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Corporate Governance, Economic Entrenchment and Growth

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Abstract

Outside the U.S. and the U.K., large corporations usually have controlling owners, who are usually very wealthy families. Pyramidal control structures, cross shareholding and super-voting rights let such families control corporations without making a commensurate capital investment. In many countries, a few such families end up controlling considerable proportions of their countries' economies. Three points emerge. First, at the firm level, these ownership structures, because they vest dominant control rights with families who often have little real capital invested, permit a range of agency problems and hence resource misallocation. If a few families control large swaths of an economy, such corporate governance problems can attain macroeconomic importance – affecting rates of innovation, economy-wide resource allocation, and economic growth. If political influence depends on what one controls, rather than what one owns, the controlling owners of pyramids have greatly amplified political influence relative to their actual wealth. This influence can distort public policy regarding property rights protection, capital markets, and other institutions. We denote this phenomenon *economic entrenchment*, and posit a relationship between the distribution of corporate control and institutional development that generates and preserves *economic entrenchment* as one possible equilibrium. The literature suggests key determinants of economic entrenchment, but has many gaps where further work exploring the political economy importance of the distribution of corporate control is needed.

I. Introduction

A growing body of work indicates that economic growth depends on the distribution of control over capital assets. Two vast literatures, already surveyed in the *Journal of Economic Literature*, are relevant as points of departure. The first, reviewed by Aghion, Caroli, and Garcia-Penalosa (1999), discusses reasons why economic inequality might impede growth. The second, surveyed by Levine (1997), discusses the functional role of capital markets in stimulating growth. We build on these insightful contributions by reviewing recent research relating the distribution of corporate control with the workings of capital markets, and showing how these interactions affect economic growth.

The key insight in Aghion *et al*. (1999, p. 1621) is that perfect capital markets make wealth distribution irrelevant by allocating capital to each investment opportunity until its marginal return equals the market clearing equilibrium interest rate. Simple capital market frictions, like moral hazard problems, drive a wedge between internal and external cost of capital. This can lead the wealthy to invest more than is first best optimal, while the impecunious invest less. Assuming diminishing rates of return, redistributing wealth from the rich to the poor directly raises total output. Moreover, wealth redistribution from rich to poor lessens overall borrowing in the economy, easing these moral hazard problems, raising overall production, and reducing the cost of debt financing on the margin (Aghion *et al.* p. 1626).

Levine (1997) surveys a second literature on the functions of capital markets in economic growth – the organization of information acquisition, allocation of resources, monitoring of managers, and exercise of corporate control. If financial markets are large and liquid enough, and if investors' property rights are sufficiently well protected, individuals expend resources to acquire information and conduct profitable informed risk arbitrage, as modeled by Grossman and

Stiglitz (1980) and Shleifer and Vishny (1997), and this trading capitalizes information into stock prices as in Morck, Yeung, and Yu (2000). Roll (1988) argues that this mechanism is especially important for the timely updating of stock prices with new firm-specific information. Stock prices that closely track fundamental values aid outside investors and corporate insiders in capital allocation decisions, simplify monitoring, and facilitate the design of credible incentive contracts that induce managers to keep faith with outside investors and maximize firm value.

These two literatures converge on a central theme: economic growth requires that savings be directed into value creating investments. Rajan and Zingales (2003), Durnev, Morck, and Yeung (2000, 2004), and others argue that capital markets are inimitably, though certainly not perfectly, effective in this regard. This is because, by creating incentives for self-interested investors to gather and process information, as well as to monitor and control top corporate insiders, capital markets generate conditions amenable to efficient capital investment decisions. Corporate insiders needing outside capital must submit to this analysis, monitoring, and control by outside investors. When official regulations, laws, and enforcement make outside investors sufficiently confident of their ability to undertake these tasks, outside investors hold equity. Pooling their capital under the management of institutional investors allows small investors to attain economies of scale in accomplishing these tasks. The resulting optimally efficient financial market directs capital to its highest value uses – a situation Tobin (1982) defines as *functional form stock market efficiency.* Note that functional form efficiency differs from the standard usage of the term *market efficiency* in the finance literature, which describes a situation where investors cannot obtain abnormal returns after transactions costs. The two concepts are related, but not identical.

Economists have little difficulty listing fracture points where actual capital markets fail to satisfy functional form efficiency. The literature we survey below suggests that the functional efficiency of capital markets depends on the distribution of corporate control in an economy. In particular, this literature views economic growth as critically dependent on institutions that restrain entrenched elites, who could otherwise come to dominate the capital investment decisions of an economy. This literature has its recent roots in corporate finance, perhaps because the extreme concentration of corporate control rights in the hands of tiny elites observed in many countries raises concerns about corporate governance in those economies. The corporate finance literature also considers entrenched management to be a corporate governance issue at the firm level in ways that are helpful in understanding entrenched control in general.

Our starting point is a curious empirical observation reported by Morck, Stangeland and Yeung (2000). These authors divide up the world's US dollar billionaires into two categories – self made billionaires and billionaires who inherited their wealth – and sum up the wealth owned by each category of billionaire in each country. Unsurprisingly, they find that a country's *per capita* GDP grows faster if its self-made billionaire wealth is larger as a fraction of GDP. What is more surprising is that *per capita* GDP growth is slower in countries where inherited billionaire wealth is larger as a fraction of GDP.

The literature we review below points to possible explanations. These turn on wealthy individuals who magnify their already substantial wealth into control over multiple corporations worth vastly more. La Porta *et al.* (1999) show that this magnification is most commonly achieved using control pyramids: structures in which a family firm controls several listed companies, each of which controls yet more listed companies, each of which controls yet more listed companies, and so on. Family members are usually placed as executives of key firms

throughout the structure. Other less common devices also used to this end include superior voting shares and crossholdings. Superior voting shares, distinct classes of stock with many more votes per share than ordinary common stock, allow insiders to control the majority of votes in shareholder meetings even though they own only a small fraction of the firm's equity. Crossholdings are structures in which firms own blocks of each others' stocks. Since insiders vote these blocks, they exercise control beyond their actual ownership. These sorts of structures can let a few wealthy families control the greater part of a country's large corporate sector. They also leave the structure typical of large U.S. firms – stand alone firms with diffuse ownership and professional management – the rarest of curiosities in most of the rest of the world.

This concentrated control can lead to corporate governance concerns – a range of agency problems. Entrusting the governance of huge slices of a country's corporate sector to a tiny elite can bias capital allocation, retard capital market development, obstruct entry by outsider entrepreneurs, and retard growth.. To preserve their privileged positions under the *status quo*, such elites might invest in political connections to stymie the institutional development of capital markets and to erect a variety of entry barriers.

Such an outcome is a suboptimal political economy equilibrium, which we dub *economic entrenchment*. While wealthy established families are probably important to economic entrenchment in many countries, the problem is probably not restricted to countries whose corporate sectors are controlled by small cliques of extremely wealthy families. Other sorts of elites can also become entrenched in positions of control over corporate assets and behave much like elite families, generating a similar outcome – functionally inefficient capital markets, high barriers to entry and a slow pace of innovation.

The layout of this article is as follows. First, we motivate this survey by discussing some empirical findings that suggest a link between economic growth and, not the concentration of wealth *per se*, but the "hands" in which control over corporate assets is concentrated. Second, we review the literature on corporate ownership, pyramidal groups, and family control. This literature shows that many economies entrust the governance of large parts of their corporate sectors to tiny elites of extremely wealthy families. Third, we discuss issues associated with such concentrated corporate governance, and how these might affect economic performance. Fourth, we evaluate the linkage between concentrated corporate control on the one hand and overall capital allocation, capital market development, creative destruction, and macroeconomic growth on the other. Fifth, we discuss entrenchment as a political economy problem and the determinants of economic entrenchment, which include investment opportunities, societal tradition, and initial endowments. Also, we examine the relationship between economic entrenchment and openness. Finally, we distill some general conclusions out of the above.

II. Inherited Wealth and Growth – A Preliminary Reading

Our starting point is a curious observation by Morck, Stangeland, and Yeung (2000). Using *Forbes'* listing of the one thousand wealthiest individuals in the world for 1993, and the brief biographies accompanying each, they distinguish *new money billionaires*, entrepreneurs who made their billions themselves, from *old money billionaires*, who inherited their wealth. They gauge the importance of each type of billionaire in a given country by the sum of the wealth of that type of billionaire as a fraction of the country's GDP. When they regress real *per capita* GDP growth from 1994 to 1996 on these measures, controlling for initial *per capita* GDP, physical capital accumulation, and education levels, they find new money billionaire wealth to be associated with faster economic growth, but old money billionaire wealth to be associated

with slower growth. That is, in standard growth theory regressions of the sort used by Mankiw (1995), they report a highly significant relationship between growth and variables plausibly reflecting the distribution of control over an economy's capital assets.

Table 1 recapitulates these results. The alternative specifications shown treat wealth that is not unambiguously controlled by either a founder or an heir differently. H_1 includes only the wealth of billionaires who are unambiguously heirs, politicians or politicians' relations. H_2 also includes the wealth of billionaires who are probably heirs. H_3 includes H_1 plus fortunes jointly controlled by a founder and his heirs. H_4 includes all the above. H_5 through H_8 are analogous to H, H_2, H_3 and H_4 but do not include politician billionaires and their relations. The positive coefficients on new money billionaire wealth and the negative one on old money billionaire wealth remain highly significant across all the different specifications.

[Table 1 about here]

Previous work, surveyed by Aghion *et al*. (1999) discusses the relationship between general inequality and growth, but Morck *et al.* (2000) add another twist – inequality involving new money wealth seems different from inequality involving old money wealth. Perhaps economists need to think less about concentration of wealth *per se* and more about concentration of wealth in whose hands? Why might inequality associated with inherited wealth be fundamentally different from inequality associated with entrepreneurial wealth? To explore this, we must first examine how highly concentrated wealth can translate into even more highly concentrated corporate governance power.

III. The Ubiquity and Purpose of the Control Pyramid

The extensive control wealthy families exert over the corporate sectors of most of the world's economies depends on a particular type of ownership structure, the *control pyramid*, and other closely related structures. While such structures are commonplace outside of the U.S., they were not well known in the academic literature until highlighted in recent work by La Porta *et al.* (1999). That research inspired further empirical work confirming that (i) most large corporations around the world have controlling owners, and (ii) controlling owners use pyramidal structures (and other mechanisms) to amass control over not just a single firm, or even just a few firms, but over large groups of corporations.

This section surveys empirical evidence about the structure of corporate control around the world. We first highlight the ubiquity of concentrated family control outside the United States. We then discuss control pyramids in detail and show they let a very small number of wealthy individuals or families leverage substantial wealth into control over corporate assets worth vastly more. While this section primarily emphasizes concentrated control over large groups of firms using control pyramids, which is our focus, it also briefly mentions other related structures.

A. Wealthy Families Control Most Companies around the World

Corporations have dominant owners

That large corporations have individuals and families as controlling shareholders contradicts the view of the firm popularly attributed to Berle and Means (1932), which implicitly or explicitly

underlies much of modern economics and finance.[1] In this view, a corporation is *widely held*, in that its ownership is dispersed across a large number of small public shareholders, and *freestanding*, in that listed companies generally do not control other listed companies. Since there is no dominant owner, effective control resides in the hand of the management team. In such corporations, corporate governance is about mitigating the *divergence of interests*, described by Jensen and Meckling (1976), between utility maximizing professional managers and small public shareholders who would like the value of their shares to be maximized.

The modern U.S. large corporate sector loosely approximates this archetype. Of course, large blockholders and intercorporate equity holdings occur even there. Shleifer and Vishny (1986), Morck *et al.* (1988), Holderness and Sheehan (1988), Anderson and Reeb (2003b), Anderson, Mansi and Reeb (2003) and others all find numerous instances of large blockholders, though they are smaller and much less common in large US firms than in most other countries. An important distinction, however, is that block holders in the US seldom control more than one corporation. Thus, the Ford family controls Ford Motors, but not GM, IBM, and 3M as well. Indeed, the term "family firm" in the United States is often a synonym for "small firm."

However, elsewhere in the world, the typical large firm has a "controlling owner" – usually a wealthy family that controls it as part of a large group of firms. The assumption of freestanding diffusely owned firms, typically justified with a cite to Berle and Means (1932), is therefore of questionable generality. This was first pointed out in studies of corporate governance in Germany and Japan, such as Prowse (1992), Berglof and Perotti (1994) and Edwards and Fischer (1994). In a systematic investigation, La Porta *et al.* (1999) show that

1 Berle and Means (1932, Ch. 5) actually describe various forms of pyramiding, non-voting shares, and voting trusts. In their sample of the largest 200 firms in the U.S. in 1930, they find that 44% are widely held (they call them 'management controlled') and 22% are controlled through a 'legal devise' (i.e., a pyramid). In any case, the finance literature has for the most part taken Berle and Means as demonstrating that large U.S. firms are largely widely held.

United States style corporate ownership is quite exceptional. In most other countries, even very large firms have controlling shareholders, and these are usually extremely wealthy families.

La Porta *et al.* (1999) investigate the ownership structures of large corporations in twenty-seven mainly developed economies. Their sample contains the top twenty firms in each country, ranked by market capitalization of common equity at the end of 1995. They also collect information on ten firms of similar size in each country. These are the ten smallest firms in each country with market capitalization of common equity greater than US$500 million at the end of 1995. They allow for five types of ultimate controlling owners: (1) a family or an individual, (2) the state, (3) a widely held financial institution such as a bank or an insurance company, (4) a widely held corporation, and (5) miscellaneous, an entity such as a cooperative, a voting trust, or a group with no single controlling investor. La Porta et al. (1999) argue that stakes exceeding fifty percent are not necessary to lock in control in most cases. This is because most small shareholders do not vote at annual meetings. Consequently, voting stakes in the ten to twenty percent range are generally sufficient.

They report widely held corporations predominating among large firms only in the United States and United Kingdom. Elsewhere, particularly in countries with weak legal and regulatory protection for public shareholders, even the largest corporations usually have controlling shareholders – predominantly wealthy families and the State. Using a twenty percent control threshold, they find that 36% of large corporations on average are widely held. The distribution shifts further away from widely held firms when the sample is based on a ten percent control threshold, or on a set of smaller firms, or on countries with poorer shareholder rights protection. In a few countries, notably Belgium and Germany, financial institutions exercise extensive voting control over other large publicly traded companies.

Studies extending La Porta *et al*. (1999), notably Claessens *et al.* (2000) on Asian countries[2], and Faccio and Lang (2002) and Barca and Becht (2001) on European countries, expand the number of firms examined and sometimes the number of countries. They confirm the La Porta *et al*. (1999) findings: outside of the US and UK, a large proportion of large firms has controlling shareholders.

Concentrated control of corporation is in the hand of wealthy families

These controlling shareholders are generally wealthy families. La Porta *et al.* (1999) report that, using a 20% control threshold, 30% of large firms are family-controlled in the average country. This increases when a sample of smaller firms is used, or when the threshold of control is 10%. Again, subsequent work, like Claessens *et al.* (2000), Faccio and Lang (2002), and Attig, Gadhoum, and Lang (2003), confirms these findings.

Diffuse corporate ownership of the sort generally associated with Berle and Means (1932) for the US is thus highly exceptional. Table 2 summarizes the findings of these various studies, and clearly displays the rarity of widely held firms and the ubiquity of family control.[3] Although Table 2 contains a wealth of data, further work involving additional countries and clarifying the determinants of these differences would be very useful.

[Table 2 about here.]

[2] Classens et al (2000) find that in Japan a large proportion of firms are widely held. The high figures for widely held firms in Japan are perhaps misleading, in the sense that most large Japanese firms are organized into *keiretsu*, groups of firms without controlling shareholders that collectively own control blocks in each other. These firms are thus not really widely held in the sense of US and United Kingdom firms, for public shareholders do not hold a majority of their stock.

[3] The different studies in Table 2 rely on very different samples of firms. For example, La Porta *et al.* (1999) examine the 20 largest listed firms; Attig, Gabhoum and Lang (2003) use the 1,121 firms in the Toronto Stock Exchange; Claessens *et al.* (2000) use 2980 listed financial and non-financial firms; and Faccio and Lang (2002) study 5,232 corporations in thirteen Western European countries. These sample differences explain the occasional wide differences between their estimates. Also, Claessens and Lang (2000, p. 95) defined *control* slightly differently by allowing a firm to have more than one significant owner. For example, if a family holds a 25% voting stake and a widely held corporation holds a 10% stake, when defining control at the 10% threshold, they classify the firm as one-half controlled by each type of owner. At the 20% level, the firm is fully family controlled.

B. The Use of Control Pyramids

The previous subsections present evidence that large corporations throughout most of the world are not widely held and more often than not are controlled by very wealthy families. This subsection outlines how these families achieve such concentrated corporate control. The impression is that the most important mechanism families use is the control pyramids, sometimes augmented by multiple voting shares and crossholdings, although the literature has not generated estimates on the relative significance of these means.

Control pyramids let these families control not just one large firm, but many large firms collectively worth substantially more than the family's actual wealth. Figure 1 illustrates a simplified control pyramid. A family firm, which is a holding company in this simplified example, holds a majority stake, fifty percent plus one vote, in each of a first tier of firms, in this case $Firm_{1,1}$ and $Firm_{1,2}$. The remaining fifty percent minus one vote stakes in each are held by small public shareholders. Each of the first tier firms then holds fifty percent plus one vote in a set of second tier firms. In this case, $Firm_{1,1}$ holds control blocks in $Firm_{2,1}$ and $Firm_{2,2}$ while $Firm_{1,2}$ holds control blocks in $Firm_{2,3}$ and $Firm_{2,4}$. Again, the remaining fifty percent, less one vote, in each tier two firm is held by public investors. Each second tier firm then controls a set of third tier firms, and so on, always with public shareholders holding the remaining stakes.

[Figure 1 about here]

Suppose each firm in Figure 1 is worth one billion dollars. The control pyramid lets the family, through its one billion dollar family firm, control fourteen other firms, also each worth one billion dollars. There is double counting in this tally since, in this simplified example, the assets of the higher tier firms are shares of lower tier firms. But even if only the third tier firms

contain actual physical assets, the family has, at a minimum, leveraged *one billion dollars of family wealth into control over eight billion dollars of real corporate assets.* Contrast this with creating eight freestanding one billion dollar firms, or, a single eight billion dollar firm. In either case, the family contributes only one-eighth of the equity and controls only 12.5% of the votes. In contrast, the pyramidal structure in Figure 1 lets the family retain absolute control of the eight firms in the third layer of the pyramid, but hold only a 12.5% cash flow stake [(50%)(50%)(50%)= 12.5%].

To see this more generally, take the chain of ownership from the family apex to any firm in the third layer, say firm $\text{Firm}_{3,1}$. Suppose the family holds $\alpha_{1,1}^{0}$ of $\text{Firm}_{1,1}$ which holds $\alpha_{2,1}^{1,1}$ of $\text{Firm}_{2,1}$ which, in turn, holds $\alpha_{3,1}^{2,1}$ of $\text{Firm}_{3,1}$. The superscript, e.g., (1,1), indicates first the "controlling" firm's level in the pyramid and its identity index at the level. The subscript, e.g., (2,1), indicates the "controlled" firm's level in the pyramid and its identity index at that level. If, at each link in the chain of control, the direct stake is sufficiently large to control the next firm, the family effectively controls $\text{Firm}_{3,1}$ while holding stock that entitles it to only $\alpha_{1,1}^{0} \times \alpha_{2,1}^{1,1} \times \alpha_{3,1}^{2,1}$ of the firm's dividends. This formula can be straightforwardly expanded when there are more layers connecting the family with the firm. Since the α's are all less than one, this product can be a very small number. Nonetheless, the family controls every firm in the chain of firms connecting the family firm to $\text{Firm}_{3,1}$ and so controls that firm too. Ultimately, the family can control many firms in this way even though its actual investment in each is small.

Actual pyramids are more complicated than the diagram in Figure 1. Firms may have varying numbers of subsidiaries, and some firms in intermediate tiers of the pyramid may engage in actual production activities. Privately held firms may be interspersed among the publicly traded firms of the pyramid. Firms also need not be neatly arranged in successive tiers. Firms in

lower tiers may have *cross-shareholdings*. That is, they may own shares in firms in their own tiers or in upper tiers.

