperial Windsor increases the family's wealth by $300. Despite this miniscule ownership, the family held full control of Imperial Windsor by controlling the firms above it in a chain leading to the pyramid's apex – either through equity blocks or more subtle mechanisms like super-voting shares or special rules for appointing directors.

This separation of ownership from control is extreme in the business groups of some countries – as in Canada (MSY) and Sweden (Högfeldt) where intercorporate control blocks can be twenty percent or less, though often fortified with supervoting shares – and relatively minor elsewhere – as in Argentina (Fracchia et al., chapter 13, this volume) and Russia (Guriev, chapter 19, this volume), where control blocks are typically two thirds or more and many group firms are unlisted.

Where the separation of ownership from control is large, a controlling family might be tempted to organize a business transaction between the family firm and, say, firm D1 in which the latter would lose one million dollars. That way, the whole amount goes to the family, with widows and orphans hopefully unaware the money ever existed. This can be done by instructing D1 not to collect on debts or bills owed it by the family firm. More likely, D1 and the family firm can contract to transfer goods or services from one to the other at artificial transfer prices, set to leave D1 a million dollars poorer and the family firm a million dollars wealthier.

Transfer pricing by multinational firms is well-known, where it transfers taxable income out of high tax countries and into low tax countries, lowering the multinational's overall taxes (Hines 1996; Desai et al. 2001). Objectionable transfer pricing in multinationals hides money from tax authorities; in pyramidal groups it hides money from widows and orphans. This aside, the two are identical. [2]

Tunneling is denounced by corporate governance advocates as "expropriation" of public shareholders' wealth. But where tunneling is commonplace, shareholders rationally anticipate it and pay lower prices for affected stocks – both at initial public offerings (IPOs) and subsequently. If widows and orphans pay depressed prices, dividends depressed by tunneling are a fair return. Nothing is expropriated.

However, even absent expropriation, tunneling can retard an economy's growth. This is because, ceteris paribus, expected tunneling cuts entrepreneurs' proceeds from share issues. Even if the company is impeccably governed at its IPO, shareholders rightly worry it might someday end up low in a pyramidal group and its shares fetch a depressed price. Possible tunneling thus makes capital costlier to start-ups, curbing competition and leaving existing businesses in sedate peace. This perhaps explains why thoughtful observers in many countries find scant connection between local versions of capitalism and intense competition.

Might pyramidal groups persist in developed because the controlling families value the fruits of tunneling too much to dismantle their pyramidal groups, even after their economic justification is passed? The empirical evidence is oddly inconsistent with this. Tunneling is most evident in developing economies (Johnson & et al. 2000; Bae et al. 2002; Bertrand et al. 2002; Friedman et al. 2003; Joh 2003; Lang 2005; Baek et al. 2006; Cheung et al. 2006; Claessens & Laeven 2006; Bertrand et al. 2008). Although specific cases of tunneling occasionally make in developed economies (Johnson & et al. 2000), evidence on systematic tunneling is mixed. For

[2] As noted above, ttunneling need not be socially undesirable if it shifts risk (Lincoln and Gerlach, 2004) or coordinates Big Push development (Morck and Nakamura, 2006)

example, some studies find tunneling in Canada (Gadhoum 2006; Bozec & Laurin 2008), but others dissent (Tian 2006; Walid & Paul 2006). Tunneling seems limited in Sweden (Holmen & Knopf 2004), and other developed European economies (Faccio et al. 2001).

23.7. Eternal Life

Why do business groups persist in developed economies absent profitable tunneling? Two answers suggest themselves.

First, the tunneling the above empirical studies examine is the siphoning of money from lower tier firms to the apex or firms near it. But tunnelling need not involve money. Business families might gain important nonpecuniary benefits from controlling a vast business group – political influence, social status, power, or even a degree of impunity from the rule of law. These are benefits rational individuals might value, but which standard economic theories have difficulty incorporating. Algebraic intractability is, of course, no excuse, and the literature might benefit greatly from work along these lines.