Cross shareholdings, differential voting shares, and public shareholders' low participation rates in corporate votes generally allow control through chains of even smaller α's, resulting in even more extreme divergence of ownership from control with each additional layer. Since family controlled boards vote cross holdings, these augment direct family voting power. Super-voting shares also allow control with smaller values of α. Returning to our example in Figure 1, if super-voting shares let the family exercise control with ten percent at each layer, rather than fifty percent, the family's stake in the third layer would be (10%)(10%)(10%) = 0.1% instead of the 12.5% calculated above. Since voting rates by public shareholders are generally quite low, a ten to twenty percent stake is usually sufficient to control board elections, so the last calculation is often relevant even in the absence of multiple voting shares.

By way of illustration, we use an example in La Porta *et al.* (1999), although other examples are amply available, e.g., in Morck *et al.* (2000). La Porta *et al.* (1999, Figure 8) describe the ABB pyramidal structure which we replicate in Figure 2. The authors follow a chain of control by which ABB, Sweden's fourth largest firm by market capitalization, is controlled *via* a 32.8% stake held by Incentive, Sweden's 17th largest firm. Incentive, in turn, is controlled *via* a 43.1% stake held by the Wallenberg Group, which is controlled by Investor, Sweden's fifth largest firm, through a voting arrangement that gives it control over 35.7% of the Wallenberg Group's 43.1% stake in Incentive. Investor is the Wallenberg's family run closed end fund and serves as the apex firm for their family control pyramid. In this way, a sharp divergence between control rights and cash flow rights characterizes many Swedish firms: For

example, the Wallenbergs have voting control over ABB, but actually have a cash flow rights stake of only about 5%.

[Figure 2 about here.].

As we explained above, a control pyramid allows a wealthy family or individual to control a large number of firms with relatively limited wealth. Pyramids permit this by creating large deviations between voting rights and cash flow rights; allowing control over many firms with a small cash flow stake in each.

Controlling families also effectuate control by placing family members in executive positions in key firms throughout a pyramidal group. La Porta *et al.* (1999) show that this frequently gives controlling families direct executive decision-making power, as well as control *via* pyramids. In sixty-nine percent of their sample of large firms (the top twenty firms ranked by market capitalization of common equity at the end of 1995 in each of 27 countries), the controlling families also participate in management. Participation is defined as a family member (sharing the same family last name) being the CEO, the Chairman, the Honorary Chairman, or the Vice-Chairman of the firm. The reported percentage underestimates the actual involvement of family members in executive position because executives married into the family may not share the family name. Claessens *et al.* (2000) report that, in East Asian countries (Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand), professional managers are rare, and family members or trusted associates are usually in charge. Top managers are family members in about 60% of firms that are not widely held. These studies are about controlling family participation in general, not controlling family participation in the management of pyramid member firms in particular. Empirical exploration of this issue is needed. For Italy, however, Volpin (2002) presents data about family members' participation in

firms that belong to pyramidal groups. He finds that 50% of top executives in the top layer of a pyramid are members of the controlling family. For lower layers, the figure is smaller: 26% for layer two firms, and 7.4% for layers three and below.

The discussion in this subsection leaves us with the following important points. By using pyramids and, to a lesser extent, crossholdings, super-voting shares, and the appointment of family members as executives, a wealthy family can secure control of a corporation without making a commensurate equity investment. Pyramids in particular allow a divergence of voting rights from cash flow rights much greater than is typically possible through direct ownership. Pyramids thus allow a family with a given level of wealth to control corporate assets worth considerably more than direct ownership would permit.

C. Other Types of Group Control

La Porta *et al.* (1999) show that control pyramids are by far the most important corporate group structures, but publicly traded companies can control each other in other ways. These generate other group structures that are important in particular countries. For example, Japanese firms are organized into groups called *keiretsu*, in which firms with no controlling shareholders each hold small stakes in one another, but these stakes collectively amount to control blocks. Thus, each firm is controlled by the professional managers of all the other firms in the group (see, e.g., Berglof and Perotti, 1994). France, Canada, Germany, and other countries also contain control pyramids without family firms at the apex. In some cases the apex firm is itself widely held. In France and Canada, some control pyramids of publicly traded firms have state-owned enterprises as their apex firms. In Germany, banks sometimes serve as *de facto* apex firms. Since public shareholders in German firms routinely sign over their voting rights to the banks that manage

their stock accounts, these control pyramids can consist of nominally widely held firms held together by banks voting the holdings of small shareholders. The large German banks are all widely held, so the bank managers collectively vote majorities of their own stock.[4] Recent reforms require German banks to advise investors of their right to vote their own shares, and this may effectively dismantle such structures over time. Of course family control pyramids are also important in all of these countries.

We use the term *corporate group* to refer to all of these structures collectively, and reserve the term *family control pyramid* for business groups with a basically pyramidal structure of inter-corporate ownership and a family firm at the apex. Corporate groups other than family controlled pyramidal groups are economically important in some countries. La Porta *et al.* (1999) find that family controlled pyramidal groups predominate in the large corporate sectors of most countries, so they are the focus of Section IIIB. However, other corporate groups are lumped together with them in some studies, introducing an ambiguity that is perhaps unavoidable at this early stage in the literature. Further work determining the economically important differences, if any, between different sorts of corporate groups would be welcome.

D. A Few Wealthy Families Control a Large Fraction of Many Economies

That family control is widespread around the world is perhaps interesting, but hardly unsettling. What makes this situation important to our understanding of economies outside the United States and United Kingdom is that control pyramids concentrate a country's corporate decision-making in remarkably few hands.

The articles surveyed above are filled with representative examples.

[4] Along with the managers of large insurance companies, affiliated with the banks.

Morck *et al.* (2000) describe how the Canadian Bronfman family extends its considerable wealth into control over corporate assets worth vastly more. Attig, Gadhoum and Lang (2003) add descriptions of the Manix, McCain, and the Bentley families. La Porta *et al.* (1999) discuss yet other examples of Canadian control pyramids. While these examples show how wealthy Canadian families greatly magnify their economic control, Morck *et al.* (2000) report that widely held firms are also commonplace in that country. Thus, no single family controls a predominant slice of the national economy.

Contrast this to Sweden, where Angblad *et al.* (2001, p. 228) report that one family, the Wallenbergs, controls roughly half of the market capitalization of the Stockholm Stock Exchange. This is accomplished through a huge and complicated control pyramid. What distinguishes Sweden from Canada is that control rights in Swedish firms are substantially in the hands of a single family, rather than a handful of families and numerous professional managers.

Other countries typically fall between the extremes represented by Canada and Sweden. For example, La Porta *et al.* (1999), Bianchi *et al.* (2001), and Faccio and Lang (2002) describe the control pyramid that lets the Agnelli family control corporate assets worth vastly more than their actual family wealth in Italy. Faccio and Lang (2002) further report that the Agnellis control 10.4% of that country's total market capitalization. Overall, across Western Europe, the value of corporate assets controlled by the leading family, measured as a fraction of market capitalization, ranges from 18% in Switzerland to only 1.10% in the United Kingdom. For the ten largest families, the figures are 19% for Austria, 30% for Belgium, 22% for Finland, 29% for France, 21% for Germany, 14% for Ireland, 20% for Italy, 23% for Norway, 34% for Portugal, 11% for Spain, 13% for Sweden, 29% for Switzerland and only 4% for the United Kingdom.

East Asian economies tend to resemble Sweden more than Canada. Claessens *et al.* (2000) find that the top fifteen family control pyramids in typical East Asian economies hold corporate assets worth a large fraction of GDP - 84% of GDP in Hong Kong, 76.2% in Malaysia, 48.3% in Singapore, 46.7% in the Philippines, and 39.3% in Thailand (these are the largest numbers reported). They state (p. 109) that, "these results suggest that a relatively small number of families effectively control most East Asian economies". They also find that the single wealthiest family controls 17.1% of the market capitalization in the Philippines, 16.6% in Indonesia, and 11.4% in South Korea.

La Porta *et al.* (1999) report that Huchison Whampoa, the third largest listed company in Hong Kong, is 43.9% controlled by Cheung Kong Holdings, the fifth largest listed company, which is 35% owned by Li Ka Shing family. Li Ka Shing, through a pyramidal arrangement, controls three of the twenty largest companies in Hong Kong, including the eleventh largest, Hong Kong Electric Holdings. Claessens *et al.* (2000) provide further description of the Li Ka Shing control pyramid.

Claessens *et al.* (2000) describe the extensive corporate control exercised by the Ayala control pyramid in the Philippines. The Ayala Corporation, the second largest listed company on the Manila Stock Exchange in terms of market capitalization, controls Ayala Land, the largest. The Bank of the Philippine Islands, the fifth largest, also belongs to the Ayala control pyramid. The principal owner of the Ayala Corporation is the privately held Mermac Inc. The Tokyo Mitsubishi Bank controls 23% and others control less than 5% each. Mermac is 100% controlled by the Ayala family.

Bae, Kang, and Kim (2002) describe the importance of Korean family controlled pyramids, or *chaebols*. *Chaebol*, while basically pyramidal in nature have extensive reciprocal

holdings as well as simple pyramidal intercorporate ownership links. The top thirty chaebols "contribute to 62.5% of the total assets and 72.6% of the gross sales of all listed firms" (p. 2699) and each is diversified across many unrelated industries. Each is also controlled by a single wealthy family (p. 2702).

Figure 3 shows the wealth of billionaires as a fraction of GDP, expressed as dollars of billionaire wealth per thousand dollars of gross domestic product.

[Figure 3 about here.]

E. Summary

These findings in this section condense into three crucial points. First, the prevalence of widely held firms in the large corporate sectors of the US and UK is highly exceptional. Second, the large corporate sectors, excluding state-owned enterprises, of most countries are predominantly controlled by very wealthy families. Third, the number of wealthy families exercising this control is typically quite small because control pyramids translate substantial family wealth into command of corporate assets worth vastly more. In some countries, individual families use this technique to control considerable, and even predominant, slices of the country's market capitalization.

Further careful empirical work is clearly needed to verify the actual extents to which these points genuinely characterize different countries. But assuming they are correct, they raise a curious question: Why are pyramidal firm groups so much rarer in the United States and United Kingdom? Or, are pyramidal groups a heretofore neglected aspect of corporate governance in the United States and United Kingdom?

IV. Potential Benefits of Control Pyramids

We now examine the impact of such disproportionate control over a country's corporate assets by tiny elites of extremely wealthy individuals and families – both at the firm level and at the economy level. We first review work consistent with dominant shareholders exerting a positive effect on firm performance in freestanding firms. We then show that findings from freestanding firms with dominant shareholders need not carry across to pyramidal groups. Pyramidal groups may have important positive effects in economies with underdeveloped factor markets and institutions. However, asking why family controlled pyramidal groups persist raises a range of possible negative effects, discussed in Section V.

A. The Performance of Freestanding Family Controlled Firms

Several studies suggest that family control *per se* might often have a positive effect on firm performance. Anderson and Reeb (2003b) study 403 firms in the Standard and Poor's 500, an index of large U.S. firms. They find that about one-third of them have individuals or families as substantial shareholders, holding altogether 18% of equity value. Using data for 1992 through 1999, excluding utilities and banks, they regress Tobin's average *q*, a standardized measure of firm valuation and a well-accepted proxy for the quality of corporate governance, on a standard set of control variables plus individual and family ownership and dummies for the presence of a founder or heir as CEO.[5] They report that public shareholders assign substantially higher values

[5] Tobin's average *q* is the market value of all the firm's financial obligations over the replacement cost of its physical and intangible assets. Note that this literature uses average q, not marginal q (the increase in market value induced by a unit increase in replacement cost of assets), which should be one absent taxes and transactions costs. In a very long run equilibrium, average Tobin's q should also be one, but need not be in the shorter run. For example, if uncertainty about insiders' stealing partially resolves after shares were issued to the public, or if inframarginal and marginal financing have different costs, an individual firm's average q might end up above or below one. Durnev et al. (2004, Table 2) show empirically that US firms' average qs and marginal qs differ markedly. In corporate finance, a long empirical tradition, beginning with Morck, Shleifer, and Vishny (1988) and justified theoretically by Stulz (1988), links average q (not marginal q) to proxies for corporate governance quality.

to firms with a large block held by an individual or family. They report an especially large value premium for firms whose founders retain equity holdings, and a smaller, but still statistically significant value premium for firms with other large individual or family shareholders. Anderson and Reeb (2003a) use the same sample and find that family controlled firms are less diversified, after controlling for size, outside directors and block shareholders. They conclude that "family firms perform as well as, if not better than, non-family firms."

Morck *et al.* (1988) reach the same conclusion for US firms in which the founder or a member of the founding family is present in management *and the firm was incorporated within the previous thirty years*. But for older firms with founders or their relatives in management, they report a significant value discount. Holderness and Sheehan (1988) report no systematic performance difference associated with large US shareholders. However, Perez-Gonzalez (2002), using United States data, divide 162 CEO transitions where the retiring CEO is a member of the founding family into cases where the succeeding CEO is a member of the founding family and cases where she is not. Stock prices, returns on assets and market-to-book ratios fall sharply for firms with inherited control, but not for firms where the CEO is unrelated to the founding family. Moreover, these declines are particularly prominent for firms that appoint family CEOs who did not attend a selective college. Indeed, the differences between firms with outside succession and in-family succession by an offspring alumnus of a selective college are not statistically different. Clearly, these results suggest that large block-shareholdings by a family, and family involvement in management, need not destroy value, and may even add value for public shareholders – especially when family control means control by

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Recent work by Gompers, Ishi, and Metric (2003) and others explicitly ties average q to direct measures of corporate governance quality. The underlying intuition is that rationally expected corporate governance problems are revealed through time, changing individual firms' total market values (the numerator of average q), but only affecting their replacement costs (the denominator of average q) on the margin.

an entrepreneurial founder or a demonstrably competent heir. Further studies along these lines for other countries would be highly useful.

Similarly, in an event study using Canadian family controlled firms, Smith and Amoako-Adu (1999) report share price drops when heirs take charge - especially if the heirs are young. They propose that older heirs, with more business experience, might reassure investors.

Caselli and Gennaioli (2003) develop a model of dynastic management – the passing of control from father to son. In their model, this is a potential source of inefficiency because heirs may inherit little of their parents' talent for managerial decision making. They explore the macroeconomic causes and consequences of dynastic management, and derive that the incidence of dynastic management depends on the severity of asset market imperfections, the saving rate, and the inheritability of talent. Using numerical simulations, they show that dynastic management may be a substantial contributor to observed cross-country differences in productivity.

Unfortunately, the empirical results cited above, except Smith and Amoako-Adu (1999), use U.S. data. Further studies using data from other countries are needed. As Section III shows, the US is exceptional for its lack of control pyramids, and for the rarity and fleeting nature of large listed firms holding control blocks in other large listed firms.[6] Elsewhere, family control pyramids, in which tiers of listed firms hold control blocks in other listed firms, are commonplace.

[6] Allen and Phillips (2000) report 227 instances of U.S. firms buying blocks of stock in one another from 1980 to 1991. These equity stakes are usually small (averaging 15% of the seller's equity) and are often preliminary to complete takeovers. They are sometimes referred to as toeholds. Indeed Mikkelson and Ruback (1985) and Choi (1991) can explain positive announcement abnormal returns associated with such purchases by the anticipation of subsequent takeovers. In some cases, joint venture partner firms may also exchange blocks of stock. Thus, U.S. inter-corporate equity blocks are usually between pairs of otherwise freestanding firms. The only extant pyramidal structure in the United States, to our knowledge, is the venture capital organization, Thermo Electron, which retains control blocks in its high technology public spin offs. Thus, family control and inter-corporate blockholdings in the U.S. are quite atypical; for wealthy U.S. families seem virtually always to control but a single large publicly trade firm.

The US results described above allow that, in freestanding firms, family control might sometimes be a net advantage. However, findings regarding freestanding firms cannot be applied hastily to pyramid firms, and empirical studies suggest important differences. For example, Morck *et al.* (2000), after controlling for firm age, size and main industry, report that Canadian heir controlled firms are less profitable than otherwise comparable firms in the US and in Canada. One possible explanation is that typical Canadian heirs running large firms are worse managers than their US counterparts. Another is that many large Canadian firms belong to pyramidal groups. While we cannot preclude the former reason, the latter seems more immediately plausible. We therefore consider ways in which pyramidal structures might affect firm performance – positively and negatively.

B. Could Control Pyramids Have Positive Effects?

Control pyramids must be of value to someone, or they would not predominate as they do in many economies. An emerging empirical literature attempts to identify advantages conferred by family control pyramids. We review some of the most important contributions.

Khanna and Rivkin (2001) examine firms affiliated with business groups in Argentina, Brazil, Chile, India, Indonesia, Israel, Korea, Mexico, Peru, the Philippines, South Africa, Taiwan (China), Thailand, and Turkey. They define a business group as "a set of firms which, though legally independent, are bound together by a constellation of formal and informal ties and are accustomed to taking coordinated actions." Thus, they are examining control pyramids run by families as well as other corporate groups; however, most of the groups they examine appear to be family control pyramids. They report higher average returns on assets (ROA) among group firms in all the countries they study save Argentina, Brazil, Chile, Mexico, Peru and the

Philippines. They also find lower variation in ROA for group firms, except in Mexico and Turkey. From these findings, they conclude "not only that members of a group incur costs and reap benefits, but also that the costs and benefits are shared."

Khanna and Palepu (2000a) compare the performance of member firms of Indian business groups, which are family control pyramids, with that of freestanding firms. Some of these business groups span many distinct industries, while others are more focused. They find that accounting and stock market measures of firm performance for group affiliates have non-monotonic relationships with group diversification. Firms in somewhat diversified control pyramids perform worse than free-standing firms, while firms in highly diversified control pyramids perform better than their freestanding peers. Apparently, a high level of diversification ultimately benefits group affiliates.

Khanna and Palepu (2000a) and Khanna and Rivkin (2001) both explain their findings by positing various arguments as to why the group structure might be an advantage in economies with poorly functioning markets and institutions that might cause unrelated firms to have difficulty writing and enforcing contracts with each other. The idea that groups mitigate market frictions goes back to Leff (1976, 1978).

One set of arguments stems from the need to overcome capital market frictions. In economies where information asymmetry is severe and institutional devices to signal trustworthiness are inadequate and ineffective, external financing is expensive and limited. A group structure can enhance monitoring and overcome liquidity constraints by letting group firms pool resources. The pyramid's controlling shareholder could potentially allocate capital more efficiently than the weak capital market could. This is essentially the same "internal versus

external capital market argument" that Lewellen (1971), Gertner, Scharfstein, Stein (1994) and Stein (1997) develop in connection with freestanding U.S. conglomerates.

In a similar vein, Burkart, Panunzi and Shleifer (2003) examine whether entrepreneurs want to surrender control of firms they found. They accept the potential benefits of owner control, but pitch them against the utilization of outside capable professional managers. When the benefits are less than the forgone benefits of rendering control to capable outside professional managers, a case may exist for surrendering control. Outside professional managers, however, may expropriate firm value. Thence, the forces that factor in on the question of whether to surrender control are the amenities and benefits of running a family business verse the extra firm value capable professional managers can bring in net of their expropriation and the monitoring costs. The net extra firm value capable professional managers can bring in is less in an environment where managers can more readily disregard outside shareholder's property rights. The lack of separation between management and ownership control is evidence of underdevelopment in financial markets.

Most of the results which show that "groups" may have a positive effect on firm performance are based on developing or newly developed countries data. It is not clear whether the lack of reported results for developed countries indicates lack of empirical attempts using developed country data or that it validates the theoretical arguments like Burkart, Panunzi and Shliefer (2003). [Journals seem to have a bias against publishing papers that report insignificant statistical results.]

More generally the arguments proposed by Khanna and Palepu (2000a) and others stem from the need to overcome frictions in factor markets. In essence, markets for capital, managerial talent, and intangibles are internalized within groups because external markets are

poorly developed. When institutions are weak, doing business with strangers is dangerous and unreliable. This impedes the operation of labor, capital, knowledge, and product markets. However, families with reputations for fairness and good management practices are especially sought after as business partners in such environments. Control pyramids let families with good reputations achieve greater economies of scale, and thus allow a higher degree of trust than would otherwise be possible. This, in turn, facilitates economic activity. Control pyramids may well be an economically rational response to poorly functioning markets in developing economies. In economies where external markets for professional managers are thin and underdeveloped, a group's internal market structure can lead to more investment in recruiting, training, and greater incentives for employees to develop "group specific human capital". Similar considerations apply to the development of market skills and brand-names.

A separate argument turns on the relationships between a firm's stakeholders – the various claimants to its cash flows such as the State, the public, the firm's workers, creditors, suppliers, customers, and various types of its shareholders. Roe (2003) argues that family control pyramids serve to protect shareholders from powerful labor unions and other social interests. These arguments are perhaps plausible as explanations for the prevalence of control pyramids in developed welfare state economies like Sweden and Canada, but, as Roe (2003) concedes, they seem inadequate at explaining their persistence in developing economies. In support of his argument, Roe (2003) shows that countries with more socialistic politics and stronger labor rights have less dispersed ownership. One difficulty we have with the Roe (2003) argument is that causality is not easily determined. Leftist politics and strong labor movements might just as easily form to counter the power of wealthy families controlling multiple corporations. Another difficulty with Roe's argument is that pyramids give controlling

shareholders interests that can sharply diverge from those of public shareholders. Further work is clearly needed to clarify these issues.

C. But, why Pyramids?

The literature positing positive effects of pyramidal structures, whether derived from Khanna and Palepu (2000a) or Roe (2003), begs the question: Why do pyramidal groups form, rather than freestanding conglomerates? Research on this question is very sparse, as far as we know. We can therefore only offer several conjectures.

First, separately registered firms might provide at least some limited liability protection, so that a parent firm's losses not exceed its initial investment. Limited liability, however, also reduces outside investors' ability to recover their investments in case of a loss. In addition, limited liability need not always provide full protection. For instance, Morck and Nakamura (2004) show that, when the Suzuki group's Taiwan Bank failed in 1930's Japan, all the other companies in the Suzuki family's pyramid failed simultaneously too.

Second, a pyramid might create space for the promotion of bright executives to top management positions. Perhaps these people would be frustrated as middle managers in a big conglomerate. Also, running a legally separated unit may give these executives more freedom and perhaps might create better career incentives. However, this freedom is likely to be quite illusory because the controlling family often retains executive decision power.

Third, many smaller firms, rather than one huge one, might conceivably allow better monitoring of professional managers by the family. Pyramids might be less opaque than a single conglomerate – to the controlling family, if not to public shareholders. This point and the previous one are consistent with Baker (1992), who proposes that conglomerates are more

efficiently run when head office delegates as much power as possible to operational units. It is possible that pyramidal groups insulate individual operations from the head office more effectively than conglomerate divisions. However, we are unaware of any evidence regarding this.

Fourth, many US conglomerates have recently issued *tracking stocks.* These are stocks whose dividends are tied to a single division of the conglomerate. D'Souza and Jacob (2000) report a positive abnormal stock return upon the creation of tracking stocks, indicating that many related stocks controlled by the same top managers are worth more than a single conglomerate's stock. They propose that distinct stocks might allow readier resolution of information asymmetries and principal agent problems, and Gigler and Hemmer (2002) provide an information theory model along these lines. Perhaps analogous models apply to pyramidal and other corporate groups.

Fifth, Hoshi, Kashyap, and Scharfstein (1991) argue that Japanese firms provide capital to other firms in their corporate groups that are experiencing financial difficulties. They propose that this intercorporate insurance enhances economic efficiency by reducing bankruptcy costs. Although, Morck and Nakamura (1999) present evidence that such transactions are better viewed as bailouts, and are probably not economically efficient, corporate groups in other countries might still perform the function Hoshi *et al.* envision.

Sixth, Almeida and Wolfenzon (2003) argue that capital market frictions induce pyramids. In their model, weak investor protection keeps firms from raising external finance unless internal funds are available as "seed money". If a wealthy family sets up a new freestanding firm, it has only family wealth available as seed money, which should include

dividends paid from firms it controls. But if it uses an existing firm to set up a new one, the accumulated retained earnings of that firm are available as "internal funds". [7]

Of course, this framework fails to explain why the wealthy family doesn't simply expand an existing firm by issuing equity or debt. However, as Landes (1949) points out in connection with French family firms, equity issues dilute the family's control block and debt issues raise the risk of bankruptcy. Both modes of expansion thus raise the risk of the family losing control.

In essence, Almeida and Wolfenzon (2003), augmented by wealthy family's desires to retain control, echo the explanation of Yoshisuke Aikawa (1934), the founder of the Nissan pyramidal corporate group in pre-war Japan, of why he opted for a pyramidal structure. He explains that pyramids are an ideal solution to what he calls the "capitalist's quandary". If a capitalist uses only his own money or his family's money, his scale of operations is too small. If he taps public equity markets, he risks losing control. But, as discussed above in connection with Figure 1, a pyramidal group provides the best of both worlds – secure control and unlimited access to public capital. [8]

Finally, Morck *et al.* (2000) and Morck and Yeung (2004) propose that political influence is proportional to what one controls, not what one actually owns. As we explain in more detail below, this might allow the controlling owners of pyramidal groups unrivaled political influence in many countries. Morck and Yeung (2004) argue that, by magnifying the wealth of an individual or family into control over corporate assets worth vastly more, pyramids magnify political influence in the same proportion. The wealthy individual or family can use this amplified political clout to alter the economy's institutional framework to favor themselves or their firms, to capture transfer payments, and so on. This advantage might be considerable,

[7] Holmén and Högfeldt (2005) propose an alternative, but closely related model of a "pecking order theory of finance" induced by insiders' extraction of private benefits of control.
[8] See Morck and Nakamura (2004) for details.

especially in economies with readily corruptible politicians and officials. Indeed, it might be so large as to explain apparently superior firm level performance, as found by Khanna and Palepu (2001a) and Khanna and Rivkin (2001), despite obvious evidence of poor governance and overall poor economy performance. Krueger (1993), Murphy *et al.* (1991, 1993), and many others argue that economies in which political rent-seeking is highly profitable grow slowly. If pyramidal groups prosper because they are especially adept rent-seekers, they perhaps ought to contain the best performing firms in the worst performing countries. Further work is needed to clarify these issues.

For example, the determinants of pyramiding are not well understood. Almeida and Wolfenzon (2003) and Yoshisuke Aikawa (1934) correctly emphasize that pyramids are formed because they magnify a given level of personal wealth into control over corporations worth vastly more. However, more work is needed to clarify how the preference of the controlling owner enters the picture and why firm units are sometimes transferred between pyramidal groups and in and out of pyramids.

For example, Berle and Means (1932) and others argue that a pyramid's lower tier firms are especially inefficiently run because of the large the gap between the controlling owner's control rights and cashflow rights. This inefficiency should attract takeovers. In general, control should pass to the party who values the cashflow rights plus private benefits of control the most. The private benefits include tangible ones, such as money from tunneling, and intangibles, like the power and influence derived from ruling a business empire - see Morck *et al.* (2000) and Morck and Yeung (2004).

If tunneling were costless, the controlling owner could appropriate all the benefits of enhanced efficiency in all her pyramid's firms. If intangible benefits were also unimportant, the

pyramid controlling owner capable of running firms most efficiently should pay the most for control blocks, and maximally efficient management should prevail. Arguably, the small personal wealth needed to acquire control via a pyramid and the subsequent extraction of all the benefits of enhanced efficiency via costless tunneling should make efficiency enhancing corporate takeovers loom larger as attractive investments than they would be in an economy of freestanding firms.

Alternatively, if tunneling were costly or intangible benefits important, control would pass to the controlling shareholder most adept at tunneling or most enthusiastic about consuming intangible private benefits of control. The former consideration leads Bebchuk, Kraakman, and Triantis (2000) to postulate that control in an economy with pyramiding might pass to the most efficient thief. If the controlling shareholder consumes intangible benefits directly from all the firms she controls, but consuming pecuniary benefits require costly tunneling, the small personal wealth needed to acquire control magnifies the importance of intangible private benefits in allocating corporate control. Control then might pass to the most power-hungry oligarch.

Much additional theoretical and empirical work is needed to solidify hypotheses in this area and to distinguish presumptions from facts.

V. Control Pyramids and the Separation of Ownership from Control

The discussion above suggests that, even were control pyramids economically salubrious, for example as devices for circumventing inadequate institutions, there are nonetheless reasons for taking a more skeptical view. Certainly, Yoshisuke Aikawa's (1934) enthusiasm for control pyramids demonstrates scant concern for the rights of public shareholders.

The first reason for skepticism is that a pyramidal corporate ownership structure allows the controlling shareholder to secure control rights without commensurate cash flow rights. Secured control rights protect the controlling owner from losing power – that is, they allow her *entrenchment*. Furthermore, as we show below, once control is secured, the controlling shareholder's low cash flow rights lead to agency problems, including non-value maximizing investment and incentives to divert resources.

Second, in family-controlled pyramids, family members often retain top management positions. Succession by inheritance can have a negative effect because top management positions go, not to the most capable, but, at best, to the most capable member of the controlling family, as modeled by Caselli and Gennaioli (2003).

Third, even were resources efficiently managed and allocated within a group controlled by single family, corporate groups can still be undesirable. Almeida and Wolfenzon (2005) argue that the efficient allocation of resources within a group can actually exacerbate the inefficient allocation of resources across groups. Their arguments apply to corporate groups in general, not just to family controlled pyramids.

Finally, the concentrated control of productive assets by a few families gives them market power, both in the goods and capital markets, leading to potentially undesirable economic consequences. Morck and Nakamura (2004) explain how this was the explicit rationale cited by the United States Occupation Force for dismantling the main Japanese family control pyramids after World War II.

Widespread problems of these types, especially those that impair capital markets, can create inefficiencies that hamper outside financing, discourage innovation, and retard economic growth. These inefficiencies can arise at both the firm level and overall economy level. In this

section we focus on inefficiencies at the firm level. These stem primarily from the separation of ownership and control in the pyramid – the first two points enumerated above. The next section focuses on inefficiencies at the economy level which stems from the control of a very large number of firms by a single family – the last two points listed above. This section is deliberately brief, for other surveys, notably Shleifer and Vishny (1997) and Denis and McConnell (2003) cover some of this material, though not from the perspective we emphasize here.

A. Divergence of Interests Agency Problems

The problems caused by the separation of ownership and control in pyramidal groups are similar to those described in Berle and Means (1932) and Jensen and Meckling (1976) in connection with widely held firms. Indeed, Berle and Means (1932) explicitly describe pyramids as having problems like those of widely held firms. Jensen and Meckling argue that the managers of firms with dispersed shareholders have substantial discretion as to the actions they take because individual shareholders cannot coordinate to share monitoring and control costs. This lets managers take actions with benefits that, by their nature, are not shared with shareholders. In addition to indirect financial benefits, like on-the-job consumption or shirking, and direct financial benefits, like redirecting corporate assets into a personal account, control also provides intangible benefits, like status, political influence, and power over people. The literature denotes all of these benefits as *private benefits of control*. Managers pursue private benefits, but balance this against their losses when the price of their shares in the firm falls plus the consequences of getting "caught and punished," such as losing their jobs. This balance means managers might choose an action with lower total value over one with higher value, as long as the former generated sufficient private benefits. This divergence of interests is greater the lower the

managers' equity stake and the lower the likelihood of her getting caught and punished for non-value maximizing behavior.

As we described in section 3, firms outside the United States and United Kingdom are owned, not solely by dispersed small shareholders, but by wealthy families *via* control pyramids. Pyramids allow a family to retain control of many firms while holding only a small fraction of their cash flow rights. Indeed, we presented examples in which the cash flow rights of the controlling family in some of the pyramid member firms are comparable to the stakes of the managers of the most diffusely held of U.S. corporations. By allowing cash flow rights and voting rights to diverge, control pyramids permit the same divergence of interest problems as dispersed ownership, even though the firms in the pyramid are not widely held.

This divergence of interests can lead to inefficient investment in firms in which a controlling owner has small cash flow rights. This is because the controlling family earns only a small part, corresponding to its small cash flow rights in such a firm, of any investment's monetary payoff, but can retain all of any private benefits the investment generates. Only in the special case of an investment that maximizes the total surplus also maximizing the controlling owner's private benefits should we observe efficient investment decisions.

A related reason for inefficient investment arises from the high cost of capital that this divergence of interest entails. This high cost stems from minority shareholders' rational expectation that this divergence of interest distorts corporate decisions to benefit controlling shareholders. Such problems are defined in the Corporations Law of many countries as *oppression* of public shareholders by the controlling shareholder. Oppression problems are thus a variant of "perks" consumption, where the perks are diversions to benefit the controlling shareholder rather than professional managers. La Porta et al. (1999) document countries

varying substantially regarding the protection their laws afford external investors against oppression. Shleifer and Wolfenzon (2002) show that, when a controlling shareholder has a low cash flow stake, as with firms at the base of a pyramid, the cost of capital to the firm is high since other investors anticipate expropriation, and pay depressed prices for any securities that firm sells. A consequence of this high cost of capital is severely distorted investment decisions because of those firms' reluctance to raise external funds.

B. Entrenchment Agency Problems

The corporate finance literature notes a second type of agency problem, called *entrenchment*. While Jensen and Meckling (1976) argue that insiders with larger stakes have less incentive to misallocate corporate resources, Stulz (1988) argues that higher equity stakes also give insiders more freedom to misallocate resources. This is because top executives who own large blocks of equity are effectively tenured. Non-value-maximizing managers with little stock can be removed in proxy fights by disgruntled institutional investors or ousted by hostile raiders attracted by a depressed share price. Top executives with large blocks of equity cannot be cast out in these ways. Thus, a dominant equity stake lets corporate insiders enjoy private benefits of control robustly, whereas a smaller stake means they must limit their inhalation to keep their share prices high enough to ward off raiders and placate institutional investors.

Moreover, entrenchment problems can take on a qualitatively distinct air, for entrenchment can lock in control by honest but inept insiders as well as clever self-serving insiders. For example, entrenchment problems occur if a firm's controlling founder bequeaths her stock to an egregiously incompetent, but power hungry son. The incompetent son cannot manage the firm well, but cannot be removed by the other shareholders because his share of

votes is sufficiently large to control the board. The power hungry son gains such utility from controlling the firm that the effects of his blunders on the value of his stock are an acceptable cost to him. While this might even be Pareto efficient, it clearly raises important distributive questions, to which we return below. This sort of entrenchment is especially difficult to counter, for if the controlling shareholder used his control rights to enrich himself pecuniarily at the expense of public shareholders, this could be proscribed as "oppression".

Of course, this picture is overly simplified. In principle, without maintaining a dominant voting share, the CEO of a widely held firm could also dominate the board through sheer force of personality, and push through an array of anti-takeover defenses, such as poison pills, staggered boards, and the like, to deter raiders and activist shareholders.

Managerial entrenchment can occur in freestanding firms. Indeed, Almazan and Suarez (2003) argue that a degree of entrenchment might be part of an optimal compensation contract for top managers. Nonetheless, as Nissan founder Yoshisuke Aikawa's (1934) unwittingly emphasized, a fundamental *raison d'être* of control pyramids is precisely that they lock in control. That is, a pyramidal structure is itself a means to entrench the controlling shareholder without the cost of maintaining a large equity stake, nor the machinations of having to establish poison pills or staggered boards. Control pyramids *per se* are simple and highly effective anti-takeover devices.

To see this, return to Figure 1 and recall the discussion in §IIIB. The family appoints the boards of directors of companies in the first tier, and so can place family members in dominant positions on those boards and as top executives. The first tier firm's boards then appoint the boards of companies in the second tier, which then appoint the boards of companies in the third tier. This locks in family control over all the companies in the pyramid, even though public

shareholders contribute most of the financing for most of its firms. In contrast, had the family established a single firm with eight billion dollars worth of physical assets (a union of the firms in the third layer), its billion dollars in family wealth would have constituted a 12.5% stake, and public shareholders could outvote the family in shareholder meetings. This would render family control contestable.

Note further that entrenchment *via* family control pyramids is intimately linked to the appointment of family members to the boards of the apex firm and other firms throughout the pyramid. The example above – allowing "an egregiously incompetent, but power hungry son" to retain control – underscores the potential for damage to firm value due to entrenchment. But, the potential for damage goes beyond the controlling manager having excessive freedom to pursue her self-interest at the expense of firm value. It also includes the possibility that an incompetent manager might retain her job precisely because she can extract more personal gains from the job than a competent manager could. Indeed, Bebchuk, Kraakman, and Triantis (2000) suggest that control might naturally pass to "the most efficient thief" because he is willing to pay the most for a control block.

C. Tunneling

The firms low in control pyramids, in which the controlling shareholder's cash flow rights are small, are thus vulnerable to concurrent divergence of interests and entrenchment problems. One consequence of this juxtaposition is that the controlling shareholder has an incentive to transfer money aggressively out of these firms and into firms near the pyramid's apex – or even into her personal holdings. Of course, these transactions can require complex schemes to be effective.

Nonetheless, when the controlling family runs many firms, they can take the form of intercorporate business transactions.

The act of transferring value from one pyramid firm to another is dubbed *tunneling* by Johnson *et al.* (2000).[9] Value can be transferred between controlled firms *via* transfer pricing, the provision of capital at artificial prices; or *via* inflated payments for intangibles such as patents, brand names, and insurance. Although the firm at the receiving end of the tunnel benefits from the wealth transfer, public shareholders of the wealth donating firm understandably might view the transfer as a governance problem. Johnson *et al.* (2000) provide detailed examples of tunneling.

The transfer of funds from one group firm to another is integral to many of the socially desirable functions of corporate groups posited above. Tunneling undertaken with such ends in mind perhaps ought to be encouraged, not condemned as a governance problem. Indeed, such transfers might well balance out over time for any given group firm.

However, the controlling owners of pyramids benefit from the systematic percolation of wealth from firms near the pyramid's base upward to firms near its apex. To see this, return again to Figure 1. Suppose that $firm_{3,1}$ generates new wealth worth one million dollars. As was shown above, this translates into additional wealth of $125,000 for the ultimate owners. The remaining $875,000 accrues to public shareholders in the various tiers of the pyramid. But if $firm_{3,1}$ overpays $firm_{1.1}$ by one million dollars for some good or service, the new wealth is "tunneled" to $firm_{1,1}$. This means the controlling owner benefits by $500,000 and the public shareholders of $firm_{3,1}$ and $firm_{2,1}$ get none of the new wealth. In the most extreme case of

[9] Tunneling is of course another type of agency problem, but we treat it separately here due to its importance. An agency problem is one where an agent, in this case controlling family, can take actions that negatively affect the utility of the principal, in this case the minority shareholders. In this sense, both entrenchment and tunneling are agency problems.

tunneling, the wealth is transferred directly to the family firm at the apex, or to another firm that is fully owned by the family.[10] In these ways, tunneling lifts assets and income from lower to higher tier firms, and dumps losses and liabilities from higher to lower levels of the pyramid.

Tunneling does not require a control pyramid of firms. For example, the Enron scandal in the United States apparently involved the transfer of wealth from Enron, a widely held company, to private companies controlled by Enron's professional managers. However, tunneling is plausibly a more everyday concern in economies dominated by control pyramids.

In passing, tunneling should be familiar to students of multinationals, which are known to engage in an analogous shifting of earnings and assets to avoid declaring income in high tax countries. The key differences are: (1) tunneling is about hiding money from public shareholders, while income shifting by multinationals is about hiding money from the tax authorities; and (2) tunneling can involve solely domestic firms. In both cases, however, the shifting of assets and liabilities among a multitude of related corporations complicates the workings of the firms in question and renders them less transparent to investors.

In summary, freestanding firms are most vulnerable to divergence of interests agency problems if widely held and to entrenchment problems if narrowly held, though this is an oversimplification. In contrast, firms in lower tiers of control pyramids are vulnerable to both problems simultaneously. Their dual presence is mutually reinforcing. Entrenchment allows a more fulsome divergence of interests agency problem, which raises the value of becoming entrenched, including maintaining the pyramidal structure and keeping family members in key executive positions and on key boards. Tunneling further exacerbates both problems by allowing

[10] In practice, the process of tunneling might well destroy part of the wealth being transferred, so the controlling owner might net less than the full million dollars because of lawyers fees, payments for discrete financial services, and the like. We return to this point below.

an entrenched controlling shareholder to appropriate corporate resources and to raise a corporate veil against outsider monitoring.