Second, business groups might persist because tunneling is not the only pecuniary benefit their controlling shareholders glean. The most powerful politicians in many countries tend to come from their greatest business families – especially where corruption is worse (Faccio 2006). Instances of political connections delivering business families major pecuniary benefits are documented in Argentina (Masami 2006), Indonesia (Fisman 2001), Israel (Kosenko & Yafeh, chapter 17, this volume), Malaysia (Johnson & Mitton 2003), Mexico (Hoshino, chapter 16, this volume), Russia (Guriev, chapter 19, this volume), Taiwan (Chung & Mahmood, chapter 8, this volume), Thailand (Suehiro & Wailerdsak, chapter 12, this volume).

These benefits include subsidies, tax favors, cheap foreign exchange, preference acquiring privatized SOEs, and the like. These are often the work of nationalist politicians, who see large business groups as national monuments and national-building tools. This may reflect genuine respect, or camouflage lucrative political rent-seeking (Morck et al. 2005b).

Such ties matter: more politically-connected firms get more generous state bailouts during crises (Faccio et al. 2006). Perhaps ruling a pyramidal business group matters because it gives a business family political influence far greater than its wealth alone would merit (Krueger 2002; Morck & Yeung 2004; Fogel 2006). Little debate exists about the high returns businesses can earn from capturing and manipulating governments (Krueger 1974). Recall how pyramiding can magnify modest family fortunes into control over corporate assets worth orders of magnitude more. It seems plausible that an analogous magnification of political influence arises (Morck & Yeung 2004). And nonpecuniary benefits from political influence might be more important than pecuniary benefits. High social status, especially elevation above the rule of law, might matter more than even state bailouts in financial crises.

Despite not knowing precisely what these benefits are, financial economists dub them private benefits of control and measure them from the difference between ordinary investors' valuations of shares and controlling shareholder's valuations. Ordinary investors buy shares to receive future dividends, takeover bids, and other pecuniary returns. Controlling shareholders get these plus pecuniary and nonpecuniary benefits of tunneling or influencing governments. When one controlling shareholder sells a control block to another controlling shareholder, the price paid often far exceeds the price ordinary shareholders pay to for shares at the same time. However, this control premium is again large for developing economies, but very small in most developed economies – with certain exceptions, like Italy (Dyck & Zingales 2004). Similar findings ensue from firms with multiple classes of stock with different voting rights (Nenova

2003). The persistence of large family controlled pyramidal business groups thus remains something of a mystery.

8. The Undead

The large pyramidal business groups that persist in developed economies tend to be very old. Canada's Bronfmans grew wealthy exporting beverages to America in the 1920s (Morck et al. 2005a). Italy's Agnelli family's group remained prominent throughout the 20th century (Aganin & Volpin 2005). Wallenberg empire arose in the 1930s, and no major listed Swedish firm is less than thirty years old (Högfeldt 2005). East Asia's great families retain their business groups, despite impressive growth rates (Claessens et al. 2000).

Long-lived family controlled pyramidal groups are efficient if they optimally allocate capital, labor, and other resources. But entrusting large swathes of an economy to a few powerful families induces great inequality. Economics entails tradeoffs between efficiency and equality (Okun 1975), but this may not apply here. Such tradeoffs are evident in countries whose wealthiest citizens are self-made, but not where they inherited their wealth (Morck et al. 2000). Greater inequality associated with inherited wealth actually correlates with worse inefficiency, not greater efficiency. Moreover, countries whose great businesses and business groups more quickly die, making way for new giants, grow faster.

Thus, whether we seek efficiency or equality, old-moneyed wealth can be too great and old businesses and business groups can live too long. Recall the above arguments: Inherited corporate control restricts top management positions to a suboptimally small pool of candidates. Pyramidal business groups can induce extreme separation of ownership from control, permit tunneling, and entrench insiders. Very large pyramidal groups tightly concentrate economic power, which cannot but have undemocratic political effects. Pyramidal business groups large enough to constitute an important slice of a national economy, but entrusting corporate governance to few people, render the risk of misgovernance systematic, rather than firm-specific, and so contribute to macroeconomic instability.