This unhappy confluence of firm-level corporate governance problems means that less able managers who particularly value control are especially likely to be locked into positions of corporate power, and that inefficient investment might plausibly be associated with control pyramids.[11] If these problems are isolated incidents, any macroeconomic effects are marginal. Indeed, pyramid firms with poor corporate governance ought to be out-competed, and their neglected investment opportunities ought to be appropriated by better-run firms. However, if control pyramids allow a very small number of controlling shareholders to amass control over so many firms that they govern a substantial part of the corporate sector, their sub-optimal behavior might aggregate to a macroeconomics problem.

Whether these problems outweigh any positive effects associated with pyramidal control is unclear *a priori*. Corporate governance problems might plausibly be expected to dominate in situations where the controlling shareholder is less able, entrepreneurial, or honest. The beneficial effects listed earlier in this section might plausibly dominate where entrepreneurial talent is scarce, market institutions are weak, bankruptcy costs high, and so on. The actual balance is thus an empirical question.

[11] One might expect poor corporate governance to raise a firm's outside capital costs. The issue, however, is complicated. A firm's cost of outside capital is affected by many factors. Pyramidal groups might have capital market power so that their firms' costs of outside capital might even be lower than those of stand alone firms. For example, pyramidal firm groups might be more favored clients of banks than stand alone firms because of their sheer size, or the pyramids themselves might contain banks. The prevalence of pyramidal groups has implications on capital market conditions and hence on the overall allocation of outside financing in an economy. We revisit these issues below.

D. Empirical Evidence

We now review a large literature that helps us answer this question. While some of this work focuses on freestanding firms, it nonetheless allows us to make carefully guarded inferences about control pyramid firms. While a rapidly growing body of work also focuses specifically on pyramid firms, further effort along these lines is likely to be highly productive.

Firm-Level Studies of Performance

As mentioned above, Khanna and Palepu (2000a) and Khanna and Rivkin (2001) both find that firms belonging to pyramidal groups in developing countries outperform independent firms on average. This could be due to any of the explanations listed above for business groups having an advantage.

Friedman *et al.* (2003) present evidence consistent with transfers of wealth from controlling shareholders benefiting public shareholders in pyramid firms. They describe both specific instances of pyramid controlling owners "propping up" firms to the benefit of their public shareholders during the Asian Crisis of the 1990s and econometric results consistent with this occurring on an economically important scale. They propose that, under some circumstances, controlling owners credibly promise to prop up distressed group firms in order to attract external debt financing. This is essentially a special case of the internal capital markets hypothesis, described above. Nonetheless, Baek *et al.* (2004) report that pyramid firms tightly controlled by wealthy Korean families exhibit worse stock market performance than independents during the crisis. Indeed, Graham (2003), Kang (2002), and many others document the history of scandal, political rent-seeking, and bailouts that characterizes Korean pyramidal groups.

The Empirical Importance of Entrenchment Problems

Entrenchment problems are clearly important in the United States, and are likely to be even more important in other countries. The first empirical evidence now recognized as indicative of managerial entrenchment is Johnson *et al*. (1985), who report that stock prices often rise significantly upon the announcement of CEO sudden deaths. This suggests that CEOs often stay in office when they might better contribute to their firm's value by retiring. They presumably do this because they enjoy private benefits of control. Morck *et al*. (1988) also report large and significant value discounts for U.S. firms with large shareholders, and for U.S. firms established more than thirty years ago and run by founders or their relative. They interpret both findings as evidence of managerial entrenchment. Slovin and Sushka (1993) relate the abnormal return upon CEO sudden deaths to the departed manager's equity stake and confirm the importance of entrenched management in narrowly held U.S. firms.

While these studies use U.S. data, and therefore refer to freestanding firms, it seems likely that similar entrenchment problems exist elsewhere. This is because the United States has a well developed corporate takeover market, sophisticated institutional investors, and litigious shareholders, all of whom are likely to work hard at dislodging entrenched corporate insiders. La Porta *et al.* (1998) present evidence that these pressures are almost surely much weaker in most other countries – especially Civil Law countries, in which pyramids and dominant family shareholders are generally quite important. Understanding why these differences exist, and the role of legal systems in them, would be of great value.

A low sensitivity of top manager turnover to firm performance may also indicate entrenchment. Here, evidence more directly related to family control pyramids is available.

Volpin (2002) shows that, when the controlling shareholder is also the CEO, CEO turnover is largely unrelated to firm performance. Interestingly, within control pyramids, he finds that family members are replaced less often than professional managers, and that their sensitivity of turnover to performance is significantly lower than that of non-family CEOs. Brunello *et al.* (2003) reports a similar result – CEO turnover is elevated in poorly performing Italian firms only if the CEO is not affiliated with controlling shareholder.

Although it seems plausible that entrenchment is more pervasive in countries with more extensive family control pyramids, further work is needed to make this conclusion unequivocal. At present, we must rely on country and case studies that may not be directly comparable. For example, Filatotchev, Wright and Bleaney (1999) document Russian managers' remarkably blatant efforts to entrench themselves. De Jong and Veld (2001) argue that Dutch managers are profoundly entrenched around old-boy networks, thanks to explicit protective arrangement depriving shareholders of their voting rights. Ugurlu (2000) argues that managerial entrenchment is pervasive in Turkey.

Unfortunately, comprehensive cross-country studies that could decide the matter are not yet available. Studies across large numbers of countries comparing the determinants of CEO turnover would be highly useful. Studies using data for other countries that rerun the Perez-Gonzales (2002) analysis of the stock price reactions to family versus professional CEO succession would also be highly useful.

Valuing the Private Benefits of Control

We argued above that entrenchment frees corporate insiders to extract private benefits of control more energetically, and that pyramids may magnify the available benefits. It is therefore useful

to asses the magnitude of private benefits of control in different countries and for different sorts of firms and owners.

A way to measure corporate insiders' private benefits from control is to estimate the value the market attaches to control rights. If this value is positive, market participants believe that the controlling party obtains benefits over and above those that are shared with public shareholders. This is evidence of entrenchment. In the absence of entrenchment, these benefits would be ephemeral (and their value close to zero), for public shareholders would react by selling to a raider or supporting dissidents at a shareholders' meeting. Persistent large private benefits of control imply both a divergence of interest and insider entrenchment.

There are two ways to measure the value of control. One is to infer it from the block premium, defined as the difference between the price per share paid in a block transaction and the market price after the transaction. This premium is a lower bound on the value the acquirer places on control. An early example of this methodology is Barclay and Holderness (1989), who study block premiums in the U.S. Dyck and Zingales (2003) apply the same methodology across a sample of thirty-nine countries by examining 412 control transactions between 1900 and 2000. Their results, summarized in Table 3, show that the value of control ranges from minus four percent to sixty-five percent, and averages fourteen percent of firm value. In countries where block premiums are larger, Dyck and Zingales (2003) find that capital markets are less developed, minority shareholders have fewer legal rights, and law enforcement is uncertain. Interestingly, they also find that non-legal factors, such as more diffuse ownership of the press, stronger product market competition, and higher levels of tax compliance are related to lower block premiums. Indeed, these factors have at least as much explanatory power as the legal measures.

[Table 3 about here]

The other method for estimating the private value of control is based on the difference between the market prices of different classes of stock. In many countries, firms have more than one class of common shares. Public shareholders invest in a class of shares, called restricted voting shares, with one or sometimes no votes per share. The controlling owner holds super-voting shares, which bestow superior voting rights. Such structures allow the controlling owner to command a majority of votes in the shareholder meeting while owning relatively few shares. Both classes of shares sometimes trade in public equity markets. Because only the shares with superior voting rights need be purchased in a sale of control, they ought to command a value premium if control provides private benefits.

This methodology has been applied to different single countries in different studies, however, this makes the results difficult to compare.[12] Nenova (2003) uses this technique for eighteen countries using comparable 1997 data on 661 firms with such dual class shares. In doing this, she controls for the probability of a sale of control, block-holding costs, and dividend and liquidity differences between the share classes to estimate a lower bound on the private benefits of control. The estimates she reports, also shown in Table 3, vary from near zero for Finland, and less than 4% of firm value in Canada, Denmark, Hong Kong, Sweden, and the United States, to over 50% of firm value in Brazil, Chile, France, Italy, South Korea, and Mexico. Nenova's (2003) regressions show that the control premium is significantly lower in countries with stronger protection for outside investors' property rights, and finds that sixty-eight percent of the cross-country variation in the value of control-block votes is explained by her measures of investor rights. Modigliani and Perotti (2001), using country level average from

[12] See Rydqvist (1996) and Bergstrom and Rydqvist (1990 and 1992), for Sweden; Levy (1992) for Israel; Lease, McConnell, and Mikelson (1983) and Zingales (1995) for the US; Zingales (1994) for Italy, etc.

Canada, Israel, Italy, Sweden, Switzerland, U.K., and U.S., show that high control premium countries have smaller equity markets and larger proportion of bank loans, which are characteristics of poor shareholder rights countries.

Private benefits of control are significantly higher in countries whose large corporate sectors are more completely controlled by wealthy families. The simple correlation coefficient of the control block premium, as reported in Table 3, with the proportion of top ten firms whose controlling shareholders are families with 20% blocks, as reported in La Porta *et al.* (1999) and reproduced in Table 2, is 0.41. If family control is inferred from a ten percent largest block, the correlation coefficient is 0.37. Both are statistically significant at 5%. Unsurprisingly, the correlation between the control block premium and the proportion of large firms that are widely held is -0.45 if widely held is defined as having no 10% blockholder, and -.61 if a 20% threshold is used.

The techniques of Dyke and Zingales (2003) and Nenova (2003) are potentially very useful approaches to determining private benefits of control. Much more work could be done along these lines. For instance, both studies are cross sectional. Work on how these measures vary over time in response to institutional changes, legal reforms, and the like would be of great value.

Entrenchment, Private Benefits of Control, and Pyramids

We argued above that controlling owners of pyramidal groups of listed companies are most likely to sacrifice the interests of public shareholders in firms low in their pyramids, for the controlling owner's cash flow rights in these firms are minimal. Several empirical studies present evidence consistent with such an effect.

Claessens, Djankov, Fan, and Lang (2002) examine 1996 data on 1,301 publicly traded corporations in eight East Asian economies – Hong Kong, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. Their sample is 37% of the 3,544 publicly traded firms in those countries. The study shows that firm value, measured by market to book ratio, rises with the cash-flow rights of the largest shareholder and falls as the control rights of the largest shareholder decline relative to her cash-flow rights. The latter result is especially pertinent, for the primary reason for control rights to diverge from cash flow rights in these countries is pyramidal groups. This result is thus consistent with controlling owners having less concern for maintaining the value of firms lower in their control pyramids.

Joh (2003) reexamines this issue using data from Korea, a country whose corporate sector is heavily dominated by large family controlled pyramidal groups, or *chaebol*. Using data on 5,829 publicly traded and private firms from 1993 through 1997, Joh finds a higher excess of control rights over cash flow rights associated with lower profitability. Again, this is consistent with controlling owners having less regard for the financial performance of firms lower in their pyramids.

Lins (2003) uses 1995 data on 1,433 firms from eighteen emerging markets to study large equity blockholders.[13] He reports that two thirds of insider controlled firms belong to control pyramids, and that insiders' voting rights average 2.7 times their cash flow rights in those firms. Regressions controlling for firm size, investment rate, leverage, and country show firm values to be depressed in proportion to the excess of insider blockholders' control rights over their cash

[13] These countries include Argentina, Brazil, Chile, Czech Rep,, Hong Kong, Indonesia, Israel, Malaysia, Peru, Philippines, Portugal, Singapore, South Africa, South Korea, Sri Lanka, Taiwan (China), Thailand, and Turkey.

flow rights.[14] This is consistent with more pronounced agency problems in firms in lower tiers of control pyramids.

Johnson, Boone, Breach, and Friedman (2000) point out that the controlling owners' diversion of resources may depend on the anticipated future need for outside financing in each firm in a control pyramid or other group. When future investment opportunities are unexpectedly curtailed, trimming the need for internal funds, a controlling owner may prefer to siphon off the funds rather than pay them out to investors in that firm. This is a specific empirical prediction that identifies insiders' tendency to pursue self-interest while balancing against repercussions, and therefore is a rather convincing empirical test. Mitton (2002) compiles a sample of 398 firms in five East Asian countries and finds that firm performance during the 1997-1998 East Asian financial crisis – a period when investment opportunities in that region abruptly shrank – is only marginally affected by the divergence between cash flow and voting rights. However, Lemmon and Lins (2003) find a stronger result. They use a dataset of 800 firms in eight East Asian countries during the 1997-1998 financial crisis. After controlling for size, beta, debt to assets ratio, and market-to-book ratio, they find stock returns of firms in which ultimate owners' control rights exceed their cash flow right to be ten to twenty percentage points lower than those of other firms. For firms in which insiders have below median control stakes, or in which the largest block holder is not an insider, performance is independent of insider's control rights relative to their cash flow rights.

The above empirical studies, which provide evidence on the relationship between entrenchment and private benefits of controls within pyramidal structures, are mostly based on East Asian countries that have relatively weak and corruption-prone institutions, at least

[14] Firm value creation or destruction is measured by high or low Tobin's average q, respectively. Average q is approximated by market value of equity plus book value of liabilities scaled by total assets.

according to La Porta *et al.* (1998). Unfortunately, comparable investigations using data from countries with more developed legal and other institutions, such as Western European countries, are lacking. This is an exciting area for further work.

Tunneling

We argued above that tunneling might serve as an especially effective way for entrenched controlling shareholders to extract private benefits of control. The studies discussed above that link the excess of a controlling owner's control rights over his cash flow rights to depressed financial performance or firm value are consistent with either tunneling or a simple neglect of the interests of public shareholders in lower tier pyramid firms. Direct evidence of the relative cross-country importance of tunneling is yet to be gathered. However, country studies again provide evidence that tunneling can be economically important.

The findings of Bertrand, Mehta, and Mullainathan (2002) concerning Indian family control pyramids, which they call *business groups*, are consistent with tunneling and are difficult to explain with any other hypothesis. They divide firms into free-standing firms, many of which have controlling families, and firms belonging to family control pyramid groups. Their focal dependent variable is cash flow which is defined as earnings before depreciation, interest, and taxes over assets. Using data from 1989 to 1999 and regressions controlling for the controlling owner's cash flow rights and firm size, they find that control pyramid firms' cash flows are less sensitive to own industry factors than are those of freestanding firms[15] This sensitivity to own industry factors is lower among firms in which the controlling owner's cash flow rights are lower (relative to the group median). In addition, group firms' performance is positively associated

[15] Industry performance is an assets weighted average cash flow across each industry. Cash flow is profits before depreciation, interest and taxes. Each firm's industry factor is inner product of this ratio times a vector reflecting the distribution of its assets is across industries.

with the industry factors of other affiliates in which the controlling owner's cash flow rights are low. Interestingly, positive cash flow shocks in the lower tier firms are echoed by positive shocks in upper tier firms' cash flows, but that the converse is not true. A positive shock to a low cash flow rights firm's industry increases the cash flow for high cash flow rights affiliates about twice as much as for low cash flow rights affiliates. Thus, firms in which the controlling owner's cash flow rights are highest – that is, firms located nearest the apex of the pyramid - benefit the most from a positive shock to firms elsewhere in the group. This is consistent with the controlling owner transferring net resources from low from lower to higher tier firms in the control pyramid – that is, with tunneling.

Bae, Kang, and Kim (2002) also report direct evidence of tunneling in Korean family controlled pyramids, or *chaebols*. *Chaebol*, while basically pyramidal in nature have extensive reciprocal holdings as well as simple pyramidal intercorporate ownership links. They ask whether *chaebol* firms benefit from acquisitions they make, or whether such benefits appear instead in firms in higher tiers of the pyramid. Using data on 107 mergers involving eighty-seven firms between 1981 and 1997, they find that when one firm buys another in the same *chaebol*, the acquirer's stock price falls but the stocks of other firms in the same *chaebol* rise. The authors argue that the controlling owner typically has lower cash flow rights in the acquirer than in the target, for which the acquirer typically overpays. Intra-*chaebol* acquisitions thus raise wealth away from firms whose cash flows accrue more to public shareholders and up towards firms whose cash flows accrue more to controlling families. This is consistent with tunneling.

A few papers do not find evidence for tunneling in pyramids. Holmen and Högfeldt (2005), using the procedure of Betrand et al. (2002), find no evidence of tunneling in Swedish pyramidal groups. They argue Sweden's high accounting and judicial standards make tunneling

difficult. However, they find that pyramid member firms over-invest significantly. One interpretation of this is that Swedish controlling families extract private benefits *via* corporate empire-building, but not *via* tunneling.

E. Summary and implications

In this section we showed that family control pyramids allow the simultaneous presence of divergence of interests agency problems, of the sort discussed by Jensen and Meckling (1976), and entrenchment agency problems, of the sort discussed by Stulz (1988). This means family control pyramids are potentially subject to worse agency problems than freestanding firms. This is because divergence of interest agency problems are most likely at their worst in widely held freestanding firms, while entrenchment problems are most likely at their worst in narrowly held freestanding firms. Lower tier firms in family control pyramids potentially suffer from both problems simultaneously. The controlling owners of pyramid firms can easily have cash flow rights as small as those of the professional managers of widely held firms, while exercising voting rights sufficient to deter any control challenge, thereby entrenching their control.

While divergence of interest and the entrenchment problems are well understood in the corporate finance literature, pyramids potentially aggravate agency problems by conferring both on their lower-tier firms simultaneously.

This unwelcome reinforcement of agency problems might be especially unpropitious if less able managers who particularly value "control" become the controlling owners of pyramidal groups. Since, effectuating family control over pyramidal groups frequently involves assigning family members to key executive and board positions, and to corporate boards, corporate governance power may often be based on family ties and ability to protect the controlling

family's interests, rather than ability. The overall consequence is that these firms may under perform from an asset utilization viewpoint. Finally, the lack of effective external monitoring in pyramid firms whose governance is dominated by a powerful family may deprive even scrupulous managers of effective investor feedback regarding investment decisions[16].

VI. Implications of Control Pyramids

So far, we have analyzed problems that arise in individual firms in a pyramid by focusing on the controlling shareholder's behavior. In this section, we broaden the scope of the survey and review the literature on the implications for the economy as a whole of a few old, established families controlling a substantial fraction of the economy through large pyramidal groups. This is an especially timely topic, for many emerging and transition economies are in the first stages of establishing patterns of ownership over large corporations. Intriguingly, control pyramids seem quite popular in these countries. For example, Cull, Matesova and Shirley (2002) describe Czech control pyramids. However, research on the development of pyramidal group dominance is only beginning, and much more work is needed.

This section considers possible repercussions at the economy-wide level of entrusting the governance of large swaths of a country's corporate assets to small elites. Its focus is on established wealthy families, but other elites – professional managers or others – also merit study.

We shall first describe capital allocation problems associated with established pyramids. We shall argue that, even if established pyramidal groups allocate capital efficiently internally,

[16] See Durnev et al. (2004).

the overall allocation of capital across pyramidal group boundaries can still be inefficient. Moreover, this problem can be exacerbated if pyramidal groups have capital market power.

Second, extending the above arguments leads to the possibility that an economy with extensive established pyramidal structures may undertake less innovation. Because of biased capital allocation, upstarts may have difficulties raising finance; and thus invest less in innovation. Also, pyramidal group firms might invest less than freestanding firms in innovations that might compete against the current products of established group firms. Intriguingly, tunneling might actually mitigate this last effect, for the controlling owner can benefit from innovation if she can tunnel the gains towards firms in which her cash flow stake is large while leaving the negative effects of creative destruction to public shareholders. Further work on net welfare implication of these effects would be useful.

Finally, we speculate that the prevalence of pyramidal structures is associated with an economy-wide under-supply of external capital. This speculation is based on the premise that a lack of corporate transparency reduces public investors' expected overall return. If this depresses overall domestic savings as well as the supply of capital from abroad, upstart firms' liquidity constraints could be more binding than otherwise. We hasten to reiterate that this is speculative, and that further research is needed.

All these issues point to pyramidal groups controlled by established families being associated with slow economic growth.

A. Capital Allocation Problems

We now consider how the allocation of capital across the boundaries of pyramidal groups might be distorted even though capital is efficiently allocated within each group. While this problem is

most likely aggravated if pyramidal group controlling owners have capital market power, it can occur under competitive capital markets too.

External Allocation Problems

Almeida and Wolfenzon (2005) propose that physical capital might be over-used within conglomerates and business groups, in that more productive applications outside of the groups are forgone. Their argument suggests that, even if physical capital is efficiently allocated within a group, the economy-wide allocation of capital might still be inefficient, in that groups have less incentive to relinquish productive assets to outside users than is socially optimal.

Their intuition is that, in an economy with poor investor protection, public shareholders rationally expect insiders to appropriate part of the return on corporate investments. Consider an economy in which some existing projects must be liquidated. A family owning such a project, and controlling no other firms, has no option but to lend the capital released in this liquidation to the outside entrepreneur with the highest productivity. However, if the family controls other firms, capital allocation can be distorted. This is because the family earns the full return when it reinvests the capital within the group; but expects only a fraction of the return when it invests in a firm controlled by someone else. Thus, the family may decide to allocate the capital within the group even if an outsider's project were more productive.

Almeida and Wolfenzon propose that the internal capital market in corporate groups may not even be a second best alternative from a social perspective. They deduce that the more efficiently capital is allocated within a conglomerate or group, the greater the likelihood that capital is misallocated overall. Their argument parallels the view that regional free trade blocs augment welfare by increasing trade between member states, but reduce welfare by diverting

trade away from globally most efficient producers outside the bloc. Likewise, corporate groups make credit more available to member firms, but also divert credit away from efficient uses outside the group. In both situations, the overall welfare effects are uncertain.

Capital Market Power

Section III.D showed that the large corporate sectors of many countries are made up of a few large pyramidal groups and scatterings of independent firms. Morck, Stangeland, and Yeung (2000) suggest that, due to their sheer size relative to the rest of the economy, large pyramidal groups might attain a degree of price setting power in their domestic capital markets.

To avoid confusing the current argument with the Almeida and Wolfenzon (2005) argument above, we assume away all information and agency problems between lenders and users of capital. This eliminates any possibility of capital market underdevelopment due to institutional inadequacy. Now, assume that a pyramidal group has a surplus of capital so large that it has a considerable "market share" in the supply of capital. The group would supply capital for internal and external use until the two alternatives generated identical marginal returns. For an internal application, the marginal return is the simple marginal return on capital. However, the marginal return for the external alternative reflects a downward sloping capital demand schedule, which is the external users' marginal return on capital. The marginal return of capital in an internal application is thus less than the external users' marginal return. In other words, the group provides too little capital to external users at too dear a price.

Along this vein, additional considerations arise. First, outside investment might erode the controlling owner's capital market power, as outsiders accumulate wealth from their investments. Hence, when supplying capital to external users, a thoughtful controlling owner

considers this negative effect, which is absent when supplying capital to internal users. This should induce group firms to charge external users of capital more than internal users. Second, gradations might arise in the cost of capital within the pyramid related to the controlling owner's cash flow rights in each firm.

In the alternative case, where the pyramidal group has insufficient capital for its internal needs, its sheer size could give it monopsony "market power" in the sourcing of external capital. This, through a precisely symmetric set of arguments to those outlined above, induces the group to use too little capital and to pay too low a rate of return to the providers of external capital.

Relationship Banking Problems

Pyramidal groups often contain major commercial, investment, merchant, or universal banks as member firms. For example, one branch of the Canadian Bronfman family controls Hees International Bancorp, a large merchant bank, and the Swedish Wallenberg family controls SEB, a large Swedish universal bank. Caprio, Laeven and Levine (2003) examine the ten largest banks of 44 countries in 2001. They find that most banks are not widely held. On average, only 25 percent have no 10% voting blockholder. More than half of the controlling shareholders of banks are wealthy families in the typical country. The State is the controlling owner 19 percent of the time.

Sharing a controlling owner presumably lessens information asymmetry problems between borrower and lender firms, and so allows firms in a pyramidal group preferential access to bank financing. This is thus a further extension of the above idea of business groups allocating capital among their member firms at low cost relative to alternative allocation mechanisms. Having a bank as an integral part of the group's structure is not always necessary,

for the apex firm can serve as a *de facto* bank in any event. Regardless, it is instructive to consider the implications of group banks within the framework of the relationship banking literature.

A borrower having a relationship with his bank mitigates information asymmetry problems and thus eases liquidity constraints, as in Peterson and Rajan (1994). However, Rajan (1992) also shows that such a relationship locks a borrower into a long-term bond with its bank. This is because, once the relationship is established, switching banks sends a negative quality signal about the borrower to other prospective lenders. This makes the borrower vulnerable to "hold-up problems". If the bank and borrower firm are in the same control pyramid, and so have the same ultimate owner, both information asymmetry and hold-up problems might be mitigated.

Even if the bank is not a member firm of the pyramid, these considerations might still remain. The share of the rent arising from the relationship that the bank captures depends on the outside opportunities and respective market power of both the bank and the borrower. For example, a larger borrower with more outside financing alternatives should be able to keep a greater share of the relationship rent. Likewise, if the bank's profits are more dependent on retaining the pyramid firms as borrowers, its share of relationship rent falls. Family control pyramids containing more corporate assets ought thus to be better able to retain relationship rents than smaller stand alone firms.

In either case, pyramid firms would enjoy cheaper access to capital, all else equal. Indeed, banks might appear to discriminate against freestanding firms.

Empirical Evidence

At present, little empirical work examines capital allocation within and between family controlled pyramidal groups, or capital allocation across group firms and freestanding firms. Morck, Stangeland, and Yeung (2000) report that Canadian firms controlled by old money families have elevated capital-labor ratio after controlling for industry, firm size, and firm age. Consistent with this, Attig, Fischer and Gadhoum (2003) find that Canadian firms affiliated with pyramidal groups have greater capital expenditures than comparable non-affiliated firms. Moreover, the higher the controlling owner's cash flow stake, the more elevated the capital expenditure.

The monopsony case discussed above can probably be eliminated as a description of the Canadian economy, for it predicts, at least in its most naïve form, that group firms ought to use less capital than other firms, which is not observed. However, any or all of the other capital allocation distortions might be occurring in that country.

Further work on other countries is also clearly needed for potentially valid a priori arguments can lead in either direction. For example, Khanna (2000) argues cogently that the Tata pyramidal group of India is social welfare enhancing because it substitutes for imperfect capital markets in that country and thus allows entrepreneurs inside the group to obtain financing that would otherwise be unavailable. This has to be pitched against the Almeida and Wolfenzon (2005) argument that groups may inefficiently concentrate capital. The nature of pyramidal groups' effects on the allocation of capital is thus, in the final analysis, an empirical issue.

Consequently, further empirical investigation along these lines is likely to be quite interesting. The relative capital intensity of pyramidal group versus freestanding firms in countries other than Canada is not known. If pyramidal group members do have better access to

capital than stand alone firms, they should be more concentrated in more capital intensive industries. Such differences should presumably be mitigated by capital market openness.

Likewise, studies comparing levels of internal utilization of retained earnings in pyramidal groups versus freestanding firms would be highly useful. Finally, and perhaps most difficult, evidence on macroeconomic capital intensity and reinvestment of earnings across economies with different incidences of old, established family groups would be desirable. Each of these exercises would, of course, require an "all other things equal" baseline. This means further thought is needed regarding necessary controls beyond the obvious ones, such as industry, and time fixed effects.

B. Depressed Investment in Innovation

Innovation is an especially interesting type of investment in an economy of control pyramids. Schumpeter (1912, 1942) is now generally acknowledged as correct in arguing that growth is a process of *creative destruction*. Growth requires the continual creation of innovations based on new technology or a recombination of old technologies, with technology broadly defined to include scientific, managerial, and other practices important to a firm. Yet, innovations also cause the destruction of firms built around activities rendered obsolete. Schumpeter (1912) points out that innovators seldom have access to large flows of retained earnings, and that innovation consequently usually requires outside financing. This suggests that innovation ought to depend on the existence of functional capital markets and institutions, a hypothesis empirically verified by King and Levine (1993). Alternatively, Schumpeter (1942) proposes that large firms with ample cash flows from previous investments might best be able to finance innovation. More broadly, innovation requires that innovators have access to capital.

If pyramidal groups limit unrelated parties' access to capital, the latter might innovate less. Pyramidal groups might form corporate venture capital to finance the unrelated parties' innovations, as Khanna and Palepu (2005) document regarding the software investments of India's Tata group. However, if the pyramidal groups have capital market power, they presumably extract rents from the innovators. Freestanding firms accepting such financing must pay such rents and cede their independence. Gompers and Lerner (1999) show that freestanding innovators pay American venture capital firms rents and cede independence too, but in exchange for critical technological and managerial expertise. The Tata group may be quite exceptional, for Gompers and Lerner describe venture capital investment, including that by established nonfinancial firms, as surprisingly concentrated in the United States.

Morck *et al.* (2000) study pyramidal groups' incentives to innovate. They argue that the destruction intrinsic to Schumpeter's (1912) 'creative destruction' is typically an externality to a freestanding firm but is less likely to be so for a large control pyramid. In an economy of freestanding firms, a maker of superior plastic pipes, who takes business away from copper pipe makers, bears none of the costs associated with the declining copper industry. Even if some investors hold stocks in both businesses, competition between investors insures that the plastic pipes venture can be financed as a stand alone entity. In an economy of control pyramids, where the copper pipe maker and plastics company have the same controlling shareholder, financing for the plastic firm's innovation may be less forthcoming. The controlling shareholder may see little net advantage in letting her plastics company disrupt her copper company. Morck *et al.* (2003) call this problem *creative self-destruction*.[17] Even if the plastics firm is not part of a group, the controlling owners of pyramidal groups containing steel companies might exert whatever capital

[17] In a somewhat similar vein, Acemoglu and Robinson (2002) argue that elites historically sometimes blocked new and efficient technologies to avoid changes that threatened their political power.

market power they command to deny financing to the upstart plastics maker. Certainly, the controlling owner has little incentive to cooperate with the innovator to form a commercial alliance, and might even seek to expropriate the innovation to slow the pace of its application.

In essence, corporate groups *internalize* the disruptive effects of innovation, and this presumably can reduce group firms' investment innovation relative to that of otherwise comparable freestanding firms. The overall welfare effect is unclear, for how the welfare enhancing effects of innovation offset its disruptive, and presumably welfare reducing effects, is poorly understood at present. That governments commonly subsidize 'innovation' reinforces the conventional wisdom that, in much of the world at least, investment in innovation is not excessive.

Intriguingly, tunneling within pyramidal groups might actually mitigate the negative impact of creative self-destruction on investment on innovation. This is because creative destruction might proceed apace if the controlling shareholder can tunnel away profits from the creative innovation and leave public shareholders to absorb the costs of the "destruction" of firms with obsolete technology. Thus, stronger public shareholder rights might impede innovation by curtailing tunneling, but might also accelerate innovation by deepening financial markets, which King and Levine (1993) argue lets entrepreneurs establish new firms to develop their innovations. Thus, while family control pyramids ought to be related to a slower pace of innovation, the interaction of this effect with stronger public shareholder rights is difficult to predict.

Finally, it is important to note that the above need not apply to all pyramidal or other groups. For example, De Long (1990) argues that the J. P. Morgan group in the late 19th and early 20th century United States was instrumental in financing numerous innovative ventures, and

in lending its financial credibility to entrepreneurs. Empirical work is needed to determine which outcome is more economically important and under what circumstances.

Only the most preliminary empirical work tests these ideas. Morck *et al.* (2000) report that firms controlled by old, established Canadian families spend less on R&D than other Canadian firms and than similar US firms, controlling for industry, firm size, and firm age. They also report that countries with larger billionaire inherited wealth over GDP have lower private sector R&D spending. Given the importance of innovation to economic growth, further work on the investment policies, R&D strategies, capital intensity, and liquidity constraints of firms with different ownership structures is clearly a priority.

C. Overall Capital Market Effects

So far, this section has focused on problems associated with capital access and investment decisions. In economies where a few old families control great swathes of the corporate sector, such governance problems, which economists typically think of as firm-level effects, might easily attain macroeconomic proportions. Also, by affecting the nature of capital markets, extensive pyramiding might more directly affect macroeconomic outcomes.

For example, a prevalence of pyramidal groups in a country's corporate sector might render the average firm more opaque to outside investors, both domestic and foreign, and this might induce both to place their savings elsewhere. This might be a direct effect, arising out of the increased complexity of accounting in large groups of firms. It might also be indirect, in that the controlling owners of large pyramidal groups might press government officials to maintain ineffective shareholder protection and weak disclosure rules to better facilitate tunneling. La Porta et al. (1997b, 1998) demonstrate convincingly than weak institutions of this sort are

detrimental to capital market development. Morck, Yeung, and Yu (2000) speculate that such weak institutions hinder informed risk arbitrage, and thus the incorporation of information into equity prices, reducing the functional efficiency of equity markets. See also Durnev, Morck, Yeung (2004) and Durnev, Li, Morck, and Yeung (2004).

As Section VIA describes, pyramidal group firms often appear to have preferential access to bank capital. Sometimes this is because a bank is part of the pyramidal group, and having a common controlling shareholder perhaps reduces information asymmetry problems. Also, large corporate groups' sheer size makes them less vulnerable to outside banks' extraction of rents. Part of the reason stems from groups' complexity. Kim (2004) shows that banks have more difficulty using observed loan repayments to gauge the quality of members of a business groups than of freestanding firms. This is because inter-group loan guarantees prevent an outside bank from knowing whether the payment is from the borrower or other group firms. Consequently, such a bank is more likely to liquidate a freestanding firm than an otherwise identical group firm.

However, from our perspective, group firms' most important preferential access to capital arises from banks being affiliated with groups of nonfinancial firms. La Porta, Lopez-de-Silanes, and Zamarripa (2003) argue that, in many countries, banks lend to related customers, including firms controlled by the bank's controlling shareholders. Caprio, Laeven and Levine (2003) examine the ten largest banks of forty-four countries in 2001 and find that 75% have a controlling shareholder, often a wealthy family. Using Mexican data, Lopez-de-Silanes, and Zamarripa (2003) show that related lending accounts for 20 percent of commercial loans. Related borrowers pay lower interest rates than unrelated borrowers. This cannot reflect lower risk in related borrowing, for they find related borrowers more likely to default than unrelated borrowers – and less likely to pay back their debts eventually. Such findings raise the possibility

that banks in some countries might inefficiently channel capital towards other companies controlled by the banks' controlling shareholders.

Barth, Caprio, and Levine (2004) note that regulations facilitating the private monitoring of banks are associated with greater development in the banking sector, lower costs of bank loans, and a smaller ratio of non-performing loans. In contrast, direct government monitoring and regulations are unrelated to the banking sector's development and stability. If the sort of bank behavior documented by Lopez-de-Silanas and Zamarripa (2003) in Mexico is commonplace elsewhere, the ubiquity of family controlled banks throughout the world, documented by Caprio, Laeven and Levine (2003), pervasive capital misallocation by banks might be a major impediment to development. Since governments commonly act as "lenders of last resort" to troubled banking systems, chronic capital misallocation by banks might also destabilize government finances. Beck, Demirgüç-Kunt, and Levine (2005) show that empowering official supervisory agencies to monitor, discipline, and influence banks directly actually engenders bank corruption and also negatively affects growth. Well governed banks, monitored by legally empowered private sector investors and depositors, seem to constitute best practice at this point.

Opaque family pyramidal groups' direct control of banks and involvement in capital intermediation could thus retard the development of both equity markets and the banking sector; with concomitant negative macroeconomic implications. Further work testing these speculative hypotheses might involve testing whether or not a high prevalence of pyramidal groups relates to underdeveloped equity capital market, underperforming banking systems, or generally misallocated capital. Comparing how severely liquidity constraints impede the growth of upstarts might also be instructive. If pyramids *per se* render their member firms more opaque,

freestanding firms might be at an advantage in raising external capital (though not capital from related group banks). But if controlling owners press for weak institutions, this might especially constrain high quality upstarts by making it harder for them to signal investors about their quality.

Arguing along these lines, Shleifer and Wolfenzon (2002) stress that the misappropriation of wealth by controlling shareholders raises costs of capital to the whole corporate sector, and thus impedes growth. Lombardo and Pagano (2002) show that aggravated information asymmetry problems in economies with weak institutions move demand and supply schedules for capital to reduce both the aggregate amount of capital used and social welfare. Castro, Clementi, and MacDonald (2003) propose that strengthened property rights for public investors can have a two-fold effect. Stronger legal rights instill trust in public investors, lowering entrepreneurs' cost of capital. But stronger investor property rights also reallocate wealth from controlling families to the middle classes. If middle class investors have lower propensities to save, this might actually reduce overall savings. Castro, Clementi, and MacDonald (2003) develop an overlapping generations model that magnifies the latter effect by positing that stronger investor rights reallocate capital from the younger generation of entrepreneurs to the older generation of retirees, and that the latter have a minimal propensity to save. This highlights the ambiguous impact of strengthened property rights on overall costs of capital and welfare.

Empirical work is needed to test these theories, and to develop stylized facts within which future theories in this area must fit.

D. Summary

This section and the previous one show that the effects of control pyramids on corporate governance might well be especially injurious in countries that provide public shareholders ineffective legal rights against malfeasance by corporate insiders. These governance problems, allowed free reign, plausibly retard macroeconomic performance for three reasons. First, a single insiders' poor governance becomes a macroeconomic problem if she controls a pyramid that includes a substantial fraction of a country's corporate assets. The structure of a control pyramid also leads to a variety of capital allocation distortions. By altering the overall investment level and by skewing the distribution of capital expenditure across groups, firms, and projects; these distortions can compromise economic growth. Second, control pyramids might adversely affect investment in innovation because they internalize the disruptive effects of one firm's innovation upon another. This, especially, might be a powerful growth retardant. Third, the concentration of capital within opaque pyramidal groups might raise public investors' required returns by raising the levels of risk they perceive. The distribution of returns to different classes of investor might also affect the overall supply of savings because of difference in their propensities to save.

The regulation of capital markets and institutions in general, and of corporate governance in particular, are ultimately functions of a country's political process – see e.g. North (1991). We therefore turn to the interaction of control pyramids with political economy in the next section.

VII. Political Economy Considerations

While inequality exists in virtually every country, we showed above that control pyramids can magnify large inequalities in wealth into truly enormous inequalities in corporate control. Control pyramids effectively entrust the corporate governance of the greater parts of the corporate sectors of many countries to handfuls of elite, established families, who can quite reasonably be described as *oligarchs*. The extent to which this concentration of corporate governance power occurs can be used to arrange capitalist economies along a metric with two stylized endpoints. One endpoint, *diffuse capitalism*, best approximated by the United States and United Kingdom, is characterized by numerous professionally managed freestanding large corporations, each owned by multitudinous small investors whose property rights are well protected by effective laws. The other endpoint, *oligarchic capitalism*, approximated by most East Asian and Latin American economies, is characterized by public investors holding minority voting stakes in large corporations controlled by a few families through control pyramids.

This section considers this metric more closely in a framework of political economy, the discussion of which we have postponed until now. We propose that the two ends of the metric, diffuse capitalism and oligarchic capitalism, represent two different political economy outcomes. Our essential point is that institutional development is endogenous. On the one end, oligarchs wield their political influences to attain policies that preserve and expand their corporate governance power and thus sustain concentrated corporate control. This in turn preserves and expands the resources at their disposal for further political lobbying. The objects of this lobbying presumably are policies to limit public investors' rights, impede entry by upstarts, and raise international trade and capital barriers. These institutional features associated with oligarchic capitalism have been linked to poor long-run macroeconomic performance. Indeed,

they may well explain why Morck *et al.* (2000) find that economies with larger inherited wealth post slower growth.[18] The concurrence of oligarchic capitalism, weak institutions, and slow growth in a stable, but Pareto-inferior, equilibrium, we call *economic entrenchment*.[19]

Clearly economic entrenchment cannot be the only possible outcome. There must be circumstances in which the elites fail to secure this outcome, or in which they actually prefer – and hence lobby for – sound institutions.