These findings and arguments suggest a final explanation for the persistence of business groups: they are undesirable for the economy as a whole, but persist because the families controlling them have disproportionate political influence, which they use to lock in a *status quo* advantageous to them.[3] Substantial economic evidence is also consistent with this hypothesis (Morck *et al.* 2005c). However, some suggest family controlled business groups are important to social solidarity in parts of Europe (Högfeldt, 2005).

Such elite entrenchment may not be solely, or even primarily, a problem in developed economies; and might explain the persistence of family controlled pyramidal groups in developing countries that have been developing the longest. Mexico, Argentina, and many other Latin American countries seemed poised for industrialization a century ago, and still do (Haber 1989, 1997; Bortz & Haber 2002; Haber *et al.* 2003; Haber *et al.* 2008). None of Argentina's largest business groups are controlled by founders; but founders' children, grandchildren, and great grandchildren control about a third each (Fracchia et al., this volume). Mexico's greatest business groups are over a century old (Hoshino, chapter 16, this volume). Although India's lesser groups rise and fall, its greatest ones persisted since the mid 19th century (Khanna *et al.* 2005; Sarkar, chapter 10, this volume).

[3] Here the sociology literature is instructive – see Schneider(this volume); Guillen and Hamilton, and Biggart.(1998), and others.

Do these countries' business elites fear for their privileged positions should their countries development succeed? Developing economies need great business families for all the reasons enumerated above; developed economies do not. Might perpetually unsuccessful development be a symptom of excessively powerful, old, entrenched elites (Rajan & Zingales 2003; Rajan 2004; Rajan & Zingales 2004)? If so, can such powerful and deeply entrenched special interests be weakened, and economic development brought to completion, by dismantling their pyramids?

9. Iconoclasts

Large pyramidal groups are virtually unknown in America and Britain; and large business groups do not involve business families in Japan and Germany. That these are also the largest developed economies is at least an interesting coincidence.

Pyramidal business groups existed in America until the 1930s, when President Roosevelt's New Deal took deliberate aim at them. The Internal Revenue Service worried about tax evasion via transfer pricing between group firms subject to different tax rules. The Federal trade Commission worried about hidden monopolies, with apparently competing firms controlled by a single family or tycoon. Progressive reformers, like Adolph Berle and Gardiner Means, sought to democratize corporate America by remaking businesses as democratic republics governed by shareholder democracy, and had little use for pyramidal groups run by "robber barons" or their progeny. Though Roosevelt's populist credentials seem genuine, voters' fury at big business after the Crash of 1929 and Great Depression no doubt made the pyramidal groups' controlling shareholders tempting targets for his political strategists.

The New Dealers launched a multipronged attack on pyramiding in the mid 1930s (Morck 2005). New tax laws subjected intercorporate dividends to double taxation. Returning to Figure 3, Firm D1's income is taxed, as are dividends it pays to C1, and dividends C1 pays to B1, and so on. A dividend by Imperial Windsor, the bottom-tier firm in the Hees-Edper pyramid described above, would thus be taxed seventeen times as it percolated up to the controlling family. Intercorporate dividends in America are still taxed at 7% in the recipient's corporate income taxes unless the recipient owns over 80% of the paying firm. In Canada, intercorporate dividends are entirely exempt if the recipient owns 20% or more of the paying firm. The Canadian approach is near universal: only Korea applies a minimal intercorporate dividend tax; and French and Belgian attempts at such taxes were terminated by the European Commission's Parent-Subsidiary Directive, forbidding any taxation of intercorporate dividends.

Augmenting this tax penalty, America established capital gains tax holidays for divesting or taking private listed subsidiaries. This mix of carrots and sticks created tremendous pressure of pyramidal groups to restructure into one or more freestanding companies.

Further augmenting these tax penalties and incentives, America adopted a Public Utilities holding Companies Act, banning pyramids over two tiers high in industries designated public utilities. The logic here was that pyramids might tunnel money from public utilities, whose regulated rates of return and cost-plus bases render them plump cash cows, to unfairly subsidize group firms in competitive industries.

These reforms apparently triggered a massive restructuring of American industry into large freestanding firms, most of which were widely held. By 1937, big American businesses were roughly as widely held and freestanding as now (Holderness et al. 1999). Repeal of the intercorporate tax was considered by the George W. Bush administration on the ground that it collects no revenue; but ultimately rejected. Obviously, if the tax were perfectly successful in preventing pyramiding, it would generate zero revenue.

British business groups persisted until the 1970s. Their demise seems due to the London Stock Exchange's 1968 Takeover Rule requiring anyone acquiring 30% of a listed firm to buy 100%. This meant that a raider could readily force a pyramidal group's controlling shareholder to either accede to a takeover or take the target private. Pyramidal groups apparently disappeared quickly under this onslaught (Franks et al. 2005).

Several other countries enacted analogous mandatory takeover laws, but they are largely dead letters absent intense hostile takeover activity, and so should have no appreciable impact in most countries.

A postwar American military government, staffed by New Dealers charged with remaking Japan as a democracy, ruled from 1945 to 1952. To this end, it dismantled Japan's largest pyramidal groups, or *zaibatsu*, (Morck & Nakamura 2005), seizing the families' apex firms and the intercorporate control blocks connecting the lower tiers, and either bestowing these on employees or selling them into the stock market. By 1952, Japanese big businesses were largely widely held and freestanding, as in post-New Deal America. Hostile takeovers, greenmail, and other aspects of Anglo-American capitalism distressed Japanese managers in the 1950s and 1960s, until an effective antitakeover defense was devised. This entailed forming new business groups called *kigyo shudan* or horizontal *keiretsu*, whose members each bought very small equity stakes in many other member firms. A typical member firm's stock might thus be two-thirds owned by several dozen other member firms, each holding only one or two percent. This terminated takeovers for several decades. These structures appear to be fading as financially strained firms occasionally sell their intercorporate blocks (Lincoln & Shimotani, chapter 6, this volume) . This again raises the specter of takeovers, and Japanese firms are now adopting poison pills (Andrew & Sebastian 2008).

Pyramidal groups never disappeared entirely from Japan. Some smaller zaibatsu eluded the New Dealers; and after the Americans' departed, new pyramidal groups formed, though these were called vertical keiretsu, rather than zaibatsu, perhaps because they were smaller – containing relatively few listed firms and spanning relatively few sectors.

Family-run pyramidal groups are less prominent in Germany than in most other continental European economies, but never disappeared entirely (Franks & Mayer 2001). Major National Socialist reforms during the Great Depression permanently changed the country's big business sector (Fohlin 2005). Adolf Hitler sought Party control over the entire economy, but balked at socialist policies like mass nationalizations. Instead, the government transferred small shareholders' voting rights to their depository banks. Thus, putting Nazis in charge of the big banks gave the Party dominant voting blocks in most listed firms. Essentially, the National Socialist Party appropriated all widows' and orphans' voting rights in Figure 3.

Augmenting this, corporate directors' duties were reformed. Rather than acting narrowly for shareholders or employees, directors would act for all stakeholders – most importantly, for their *Reich* and *Führer*. A further reform, the *Führerprinzip*, gave Party representatives on corporate boards absolute power over their companies and an absolute duty to Hitler (Fohlin 2005).

Remarkably, these laws remained until recently. German supervisory board directors still have a divided loyalty to shareholders and German workers, and the default remains that banks, rather than public shareholders, vote public shareholders' shares. The result is large diffuse business groups loosely controlled by major banks voting small investors shares. Thus, Germany – like America, Britain, and Japan – entrusts big businesses to professional managers (Franks &

Mayer 2001). However, family controlled groups persist in the background, especially for a so-called *Mittlestand* of medium-sized firms (Fohlin 2005).

All of these systems evolve continually. For example, recent reforms show signs of changing the German landscape. One reform requires banks to advise shareholders annually that they may vote their shares if they wish. Another proposal would let non-German employees vote for labour representatives on supervisory boards (von Rosen, 2007). Yet another change is nascent institutional investors.