The concepts we develop in this section are quite general. Although we focus on family control pyramids as the means to concentrate control, other institutional arrangements can serve a similar goal. For example, the professionally managed *keiretsu* groupings of Japanese corporations might be another arrangement, as Morck and Nakamura (1999) argue. Yet another might involve entrenched elites of bureaucrats presiding over inefficient state-owned enterprises, as in Krueger (1993). See also Megginson and Netter (2001).

A. A political economy and institutional focus

Our conceptual framework lets economic agents use resources to influence "institutional development." This allows a political economy framework for understanding the relationship between the distribution of corporate control and the development of economic institutions. We first clarify the "institutions" we have in mind.

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[18] There are many possible reasons why oligarchic capitalism might allocate resources more or less efficiently than diffuse capitalism. If the oligarchs are especially adept at business, they may excel at placing resources where their values are highest. This might underlie the finding of Morck *et al.* (2000) of high growth in countries in which great wealth is concentrated in the hands of self-made billionaires. However, if the oligarchs were especially poor managers, a similar concentration of corporate governance in oligarchic capitalism could magnify the mistakes of a few individuals into macroeconomic problems. This might underlie the Morck *et al.* (2000) findings of slow growth in countries in which great wealth in concentrated in the hands of old, established families.

[19] Note that this is deliberately distinct from *managerial entrenchment* in corporate finance, where suboptimal managers cannot be ousted and the performance of the firm suffers. We view *economic entrenchment* as a macroeconomic counterpart to this, and a potentially much more important problem.

One is public shareholders' rights. La Porta *et al.* (1997b, 1998) construct an index of public shareholders' rights by adding up distinct legal rights – the right to vote by mail, the right to sell shares prior to meetings, the right to cumulative voting, the right to sue directors, pre-emptive rights to new issues, and the right to call extraordinary shareholder meetings. This index is used in many empirical studies. For example, Wurgler (2000) shows that sound capital institutions and markets, especially shareholder legal rights, effectively check capital misallocation – presumably including that by corporate insiders running control pyramids.

The "Law and Finance" literature, which descends from La Porta *et al.* (1997b, 1998), argues more broadly that how well capital markets function depends on a range of customs, rules, laws, and regulations, and on how vigorously they are enforced. Thus, statutory shareholder rights are dead letters if the judiciary, police, and regulators are all deeply corrupt. While legal rights for public shareholders are clearly an important determinant of how well capital is allocated, other considerations factor in as well. These include a general absence of corruption, transparent accounting and disclosure, and many other dimensions of institutional development. Ultimately, a pervasive respect for outsiders' private property rights seems basic to an efficient allocation of capital.

This respect must engender not only rights for public investors, but also rights for aspiring entrepreneurs. Djankov, La Porta, Lopez-de-Silanes and Shleifer (2002) document the difficulties entrepreneurs confront in becoming registered business firms in many poor countries. These include expensive, arbitrary, and repeated inspections, taxes, and fees relating to "safety and health," the environment, labor, and "screening." They show that the time and direct cost of these procedures as a fraction of 1999 *per capita* GDP, as well as their sheer number, is significantly positively correlated with measures of government corruption. Such arbitrary entry

barriers deter prospective entrepreneurs and lock in insider control. We count such impediments as infringements on entrepreneurs' private property rights. See also De Soto (1989).

For expository convenience, we refer to all of these rights together as *private property rights*. The degree to which these private property rights are protected, both from the government and from more powerful individuals, depends on government policies – their stipulation and enforcement. Our proposition is that economic agents, oligarchs and others can use their resources to influence the government's choices regarding the enactment and enforcement of property rights. Although economics long regarded government policies as exogenous except in limited areas – such as taxes, monetary policy, and fiscal policy – recent work, such as Krueger (1993), Olson (1982, and 2000), favors treating government policies as thoroughly endogenous; in particular, they depend on political influence, or lobbying.[20]

B. Political Influence in Oligarchic Capitalist Economies

There are several reasons for believing that oligarchic families are likely to be highly effective political lobbyers, especially when they control large pyramidal groups of companies. In particular, Morck and Yeung (2004) argue that the apex shareholders of control pyramids have particularly low political lobbying costs.

One reason they stress is that the controlling owners of great pyramidal groups command vast economic resources, from which they can readily make up-front side-payments to public officials. In contrast, new entrants, usually short of capital, must promise future side-payments

[20] For example, Krueger (1993) stresses dynamic interactions between political and economic factors. She argues that import substitution programs divert wealth to certain bureaucrats and influential individuals whose fortunes grow under the programs. This wealth makes them formidable interest groups and gains them political power, with which they defend the programs that enrich them. The result is a "vicious cycle" of ever slower economic growth. She pitches this against a "virtuous cycle" in which export oriented programs enrich defenders of export oriented policies, and economic growth steadily rises.

for advantageous government policies now. Since many new ventures fail, or are taken over by others, such promises are risky investments for a public official. Thus, lobbying costs are lower for the controlling owners of established great pyramidal groups than for the principals or professional managers of new entrants.

A second set of reasons has to do with lower transactions costs. A pyramid's controlling owner can pool the resources of many companies to make side payments to politicians without the coordination costs a similar array of freestanding firms would incur. An array of freestanding firms would also surely experience some free-rider problems, while an array of pyramid firms with a common controlling owner need not.

Olson (1982) argues that larger or more diverse groups of people have higher transaction costs in organizing effective lobbying. Control pyramids can entrust corporate control over vast reaches of a country's economy to handfuls of wealthy families. If the number of oligarchs is small, the transaction costs of coordinating their actions are correspondingly low. This makes coordinating the lobbying of different oligarchs easier.

Yet another reason oligarchs' lobbying costs might be low is that politicians might perceive them as more trustworthy partners in favor trading. Favor trading between political and corporate insiders often involves trading actions today for promised future responses. The beneficiary of today's action has an *ex post* incentive not to pay up. The C.E.O.s of widely held firms in the United States serve an average seven year term – an eye blink compared to the permanence of the old money families controlling pyramidal corporate groups in many countries. One CEO of a widely held firm may feel little obligation to uphold promises made by a predecessor. In contrast, a dynastic family can better keep faith over time. For similar reasons, an oligarch should discount promised future consideration from a public official at a lower rate

than that the professional manager of a widely held freestanding firms would use. Public officials should also be less willing to break faith with the controlling owner of a great pyramidal group, for she would have means to "punish" the defecting official, given her extensive corporate governance powers. Thus, the controlling owners of pyramids have lower lobbying costs than the professional managers of widely held freestanding firms.

A third set of reasons why oligarchs' lobbying costs are likely to be especially low involves their use of tunneling to transfer resources among controlled firms. If the controlling owner paid politicians from lower tier firms for favors that benefited higher tier firms, public shareholders would pay most of the group's lobbying costs while the controlling family would reap most of the benefits of the lobbying. Moreover, by coordinating where the costs and benefits of political rent-seeking fall among pyramid firms, the controlling owner can effectively tunnel wealth from one firm to the other without directly transferring assets or income between firms. Furthermore, to render favors to government officials, the controlling family of a pyramid can tunnel resources to where the payment can be made most discretely – perhaps a private firm or a firm in an industry with little government business. This increases oligarchs' flexibility as to the specific form favors to officials can take.

Finally, corporate insiders and political insiders may be the same people, or at least from the same families. This may be the result of effective past lobbying, but it surely also facilitates further cooperation between oligarchic families and the State.

Such ties are surprisingly prevalent. Claessens, Djankov, and Lang (2000, p. 109), cite a *New York Times* (Sept 8 1998, p. 2) report in which Imelda Marcos, the widow of former Philippines president Ferdinand Marcos, explains that her relatives "practically own everything in the Philippines from electricity, telecommunications, airlines, banking, beer and tobacco,

newspaper publishing, television stations, shipping, oil and mining, hotels and beach resorts, down to coconut milling, small farms, real estate and insurance." They also report that "the business empire of the Suharto (the previous strong man in Indonesia) family is thought to control 417 listed and unlisted companies through a number of business groups led by children, other relatives, and business partners, many of whom also have held government offices" (*Financial Times*, Dec 8, 1998, p. 16). Leuz and Oberholzer-Gee (2003) show that Indonesian firms with close connection to former President Suharto are significantly less likely than unconnected firms to have publicly traded foreign securities. This is presumably either because they have special access to lower cost domestic capital or because they are disinclined to comply with foreign disclosure requirements. The first Chief Executive of Hong Kong is the offspring of a shipping tycoon; and Kashing Li, who controls some large pyramidal groups, allegedly maintains a considerable stake in the Chief Executive's family business. The Lee family provided Singapore a head of state for decades, while also managing many of its businesses. The Appendix to Johnson and Mitton (2003) describes the close ties of the Mahathir family, Daim Zainuddin (a previous finance minister) and Anwar Ibrahim (a purged vice prime minister) with Malaysian businesses. Former Russian Prime Minister Viktor Chernomyrdin is a large shareholder of Gazprom. Faccio (2003) provides other abundant examples.

Such connections are not restricted to emerging market countries. Faccio and Lang (2002) report that two members of the Agnelli family, which controls the largest Italian industrial group, serve Italy as members of parliament. Silvio Berlusconi, who controls another of the same country's largest pyramidal groups, serves Italy as Prime Minister. And Francois Pinault, the controlling shareholder of Pinault-Printemps-Redoute, Grand Bazar de Lyon, Rexel,

and Zodiac, is reputedly a close friend of French President Jacques Chirac.[21] Paul Desmarais, the controlling shareholder of one of Canada's largest pyramidal groups, is a closely related in-law of former Prime Minister Jean Chrétien and the longtime business associate of the current Prime Minister, Paul Martin.

Faccio (2003) examines these relationships formally by carefully documenting family ties between the political and corporate leaders of forty two different countries. She reports that firms representing 7.76% of the world's market capitalization are run by relatives of their countries' political leaders. While there is no hint of corruption in many of these family ties, others presumably result from political influence and lower the costs of further lobbying.

Indeed, political influence might be instrumental to oligarchs' private benefits of control. Faccio (2003) shows that politically connected companies enjoy easier access to debt financing, lower taxation, and higher market shares. She also demonstrates that announcements of directors or dominant shareholders entering politics or of politicians joining boards result in significant increases in firms' value in highly corrupt countries. De Soto (1989), Shleifer and Vishny (1993, 1994), and others argue that such political connections give firms preferential access to government subsidies, financing from government owned enterprises and banks, tax breaks, and exemptions from burdensome regulations.

This is not to suggest that political lobbying is an unimportant corporate investment in diffuse capitalist economies like the United Kingdom and United States. A huge literature, in its modern form descending from Stigler (1971), attests to the near universal importance of political rent-seeking. Indeed, many of the arguments listed above suggest that large family firms might also have a political influence advantage in diffuse capitalist economies. For example, the *Financial Times* (Feb. 26, 2004, p. 8) quotes a "former US government trade official" as being

[21] See "Heat on Chirac for Public Inquiry" *Financial Times*, Dec 6, 2003,

impressed with Cargill, a huge private US family agribusiness because "They weren't simply looking in a short sighted way at the bottom line, but had an eye on the longer term. It made me more and more inclined to listen to them for trade negotiations." Econometric evidence on which sorts of firms are best at political rent-seeking is scant.[22]

Our point here is not that diffuse capitalism is free of political rent-seeking, but that oligarchic capitalism, because of pyramidal corporate control and the other factors described above, narrowly concentrates and greatly magnifies political rent-seeking power in the hands of a tiny elite.

Morck and Yeung (2004) find a strong correlation between corruption and family control. Countries with high incidences of family control over large firms have low compliance with tax laws, high official corruption, low judicial efficiency and integrity, inefficient bureaucrats with low autonomy, and high regulatory barriers to entry. Table 4 reproduces their results.

[Table 4 about here]

Extensive lobbying power in the hands of a country's leading business families might seem a recipe for strong private property rights, but Morck *et al.* (2000), Glaezer *et al.* (2003) Rajan and Zinglaes (2003), Sonin (2003), and others argue that this is far from clear. Glaezer *et al.* (2003) posit that the very wealthy can prefer weak property rights if they benefit from the transfer payments weak property rights allow. Shleifer (1997) points out that, in economies with weak general property rights, the wealthy can invest in private protection of their property rights. This results in private enforcement of their property rights and an absence of property rights protection for others.

Entrepreneurial ability, like other dimensions of intelligence, is likely at most only partially hereditary. On average, the entrepreneurial ability of oligarchic family scions ought to

[22] Though see Lenway *et al.* (1996).

regress steadily towards the population mean with each successive generation, as modeled by Caselli and Gennaioli (2003). Yet an oligarch with little entrepreneurial ability still commands all the political lobbying advantages enumerated above. Thus, older billionaire families should be progressively more drawn towards using political influence, rather than entrepreneurship, to sustain their economic positions. Alternatively, Sonin (2003) argues that a first generation of entrepreneurs in many transition economies became wealthy through adept rent-seeking, and favors weak general property rights enforcement because this facilitates their continued rent seeking. Genuine entrepreneurship never enters the picture.

By using their political influence to lock in their own corporate governance power, economically entrenched oligarchs thus also lock in on-going suboptimal capital allocation. This is partly because hereditary oligarchs are often simply less able entrepreneurs. In part, it also reflects the corporate governance problems intrinsic to the control pyramids that provide oligarchs with vast rent-seeking influence. It also reflects the incentives oligarchs have to suppress innovations that threaten the value of their existing capital, discussed in the previous section. And the lobbying for entry barriers and the like that lock in oligarchs' governance powers can also have side effects that further distort capital and other resource allocation.

C. Formalizing the Flavors of Capitalism

In this section, we formalize the reasoning that oligarchs may use their political influence to sustain institutional arrangements that preserve their status quo which benefits them at the expense of the rest of the economy.

Wealthy families need not always lobby for weak private property rights, which are detrimental to financial development.[23] A more developed, or more functionally efficient, financial system better allocates capital to its highest value uses. Greater financial development would improve the terms on which wealthy families could sell out, or raise outside capital. But wealthy families *might* lobby for institutions that enhance and protect their private benefits of control, weakening the private property rights of others and retarding financial development. Public investors, in contrast, unambiguously prefer strong private property rights protection since the main effect of weak rights is more predation by oligarchs. Potential entrepreneurial entrants likewise prefer strong private property rights because this lets them raise funds from public investors on better terms.

Whether economic entrenchment ensues or not thus depends upon which way the oligarchs opt. This jibes with the discussion above of oligarchs' magnified lobbying power.

[23] We deliberately adopt a narrow view of property rights related to financial development; however, a broader view may also be sensible. For instance, a class of top professional managers might become "entrenched" by setting up takeover defenses and undermining shareholder democracy. Or, as Krueger (1993) argues, government activism might create a class of bureaucrats who "entrench" to preserve their influence and economic power. Of course, large interventionist governments, pursuing social objectives other than economic efficiency, might deliberately sacrifice investors' property rights and financial development to those ends – even without entrenched bureaucrats. If these other forms of entrenchment, or even just big government *per se*, correlate with family control pyramids, this could confound the framework we develop below.

This can be formalized along lines developed in Shleifer and Wolfenzon (2002). Public shareholders expect some "stealing" by corporate insiders Thus, an entrepreneur seeking external financing must compensate investors up front for her expected thievery, in the form of a low share price in the initial sale of equity to the public. Better private property rights reduce actual and expected thievery by insiders, and so improve the terms on which external capital can be raised. This makes more investment projects viable for entrepreneurs. The result is faster economic growth.

The level of private property rights is controllable by the government – either by altering rights on the books or by varying the enthusiasm with which they are enforced. This means the government can determine capital market functionality. By raising the level of private property rights, it can generate faster economic growth.

Consider a simple stylized political economy model with the following cast of players. First, *political insiders* value both economic growth and side payments. The side payments can be outright bribery, campaign contributions, or anything in between. Second, *corporate insiders* control on-going business operations with considerable internal cash. Third, *outsiders* include both public investors and potential innovative entrepreneurs. We assume the political insiders and corporate insiders each act as one. In contrast, there are a very large number of outsiders, each with a small amount of cash, who cannot act collectively. Outsiders supply their savings to capital users competitively. Some outsiders wish to become entrepreneurs, and are possibly more able than the corporate insiders.

Clearly, this is a highly simplified model of the political and economic determinants of institutions. It omits obviously important considerations, like the roles of organized labor, political ideologies, and pressure from foreigners. It also abstracts away from salient aspects of

real political processes, like voting mechanism and constitutions. We return to these issues in subsection E below.

For simplicity, suppose there are only two levels of private property rights: strong and weak. The maximum side-payment the corporate insiders are willing to pay to the political insiders is the difference between their wealth in these two states. An analogous constraint applies to each outsider. This is a minimally binding constraint for the corporate insiders, for pyramids might allow them to use assets they control, in addition to their own wealth, to pay bribes. The political insiders' utility is a weighted average of the side payments received and economic growth, which is higher if shareholder protection is strong.

Define an equilibrium as a level of private property rights such that

1. The political insiders' utility at the equilibrium is higher than at any other level, given the behavior of corporate insiders and outsiders.
2. Neither the corporate insiders nor the outsiders are willing and able to pay side-payments to the political insiders sufficient to induce a change in the private property rights regime.

If the corporate insiders lobby for strong private property rights, they can sell their capital assets to more able entrants, who can more readily raise the necessary funds from public investors. This permits the old corporate insiders to fade away into a comfortable retirement. As strong private property rights are implemented, the value of private benefits of control, including those due to pyramids, falls. This limits corporate insiders' ability to make side-payments, and thus limits their political influence, reinforcing their decision to sell out, assuming side-payments are financed out of current cash flow. All of this combines to create pressure for less oligarchic and more diffuse capitalism.

In contrast, if the corporate insiders lobby for weaker property rights, and the attendant higher private benefits of control, they set the stage for economic entrenchment. Policies that compromise investor rights raise oligarchs' private benefits of control, providing them with more resources to lobby further. This creates pressure for more oligarchic and less diffuse capitalism. This what we call *economic entrenchment* – oligarchs lobby successfully for weak property rights, which provide them resources for further lobbying to preserve weak property rights.

This example is highly simplified. Private property rights protection is a multidimensional phenomenon that certainly can take more than two values. However, two values suffice to make our basic point: Economic entrenchment is but one possible equilibrium. There can be others – perhaps many others – in a more nuanced model. This suggests that previous work, such as Morck *et al.* (2000) and Rajan and Zingales (2003), may be excessively pessimistic in focusing too doggedly on the weak shareholder rights equilibrium. Nonetheless, that work clearly captures important aspects of the political economies of many countries, especially those that entrust corporate governance a few old moneyed families controlling great pyramidal groups.

Establishing the equilibrium is non-trivial. However, some intuitive considerations must apply. Any deviation from a pre-existing level of private property rights has several effects:

1. Any improvement in private property rights transfers wealth from existing users of capital to existing providers of capital. The opposite occurs if private property rights fall. We call this the *transfer effect.*
2. Any improvement in private property rights reduces the cost of external capital, and thus raises capital investment by both corporate insiders and outsider entrepreneurs. The opposite is true when private property rights are downgraded. We call this the *cost of*

capital effect. The cost of capital effect is positive for outsiders when private property rights are strengthened and negative when they are downgraded. For corporate insiders, the cost of capital effect from stronger (weaker) private property rights is positive (negative) if they need outside capital and zero if they do not.

3. A change in private property rights changes the number of outsiders who become entrepreneurs and undertake investment projects. This is because stronger private property rights lower their costs of external capital and make more projects viable. This creates product market competition for the firms controlled by corporate insiders. It also creates capital market competition, as today's entrepreneurs have more wealth to invest in the future. And it allows creative destruction to proceed, which erodes the value of the corporate insiders' existing capital assets. This *competition effect* is negative for corporate insiders if private property rights grow stronger, and positive if they grow weaker.

These considerations belie any simple predictions about the relationship between the level of private property rights and the corporate insider's welfare. Morck, Stangeland, and Yeung (2000) and Rajan and Zingales (2003) assume that weaker private property rights always benefit the corporate insider. That is, they presume that the transfer, cost of capital, and competition effects combine to generate a net increase in the corporate insider's welfare if the private property rights regime switches from strong to weak. This is likely a special case, albeit an important one, for the sum of the effects can have the opposite sign. For example, if corporate insiders' future investment needs greatly exceed their internal cash, the cost of capital effect might be sufficiently large to overwhelm the transfer and competition effects. In that case, the corporate insiders and the outsiders concur on the need for stronger private property rights.

Rajan and Zingales (2003) point out that many countries that currently have small stock markets had large and dynamic stock markets a century ago – a phenomenon they call the *great reversal*. They propose that, in these countries, a first generation of corporate insiders raised money from public investors and then lobbied for policies that caused financial market atrophy, or at least stood by while ideologues enacted them. This weakening of private property rights was to their advantage because they no longer needed outside capital. In our terminology, the "cost of capital" effect faded, and the "transfer" and "competition" effects dominated. They call their idea an *interest group theory of financial development*, which parallels our concept of economic entrenchment. In essence, Rajan and Zingales (2003) propose that the preferences of the first generation of corporate insiders regarding investor property rights protection changed as the insiders aged – or that their heirs had markedly different preferences.

This reasoning, while perhaps historically plausible, highlights a time inconsistency problem. Rational public investors should have anticipated this *volte-face*. Expecting a future erosion of shareholders' property rights, they should have been loath to provide the first generation of entrepreneurs with capital on generous terms. This objection can be circumvented in several ways. First, public shareholders make mistakes and learn from experience. The statutory property rights protection most *great reversal* countries provided their first generation of public investors was weak, and public investors may have learned from experience not to offer equity capital on generous terms. Alternatively, the erosion may have been uncertain, for investors might have expected the enactment of strong property rights. Finally, public investors might have expected the erosion to occur many years down the road. Perhaps the expected present value of insider expropriation at the time of the initial provision of finance was small.

Such issues highlight the difficulty of constructing fully rational expectations equilibrium models of institutional development.

A simplification in our conceptual framework is that outsiders always prefer strong private property rights because the transfer and cost of capital effects are both positive for them and the competition effect is irrelevant. This may not be entirely realistic if organized labor prefers job security for members over general economic growth, as Roe (2003) and Högfeldt (2003) argue is the case in social democracies like Sweden. However, in such countries, we might think of organized labor as insiders too.

This and all the other simplifications in this section highlight the need for rigorous theoretical development of this area, and for careful empirical work to guide theory. Developing models that formalize different flavors of capitalism is a fascinating uncharted territory for creative theorists.

D: Determinants of Economic Entrenchment

Economic entrenchment is a self sustaining, stable equilibrium that seems to characterize some, but not all oligarchic capitalist economies. The stark divergence between high and low income economies appears to result from the latter becoming trapped in weak property rights regimes characterized by economic entrenchment. This begs the questions of what determines whether or not any particular country falls into an economic entrenchment trap. We believe this to be a fundamental economic problem.

Generic considerations

For economic entrenchment to occur, corporate insider must be willing and able to pay the political insider sufficient side-payments to refrain from establishing strong property rights

protection, and outsiders must be unable or unwilling to offer large enough side-payments to oppose this. Equally important are political insiders' preferences – the relative values they place on general economic prosperity versus personal side-payment income. These presumably depend on how strongly property rights affect economic growth as well as social constraints on political insiders' acceptance and valuation of side-payments.

Obviously, current economic condition and future economic outlooks affect the corporate insider's stance – she is more able and willing to pay large side-payments to political insider for weak private property rights if her existing operations generate larger cash flows and her future investment needs are smaller. In our terminology, the transfer effect is larger, for larger cash flows mean the corporate insider has more opportunities to appropriate wealth. Interested in sustaining these cash flows, the corporate insider views the competition effect associated with high private property rights as a negative. Also, the corporate insider has more internal cash to finance future investment, so the cost of capital effect is less important.

The corporate insiders' current cash flows and future investment needs certainly depend on exogenous "initial conditions," at least to some extent. Corporate insiders with more experience in rent-seeking than in genuine entrepreneurship, as in some transition economies, might tend to favor weak property rights because these let them play to their advantage. Hellman *et al.* (2003) call this *state capture* – in our terminology, the acquisition of control over the organs of the state by corporate oligarchs. If such initial conditions induce weak institutions, these may well further limit future investment opportunities and alter political leaders' concern for the public interest. Ensuing path dependence might well lock in economic entrenchment.

All else equal, oligarchs' lobbying should be more effective if political insiders value side payments more and economic growth less. This weighting is inherent in the parameters of the

political insiders' utility functions, though this is a vast over-simplification. Enumerating the likely determinants of the weights politicians assign to the public interest versus their personal gain requires further reflection. This relative valuation most plausibly depends on the country's political, legal, and cultural traditions.

Political insider's preferences presumably also depend on the costs and benefits of taking bribes. An absence of democratic accountability, a high general level of corruption, a controlled press, and an ignorant, illiterate, and impoverished citizenry probably shift this balance towards accepting bribes. Of course, all these factors are also outcomes, potentially caused by economic entrenchment. Glaezer and Shleifer (2003) describe a "Curley Effect" in Boston politics, whereby its Irish-American Mayor James Michael Curley used wasteful redistribution and inflammatory rhetoric to drive more affluent and educated Anglo-Saxon voters out of Boston, thereby cementing his political control. Nonetheless, many authors argue persuasively that these sorts of factors are largely historically rooted and therefore exogenous in fundamental ways. However, the partial endogeneity of such factors might contribute critically to stabilizing economic entrenchment.

Further considerations, and our reading of the available literature, let us resolve these generic considerations into a set of fundamental determinants of economic entrenchment. These consist of pre-existing endowments and industrial conditions; political, legal, social, and cultural traditions; and economic openness. We consider each set in turn

Initial endowment and industrial conditions

Easterly and Levine (2003) consider three broad classes of hypotheses. The first they dub the "endowments hypothesis" – variables like settler mortality, latitude, natural resources, and access to the sea matter most in explaining general prosperity. The second, their "institutions

hypothesis", focuses on private property rights, accountability, political stability, government effectiveness, regulatory burden, rule of law, and an absence of corruption. The third, their "public policy hypothesis", holds that more standard economic variables like inflation, trade openness, and exchange rate overvaluation.

Using the logarithm of 1995 real *per capita* GDP as their dependent variable in multiple regressions, they report that endowments explain economic growth, with natural resources and mortality rate the most significant factors. They also find that endowments help explain cross-country variation in institutional development, with natural resources and mortality rate again the most significant factors; and that endowments do not explain growth except through their influence on institutions. Finally, they report that policy variables do not explain growth once the institutional effects are accounted for. The Easterly and Levine (2003) study is valuable not only for its empirical findings, but for demonstrating how researchers can test the importance of different theoretical and conceptual explanations for these issues. We anticipate a large literature developing along these lines.

Other important studies provide valuable insights into why endowments are critically important.

Such a view is embedded in Solokoff and Engerman (2000), who study the economic history of the Americas from the sixteenth to the eighteenth century. They point out (p. 221) that plantation economies like Barbados, Cuba, and Jamaica, which "specialized in the production of sugar and other highly valued crops associated with extensive use of slaves had the highest *per capita* income in the New World" in the sixteenth century, including slaves in the calculation. The greater efficiency of the very large plantations and the overwhelming fraction of the populations that came to be black and slave made the distributions of wealth and human capital

extremely unequal. The long-run success and stability of the members of these elites (white plantation owners) were also facilitated by their disproportionate political influence. Together with the legally codified inequality intrinsic to slavery, the greater inequality in wealth contributed to the evolution of institutions that protected the privileged, even after the abolition of slavery."

A second category is Spanish America. These economies had valuable mineral resources and abundant native labor with low human capital. The Spanish colonial master built on pre-conquest social institutions, whereby Indian elites extracted tribute from the general population, to control huge landholdings. This system locked in the status of the earliest settlers, who became formal representatives of the Spanish Crown, while restricting further settlement. The result is a highly unequal distribution of political and economic power.

In both of these categories of economies, institutional development was directed towards protecting the economic and political power of entrenched oligarchs. This was accomplished by curtailing democracy and otherwise limiting the economic and political power of the commoners, say, by spending little on basic public education. This is consistent with the oligarchs' established investments generating high cash flows, but with broader investment having relatively low returns to the oligarchs. Morevoer, the oligarchs, the first wave of European settlement, by favoring weak institutions, might well have limited the returns to further investment by later immigrants or natives. The resulting skewed wealth distribution induced politicians to attach little weight to the interests of the common people, further reinforcing economic entrenchment.

Solokoff and Engerman (2000) contrast these two categories of economies with a third – British North America. These areas, especially north of Virginia, had climates unfavorable to

large-scale plantations. Their development was based instead on yeoman farmers and townsfolk of European descent with relatively high and similar levels of human capital – especially after settlement displaced the fur trade. Consequently, the areas that became Canada and the United States developed more egalitarian distributions of political power, and their institutions developed to provide more equal treatment and opportunities to their populations. As well, they spent far more on education for the population as a whole. These colonies presented few opportunities the first wave of settlers to appropriate cash flows, but offered a broad range of investment opportunities that required outside capital. In this environment, the initial settlers favored property rights protection and sound institutions in general. The resulting relatively even distribution of wealth induced politicians to place a greater weight on general prosperity.

Acemoglu, Johnson, and Robinson (2001) propose a different explanation as to how the initial conditions confronted by European settlers in different countries generated different investment opportunities and hence different property rights regimes. They examine the economic growth of British colonies to ascertain why some became rich and others did not. They argue that large European settler populations preferred institutions that enforced the rule of law and encouraged investment. In places where climatic conditions led to high settler mortality, large settler populations were unviable, and small cadres of European colonial overlords took charge and established institutions based on exploiting indigenous populations. Taking European settlers' early mortality rate as an exogenous instrument, they find that low mortality encouraged European settlement; inducing early institutions supportive of the rule of law, public education, etc., which form the basis of current institutions. High settler mortality fostered "extractive" institutions, which also persist. They go on to show that current *per capita* income

is higher the better the country's current protection against state expropriation; and that this, in turn, is highly negatively correlated with early settler mortality rates.

In a similar vein, Easterly and Levine (1997) use African data from the 1960s through the 1980s to show that ethnic diversity is related to slow growth. They propose that ethnic fragmentation causes groups in power to invest in competitive short-term "extractive" policies for fear of another ethnic group usurping power. They further suggest that ethnic diversity, or more general political fragmentation, reduces the consensus for funding good public goods like infrastructure, education, and financial regulation. They provide robust supportive empirical evidence.

Acemoglu, Johnson, and Robinson (2002, 2003), using urbanization to proxy for economic development, demonstrate a "reversal of fortune" effect. Many countries that were relatively rich in 1500 are now relatively poor. They argue that this is inconsistent with a simple geographic or climatic story. Instead, they argue that "[i]n prosperous and densely settled areas, Europeans introduced or maintained already existing extractive institutions to force the large population and the slaves imported from Africa to work in mines and plantations." "In contrast, in previously sparsely settled areas, Europeans settled in large numbers and created institutions of private property … [that] encourage commerce and industry." This institutional development made possible the spillover benefits associated with industrialization in the eighteenth and nineteenth centuries that built their current high standards of living.

Thus, the work by Solokoff and Engerman suggests that an initial round of investment opportunities creates either a skewed or egalitarian distribution of wealth, and that this in turn provides politicians with either an apolitical peasantry or a politically active middle class. The former allows politicians to place greater weight on their personal gains than does the latter.

Acemoglu, Johnson, and Robinson suggest that large populations of European settlers, who expected to build a new homeland, transplanted institutions supportive of the rule of law and property rights. The ensuing development of social and political traditions allows these institutions to persist. These observations lead to the following additional considerations.

Traditions – political legal, social, and cultural

A tradition of democracy is probably important, see Barro (1991, 1997). If political insiders are elected, and if outsiders substantially outvote insiders, political insider's should assign a lower weight to side-payments than they would absent democracy. Democratic traditions are the work of decades and centuries, and so can be regarded as exogenous – at least compared to more ephemeral economic phenomena. For instance, religious dissidents and other anti-establishment groups from Europe settled early in the thirteen colonies that became the United States. Their popular suspicion of excessively centralized political and economic power regularly resurges in American political history; as when President Woodrow Wilson (1913-1921) wrote: "No country can afford to have its prosperity originated by a small controlling class. The treasury of America does not lie in the brains of the small body of men now in control of the great enterprises, ….. It depends upon the inventions of unknown men, upon the originations of unknown men, upon the ambitions of unknown men. Every country is renewed out of the ranks of the unknown, not out of the ranks of the already famous and powerful in control." [24]

Political systems are probably not exogenous in the long run, for corporate insider's lobbying targets might include the political process itself, as well as private property rights. Engerman and Sokoloff (1997) and Sokoloff and Engerman (2000) argue that the colonial elites of Latin American countries, intent on controlling the state to control natural resources, actively

[24] See Brandeis (1914) Ch. 10, "The Inefficiency of the Oligarchs."

opposed democracy to prevent the poor majority from gaining power and redistributing rents form those resources. Haber (2000) makes similar arguments. Olson (2000) and others present general models of how entrenched special interests take control of the political process. Rajan and Zingales (2003) propose that the United States' political process is largely immunized against economic entrenchment (which they call "the interest group theory of financial development") because of its multitudinous branches of government, which provide checks and balances, and because of the diversity and activity of competing interest groups.

In addition to democracy, an efficient and independent judiciary seems important. It raises the penalty for being caught accepting bribes, and so plausibly shifts political insiders' cost-benefit analysis towards greater concern for economic growth. La Porta *et al.* (1998) and others propose that ancient legal traditions, established centuries or even millennia ago through colonial occupation, invasion, or economic domination, still influence levels of general corruption, judicial efficiency, and basic legal rights. La Porta *et al.* (1998) echo Hayek (1960) in proposing that, in Civil Code countries, which subordinate courts to the State, elites use the judicial system to become entrenched. In contrast, Common Law traditions have more independent judiciaries that protect private property owners from the State[25]. See Beck *et al.* (2002) for empirical evidence consistent with this view. Yet the evidence in Rajan and Zingales (2003) that many civil law countries (such as Belgium or France) were much more financially developed than common countries (such as the U.S. and Australia) undermines the stronger version of this theory, and brings back a central role for political choice on legislation which seems to have led to a reversal in the interwar period (see Perotti and von-Thadden, 2004).

[25] Another difference is that Common Law systems, based on continually reinterpreted precedents, are better than Civil Code traditions at adjusting to changing social and economic circumstances. See Beck *et al.* (2002) and many others.

Another important adjunct to democracy, that also probably raises the costs of taking bribes, is a free and independent press. A free press exposes and criticizes political insiders who value side-payments more than social objectives. A free press also exposes controlling insiders' extractions of private benefits. Finally, a free press informs outsiders, making them less manipulable, and thus making insiders' lobbying less effective. Dyck and Zingales (2002) show that an independent and free press mitigates theft by corporate insiders. However, Djankov *et al.* (2003) show that the media virtually everywhere are controlled either by the State or by a few wealthy families. Where those families are part of oligarchic elites, the watchdog role of the press may be seriously compromised despite seeming free of State interference.

Less quantifiable social institution also probably determines a country's propensity for economic entrenchment. For example, whether a country provides sound basic public education might matter. Better educated outsiders are better able to understand and participate in political debates. This presumably lowers outsiders' lobbying costs relative to insiders'. A better educated populace also presumably generates more capable and politically astute outsider entrepreneurs. Engerman and Sokoloff (1997) and Sokoloff and Engerman (2000) argue that Latin American colonial elites actively opposed public investment in human capital to prevent the poor majority from gaining power and redistributing rents from natural resources.

Even less tangible institutions, like culture and mores, may also be important. Landes (1949) attributes the generally poor performance of the French economy compared to those of Germany, Great Britain, and the United States throughout the 19th century to a predominance of family control in France. He argues that French family firms were highly risk averse, and more interested in survival and succession than in growth and innovation. Thus, family businesses lobbied for protectionism and bailouts, and regarded the state as "a sort of father in whose arms

[they] could always find shelter and consolation" (p. 50). The cost was slow overall economy growth. Consistent with this, Murphy (2004) argues that French culture places a huge weight on each generation's sacred duty to pass on a patrimony to the next, and that the French Civil Code makes it very difficult for the patriarch of a family business to disinherit his son.

Weber (1958), La Porta *et al.* (1997a), and others argue that religion, perhaps the most intangible of institutions, also matters, with some religions more amenable to commerce and finance than others. Weber (1958) proposes that the Protestant religion, more specifically the Calvinist Reformation, by emphasizing individual accountability, fostered a cultural shift that favored entrepreneurs over old-money elites. La Porta *et al.* (1997a) argue that hierarchical religions, which they define to include Roman Catholicism and Islam, are less conducive to the growth of large businesses. Like Weber, they emphasize the importance of cultural institutions that encourage individual initiative and cooperation among unrelated individuals. These characteristics embolden outsiders and limit popular acceptance of oligarchic rule. Stulz and Williamson (2003) show that a country's principal religion (a proxy for culture) helps predict cross-country variation in creditor rights. For example, Catholic countries provide creditors weaker rights than other countries do; and firms in Catholic countries use less long-term debt. Religion actually predicts a country's creditor rights better than openness to international trade, language, income *per capita*, and even legal origin. Religion and language, both as proxies for culture, are also important explanatory variables of property rights enforcement.

Rajan and Zingales (2003) point out that the financial atrophy, or "great reversals", they detect did not occur with equal intensity in all countries, and that many stock markets flourished through the entire twentieth century. They propose that different political, legal, and cultural

traditions instill different degrees of susceptibility to economic entrenchment, much as certain genes create dispositions towards specific infirmities given the necessary environmental triggers.

Further research along the lines of all of the studies discussed above is likely to generate exciting new insights. We are only beginning to understand these very basic issues, which are fundamental not only to economics and finance, but to the whole spectrum of social sciences.

Globalization

One particularly rapidly changing aspect of the economic environment of many countries is openness to the global economy. European countries are merging into an ever closer economic and political union, regional free trade blocks and bilateral free trade treaties are much in vogue, and pressure continues for further multilateral action to reduce trade and capital flow barriers. Globalization merits special attention here, for the persistence of economic entrenchment requires a degree of economic autarky for several reasons[26].

First, autarchy preserves monopoly and monopsony power in product and factor markets in general. If domestic entrants can borrow abroad, list on foreign stock exchanges, or otherwise obtain capital from foreign investors, they can establish themselves despite ill functioning local capital markets and institutions. Bekaert and Harvey (2000) examine how emerging market liberalizations – regulatory changes, the introduction of depositary receipts and country funds, and structural breaks in equity capital flows – affect the cost of capital among other things. They find that liberalizations decrease the cost of capital by significant margins: 5 to 75 basis points. Similarly, Henry (2000a, b) reports a significant favorable impact of capital openness on the domestic cost of capital, and thus on investment. Coffee (2002), Karolyi and Stulz (2003), Stulz

[26] For a very recent contribution, see Stulz (2005).

(1999), and Siegel (2003) discuss how cross-listing on foreign exchanges and submitting to foreign regulators can credibly signal investors about firm quality.

Second, autarky allows better control over the pace of creative destruction. Capital barriers can keep local innovators from developing their innovations, cutting into existing firms' markets, and accumulating wealth. Trade barriers can keep innovative foreign products out of domestic markets and thus preserve the value of existing capital assets. Suppressing domestic innovation is of no value if foreign innovators can flood the market with their products.

Third, autarchy gives governments much greater policy freedom. Confiscatory taxes, skewed regulations, inefficient subsidies, and other politically related private benefits of control are difficult to sustain in an open economy. And bilateral and multilateral treaties limit governments' powers to enact such policies. Moreover, footloose capital, skilled labor, and consumers can take their business elsewhere if the local economy becomes too distorted.

Finally, locals may imitate foreigners. Caves (1974) and a huge subsequent literature argue that entry by foreign multinationals raises productivity because of technology spillovers and heightened competition in both goods and factor markets. Locals may also come to demand the same financial and political rights they see foreigners enjoying. That is, openness may create popular support for institutional reform. Local governments and regulators may be pressed to adopt international best practices in disclosure, governance, and regulation.