That family controlled pyramidal business groups faded from all four of these major capitalist economies perhaps explains the commonplace association of industrialization with the rise of professional managers and the eclipse of family control (Chandler 1977; Chandler & Hikino 1990). This generalization is unjustified, for family controlled pyramidal business groups remain predominant virtually everywhere else (Morck & Steier 2005).

10. Daring the Gods

The empirical evidence is generally consistent with large family controlled pyramidal groups aiding early stage industrialization by substituting for weak market institutions in a largely free market economy, and for central planners during Big Push growth. This study does not presume to dictate such policies to governments. Rather, it highlights pros and cons of permitting large pyramidal groups to predominate under various circumstances, and outlines how such groups have been dismantled in the past by governments choosing that option.

These advantages are offset by a set of burdens such groups can impose. One plausible cost is dear capital for the upstart innovative firms critical to sustained growth. While individual cases of family pyramids bankrolling upstarts exist (Khanna et al. 2005), it seems plausible that self-interest would preclude families whose wealth rests on existing business empires from financing disruptive technologies that might undermine those empires (Morck et al. 2000; Rajan & Zingales 2003, 2004; Morck et al. 2005c).

Even new entrepreneurial firms, not initially belonging to pyramidal groups, are likely to be valued as if tunnelling were possible, for little in most countries prevents them from coming under the control of a pyramidal group subsequently. Thus, firm-level governance provisions – commitments to certain board structures, etc. – appear markedly less important empirically than the institutional protections offered by law and regulation (Durnev & Kim 2005; Krishnamurti et al. 2005). Strategies such as high leverage, which might lock in commitments to disgorge profits and discourage takeovers by group member firms, may be somewhat more effective (Harvey et al. 2004).

Standard Anglo-American approaches to improving corporate governance – independent directors, chairs, or board committees and the like – are unlikely to be effective in family controlled pyramidal groups. It would take a very brave independent director indeed to oppose a family that controlled not just the firm on whose board she sits, but a major fraction of her country's economy, and perhaps its government too. The most critical corporate governance laws and regulations in most countries are thus not about board structures, but about the rights public shareholders have against controlling shareholders (Djankov et al. 2008).

Citing the lack of evidence of shareholder wealth expropriation in many continental European countries, (Holmen & Knopf 2004), some European policy advocates argue that pyramiding is innocuous if legal institutions are strong (Belcredi & Caprio 2004). However, this logic is not entirely clear because expropriation of shareholders' wealth is not really the issue. If shareholders rationally expect controlling shareholders to divert firms' cash flows to fund private

benefits, the firms' share prices should be discounted at the IPO and subsequently (Jensen & Meckling 1976). The real public policy issue is whether or not extensive pyramiding and private benefits accruing to controlling shareholders raises the cost of capital in general, and especially for innovative new firms. While some work begins to address this issue (Orbay & Yurtoglu 2006), much more remains undone.

Though economists are uncomfortable speaking of power, such a discussion is unavoidable here. Pyramiding greatly concentrates economic power, and to an extent which may not be clear to even the sharpest outside observers. For example, large pyramidal groups are rife in Russia, but the ultimate controlling shareholders are shadowy anonymous entities that likely hide powerful political leaders and their associates (Chernykh 2008). That precisely such hidden pyramidal control can disguise market power, frustrate tax authorities, and manipulate government clearly motivated the New Dealer's Depression Era attach on American pyramidal groups (Morck 2005).

Of course, influence can also run the other way. Mussolini's Fascists, and subsequent Italian governments, used large pyramidal groups of listed firms with SOEs, rather than family firms, at their apexes to lock in de facto state control over what superficially seemed a free market economy (Mussolini 1933; Amatori 1997; Aganin & Volpin 2005); and this may be the Russian government' objective too. Pyramidal business groups also appear to be forming in China (Lu & Yao 2006) – perhaps to the same end. Large pyramidal business groups controlled by State or Party organs might give pause to liberal democratic reformers, for these are tried and true methods of projecting state power through an economy painted superficially with liberal free market colors. These considerations make developing an economic theory of power all the more urgent.

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