For example, Stulz (1999) analyzes how openness alters domestic investors demand for better corporate governance. Locals can learn from foreign investors the skills to seek information about domestic companies and to monitor performance. Khanna and Palepu (2001) examine Indian firms and show that foreign investors identify better performing India firms and propose that their monitoring improves performance. Active foreign investors both train

personals for domestic investors and serve as role models. Also, the presence of active investors raises the demand for information services, such as auditing and financial analysis. And foreign investors can activate a dormant market for corporate control. All of this raises the net benefits to corporate insiders of providing good governance and lowers the cost of sending a "good governance" signal to investors.

Thus, economic openness, the freedom of locals to do business with foreigners, ought also to be numbered among private property rights; and economic autarchy is probably a lobbying goal of oligarchs seeking economic entrenchment. At the same time, openness, once installed, probably will make economic entrenchment more difficult to attain for elite.

While direct evidence of this is limited, circumstantial evidence is supportive.[27] Faccio (2003) shows that economies in which the corporate and political elites have stronger blood ties also have more restrictions on cross-border capital flows. Morck *et al.* (2000) show that economies with more inherited billionaire wealth as a fraction of GDP have more restrictions on inward foreign direct investment. Rajan and Zingales (2003) find greater "great reversals", or financial atavism, in countries with more closed economies. They argue that dual openness, that is trade openness and capital flow openness, is essential to counter the forces that undermine capital market development. With only trade openness, industrial incumbents press for government subsidies as well as the maintenance of their privileged access to capital. The end result is the sustained repression of domestic capital market development. Moreover, they argue that capital openness requires private property rights, for otherwise information asymmetry

[27] By direct evidence, we mean evidence that links openness, or the lack thereof, to lobbying behavior. An extensive literature links openness to development. This deserves another survey, but some related contributions merit mention here. Sachs and Warner (1995) report a positive impact of globalization on reforming countries. Bekaert and Harvey (2004) find that financial liberalization has a greater positive impact on growth in countries with better institutional environments. These include countries with English legal origins, better investor protection, and speedier judicial processes. Li *et al.* (2004) find that when emerging markets grow more open to foreign investors, their stock markets grow more discriminating in valuing individual companies.

continues to mar domestic capital markets, preventing entry by locals too small to seek foreign capital and thus sustaining the dominance of the local oligarchs (meaning that the foreign capital will flow to the oligarch's companies). Rajan and Zingales (2003) use exports plus imports over GDP to proxy for trade openness, international capital flows to proxy for capital flow openness, and measures such as equity issues, the number of listed companies, and stock market capitalization to proxy for financial development. They report that trade openness heightens the positive impact of industrialization on financial development. They also note that this impact is much more important early in the twentieth century than in its latter decades. The impact disappears in the mid-century period when international capital mobility was limited, roughly from 1930 to the 1970s.

Some direct evidence pertaining to changes in openness is available to support these arguments. Morck *et al.* (2000) show that the unexpected enactment of free trade with the United States caused the stock prices of Canadian firms controlled by old money families to fall relative to other Canadian stocks in the same industries. They also show that Canadian firms controlled by old money families had abnormally high capital intensity prior to free trade, but that their capital intensity fell to industry, firm size, and firm age corrected norms subsequent to free trade. Johnson and Mitton (2003) show that, when the Malaysian government imposed capital controls in 1998 in response to allegations that foreign "hot money" caused the East Asian economic crisis, the stock prices of firms with ties to the ruling party rose and the stock prices of other firms fell. Their result suggests that capital controls create a screen for cronyism, in which the government forwards resources to connected firms via their policies. However, Siegel (2003a) finds that increasing openness in Korea primarily expanded and strengthened that countries' most politically connected firms. Further evidence is needed to clarify the issue.

The arguments of Morck *et al.* (2000), Johnson and Mitton (2003), and Rajan and Zingales (2003) suggest that openness to global capital flows, as well as to international trade, ought to augment national economic performance. However, other students of international finance disagree out of concern that capital market openness might heighten economic volatility. For example, Bhagwati (1998) argues that capital market openness can spread financial crises, and Forbes and Rigobon (2002) study contagion as a factor in market fluctuations. Be this as it may, avoiding economic entrenchment clearly counts as a serious weight on the side of the balance favoring capital openness. Further work exploring this issue is likely to be of considerable value.

E: Critique

The above political economy framework is deliberately simplified for clarity, and uses a limited number of players. The evolution of institutions is certainly affected by more than "corporate insiders" and "outsiders" lobbying "political insiders". Other constituents, like organized labor and professional managers certainly matter. Also, the framework assumes a unitary government, sidestepping complicated political processes and tensions associated with alternative constitutional arrangements, e.g., systems with substantial separation of powers, federal systems, and alternative electoral systems. These are important issues.

Expanding the list of players beyond "corporate insiders" and "outsiders" may lead to useful and competing explanations for concentrated corporate control other than economic entrenchment. Roe (2003) suggests that corporate control must be concentrated in economies with powerful organized labor and other powerful interest groups who would otherwise exploit providers of capital. Perotti and von Thadden (2004) examine political economy determinants of

corporate control and argue that corporate control arrangements reflect the median voters' preference. Laborers and managers with undiversified human capital dislike risky corporate strategies. If these constituencies provide the median voter, a democratic society would grant corporate control to banks or others averse to risky strategies, whose preferences resemble those of voters more than those of wealth maximizing diversified shareholders.

Political market competition and constitutions, mechanisms that determine winners in the political market, could lead to important additional insights. The intensity of competition in the political market might affect the equilibrium path of institutional development. In the framework of Engerman and Sokoloff (1997), Sokoloff and Engerman (2000), and Acemoglu, Johnson, and Robinson (2001), institutional development follows the preferences of the dominantly powerful. But Easterly and Levine (2003) describe a political market crowded with unstable outcomes so that all ruling parties act myopically, impeding property rights development. Also, constitutions might affect the behavior of political actors and their weighing of constituents' interests.

Research addressing these issues is needed for a clearer understanding of institutional development. A great example is Pagano and Volpin (2005), who model entrepreneurs, rentiers (minority shareholders), workers, and two competing political parties. They show that the electoral system, whether proportional (where a political party dominates by winning a majority of votes) or majoritarian (where a political party aims to win in a majority of districts), affects the equilibrium level of investor protection. Under a proportional rule, parties cater to social groups whose votes might add up to a dominant position, and an outcome favorable to entrepreneurs and employees, but unfavorable to rentiers, ensues. Under a majoritarian rule, parties compete for votes in pivotal districts, which may not be ideologically committed. If these districts are populated by rentiers, who focus on the implications of policies for overall economic

growth, stronger shareholder protection and weaker employment protection are more likely. The paper vividly demonstrates the fruitfulness of injecting multiple constituents and political competition into the research on the political economy of institutional development.

F. Summary

The core inquiry in this survey is the concentrated control of corporations, and its micro and macro level economic implications. Concentrated control of a country's large corporations, as in family control pyramids, could serve important positive economic functions. It might help overcome market inefficiencies by facilitating monitoring, control, and capital allocation. But the concentrated control of a country's large corporations might also induce microeconomic problems associated with entrenched management wielding control rights vastly disproportionate to their ownership stakes and macroeconomic resource misallocation that might compromise economic growth. This section proposes the concept of *economic entrenchment* as a feedback loop, whereby weak institutions place sweeping corporate governance powers in the hands of a tiny elite group, who then lobby for weak institutions to preserve their concentrated control over the countries large corporations – oligarchic capitalism.

But sometimes, highly concentrated corporate control does not induce economic entrenchment. Strong institutions develop and diffuse capitalism takes hold. This apparent indeterminacy in the co-evolution of institutions and corporate control is an important puzzle. Economic entrenchment explains why family business groups, an institutional advantage early in economic development, become oligarch capitalism in some countries, but not others. Exploring

the political economy basis of financial development provides answers, and is likely to yield further insights soon.[28]

Some core concepts underlie economic entrenchment as a possible political economy outcome. First, entrusting the corporate governance of the greater part of a country's corporate sector to a tiny elite, especially via control pyramids, gives that elite huge advantages in political lobbying. Second, such oligarchs lobby for weak property rights if they prefer increased private benefits of control over better access to outside investors' capital. Thus, the elite prefer strong private property rights only under some circumstances, while the rest of the population always prefers strong private property rights. Third, economic entrenchment requires that political insiders see the benefits of cooperating with the oligarchs as outweighing the costs, despite its detrimental effects on the populace in general.

This framework does not imply that economic entrenchment is inevitable. The elite and the general citizenry might both prefer strong property rights, particularly if the future economic outlook is bright and the elite, not just the general citizenry, need external financing. However, the framework does suggest a high degree of path dependence. An historical shock that induced economic entrenchment in the past could have a long-lasting effect on a country's institutional development; for once in place, economic entrenchment can be self-sustaining in the absence of further shocks.

How corporate control and the political influence it engenders are path dependent is of great interest. For on this issue turns the most important economic question of all – why some countries are rich and others poor. This section is deliberately speculative. Our central idea is that economists ought to explore how institutional development, as a political economy issue,

[28] This approach is gaining attention from, among others, Acemoglu *et al.* (2004), Perotti and Volpin (2004), and most recently Stulz (2005).

relates to the distribution of corporate control in an economy. Corporate control provides resources and power to influence institutional development. The whole body of economics suggests that such resources and power would be used to further the self-interest of those who wield them.

The preliminary work surveyed above, notably Acemoglu *et al.* (2001, 2002, 2003), Engerman and Sokoloff (1997), Easterly and Levine (2003), Rajan and Zingales (2003), highlights the importance of an initial distribution of economic power, the preferences of those wielding it, and the path dependence of institutional development. This research agenda is long and incomplete. We know little about when or whether initial conditions matter more than the elite's preferences. We know little about how that balance varies across countries and over time. Much important work remains.

We speculate that the preferences of entrenched elites regarding institutional development depend on their expected future needs for broader cooperation – for example external financing to undertake future economic opportunities. But further work is needed to confirm or reject such speculation, and to clarify the tradeoffs involved.

The success of those entrusted with corporate governance powers in influencing institutional development doubtless depends on existing institutions – social, political, judicial, and educational institutions. These institutions determine the effectiveness and nature of successful lobbying strategies, as well as the payoffs available to political insiders. Democracy, the rule of law, a free press, comprehensive public education, and individualistic cultures all probably raise political insiders' potential costs when accepting bribes from corporate insiders.

This newly emerging literature suggests conditions deep in each country's economic history strengthened or weakened these sorts of institutions, either locking in oligarchic

capitalism and economic entrenchment or opening the way to rapid growth and more diffuse capitalism. But these historical, social, political, and judicial institutional conditions are, in turn, endogenous, if we push deeper into economic history. Our theoretical and empirical understanding about how these interactions play out is severely limited. For example, we are only beginning to understand the importance of legal traditions in determining the property rights of outside investors, and have little understanding of other ways in which legal traditions might matter. We have barely scratched the surface in learning how different legal systems affect financial and economic institutions such as the distribution of corporate governance powers, let alone social, political, judicial, and educational institutions, not to mention the complicated interactions between them all. Yet all of these almost certainly affect the political economy equilibrium that determines property rights among other things. Further work – conceptual, theoretical, and empirical – is needed.

Overall, rigorous theoretical models of this sort of political economy game are likely to run up against difficult problems. Rajan and Zingales (2003) explicitly sidestep an apparent time inconsistency in institutional change. How should investors in a strong property rights institutional environment deal with the possibility that property rights might be weakened in the future? Do investors buy stocks in emerging markets as ways of betting on those countries developing good institutions? This might explain some of the findings of Morck, Yeung and Yu (2000). But we have little real understanding of how stable property rights regimes are, and what contributes to their stability.

While we suggest using formal political economy models and hypothesis testing to advance our understanding of institutional development, this needs not be the only approach. At

present, non-technical and historically descriptive approaches, like Haber (2000), Roe (2003), and Morck (2004), can still provide critical insights.

Assembling either cross country and historical data for formal econometric analysis can be labor intensive. One way of mitigating this problem is for researchers to share their data. Some plausibly important variables also measure concepts more commonly associated with anthropology, sociology, political science, or other social sciences than with economics and finance. Borrowing data from other fields might thus help build a deeper understanding of institutions, and of the extent to which they really are creatures of economics. Surveys of the attitudes of different segments of society towards different sorts of institutional changes might also be useful.[29] Carefully designed economic experiments might also help our understanding institutional development while we await sufficient panel data on real economic and institutional variables.

V. Conclusion

Economic growth seems related to the distribution of control over an economy's large corporate sector. Outside of the United States and United Kingdom, most large corporations have controlling owners, typically very wealthy families. Using pyramidal structures, cross shareholding, and super voting rights, they typically control many listed companies *via* control pyramids. These drive wedges between such families' dominant control rights and their often miniscule actual investments in companies they control.

This separation permits the simultaneous presence of two well known corporate governance problems: a divergence of the interests of the controlling owner from that of outside

[29] For example, Domínguez (1982) surveys attitudes of Latin American elites and outsiders to economic openness to detect what he calls *national bourgeois coalitions* –akin to our entrenched economic elites.

shareholders and the entrenchment of the controlling owner. Tiers of fully controlled, but only partially owned firms let the controlling owner utilize corporate resources she does not *de jure* own to fund private benefits with no fear of a successful shareholder revolt or hostile takeover. By orchestrating intercorporate transactions at artificial prices, the controlling owner can tunnel wealth between pyramid firms to generate greater private benefits. The consequence is inefficient resource allocation at the firm level.

Many countries effectively entrust the corporate governance of substantial parts of their corporate sectors to the large pyramidal groups of a few extremely wealthy families. This can potentially magnify poor governance by a few family patriarchs into inefficient economy-wide capital allocation, reduced investment in innovation, and retarded economic growth. Moreover, such elite families understandably value the *status quo*. They sometimes, but not always, appear to influence public policies to curtail private property rights development, capital market development, economic openness, and other threats to the *status quo*. Much existing work points to this *economic entrenchment* as a significant issue in many countries. We propose a simple conceptual political economy framework to define economic entrenchment and the conditions under which it takes hold.

While we develop our arguments in the context of wealthy families with extensive control pyramids, the fundamental concept of economic entrenchment is more general. Tiny elites of professional managers running *keiretsu* corporate groups in Japan, or of bureaucrats running state controlled pyramids in France, might also be entrenched. The essential issue is the negative consequences for growth of entrusting an economy's capital allocation to a tiny elite that cannot be sacked.

Our literature survey suggests several key issues.

First, the archetypal corporate governance problem in the modern United States economy, a conflict between atomistic shareholders and professional managers does not generalize to most other countries. Rather, large firms in most countries are typically organized into pyramidal groups controlled by a few wealthy families. The ensuing corporate governance problem is conflict between the controlling shareholder of the pyramidal group and public shareholders.

Second, the distribution of control over the corporate sector affects economic development. Such highly concentrated control over corporate assets plausibly leads to a range of market power distortions, especially in capital markets. It also may curtail investment in innovation and augment rent-seeking. All of these effects likely retard economic growth.

Third, public policy regarding important issues like property rights, the development of financial markets and institutions, and economic openness, is usefully thought of as a political economy outcome. From this perspective, "public policy" in many countries cannot be considered a discretionary variable that can be "adjusted" to cure economic ills. We need to identify those factors that are "adjustable" and that might induce a transition of the political economy from a suboptimal to a better equilibrium. Further empirical and theoretical work that clarifies these issues is likely to be of first order importance.

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Table 1 The Cross-Country Relationship Between Growth in Real *Per Capita* GDP and Capital Ownership, Controlling for Current per Capita Income, Capital Investment Rate, and Level of Education

	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8
Intercept	1.43	1.58	1.59	1.65	1.75	1.73	1.86	1.78
	(0.32)	(0.30)	(0.27)	(0.28)	(0.22)	(0.26)	(0.20)	(0.25)
Log of per capita GDP: ln(*Y*/*L*)	**-1.76**	**-1.77**	**-1.80**	**-1.79**	**-1.54**	**-1.66**	**-1.62**	**-1.69**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Capital Accumulation Rate: *I*/*K*	**0.21**	**0.22**	**0.21**	**0.21**	**0.17**	**0.20**	**0.18**	**0.20**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Average Total Years of Education: ln(*E*)	00.23	00.20	00.25	00.21	00.24	00.20	00.26	00.21
	(0.27)	(0.35)	(0.23)	(0.32)	(0.24)	(0.35)	(0.21)	(0.32)
Business Entrepreneur Billionaire Wealth Over GDP: *B*/*Y*	**0.44**	**0.37**	**0.42**	**0.37**	**0.50**	**0.38**	**0.45**	**0.37**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Heir Billionaire Wealth Over GDP: *H*/*Y*	**-0.29**	**-0.17**	**-0.27**	**-0.16**	**-0.41**	**-0.19**	**-0.33**	**-0.17**
	(0.03)	(0.10)	(0.03)	(0.09)	(0.01)	(0.09)	(0.01)	(0.08)
Definition of 'heir' [a]	H_1	H_2	H_3	H_4	H_5	H_6	H_7	H_8
R squared	0.519	0.488	0.531	0.489	0.545	0.491	0.536	0.491

Note: Numbers in parenthesis are two tailed t-test probability levels for rejecting a zero coefficient. Coefficients in boldface are statistically significant at 90% confidence or more. Sample of 39 countries consists of the countries listed in Table 1 minus the U.K. and U.S. See Morck *et al.* (2000), Table 2 for further details.

[a] H_1 includes only the wealth of billionaires known positively to be heirs, politicians or politicians' relations. H_2 also includes the wealth of billionaires who are probably heirs. H_3 includes H_1 plus fortunes jointly controlled by a founder and his heirs. H_4 includes all the above. H_5 through H_8 are analogous to H, H_2, H_3 and H_4 but do not include politician billionaires and their relations.

Table 2 – Widely Held Firms versus Family Controlled Firms as Percent of Large Corporations in Various Countries[a]

	Control inferred at 10%[b]		*Control inferred at 20%*		Source
Country	**Widely held**	**Family control**	**Widely held**	**Family control**	
Argentina	0	65	0	65	La Porta et al. (1999, Tables 2 & 3)
Australia	55	10	65	5	La Porta et al. (1999, Tables 2 & 3)
Austria	5	15	5	15	La Porta et al. (1999, Tables 2 & 3)
Belgium	0	50	5	50	La Porta et al. (1999, Tables 2 & 3)
Canada	50	30	60	25	La Porta et al. (1999, Tables 2 & 3)
	17.54	46.67	36.24	26.18	Attig, Gadhoum, Lang (2003)
Denmark	10	35	40	35	La Porta et al. (1999, Tables 2 & 3)
Finland	15	10	35	10	La Porta et al. (1999, Tables 2 & 3)
France	30	20	60	20	La Porta et al. (1999, Tables 2 & 3)
	8.92	70.44	17.79	64.83	Faccio, Lang (2002)[a]
Germany	35	10	50	10	La Porta et al. (1999, Tables 2 & 3)
	5.61	71.64	14.02	64.62	Faccio, Lang (2002)
Greece	5	65	10	50	La Porta et al. (1999, Tables 2 & 3)
Hong Kong	10	70	10	70	La Porta et al. (1999, Tables 2 & 3)
	0.6	64.7	7	66.7	Claessens, Djankov, Lang (2000)
Indonesia	0.6	68.6	5.1	71.5	Claessens, Djankov, Lang (2000)
Ireland	45	15	65	10	La Porta et al. (1999, Tables 2 & 3)
Israel	5	50	5	50	La Porta et al. (1999, Tables 2 & 3)
Italy	15	20	20	15	La Porta et al. (1999, Tables 2 & 3)
	7.83	64.87	15.86	59.61	Faccio, Lang (2002)
Japan	50	10	90	5	La Porta et al. (1999, Tables 2 & 3)
	42	13.1	79.8	9.7	Claessens, Djankov, Lang (2000)
Korea	40	35	55	20	La Porta et al. (1999, Tables 2 & 3)
	14.3	67.9	43.2	48.4	Claessens, Djankov, Lang (2000)
Malaysia	1	57.5	10.3	67.2	Claessens, Djankov, Lang (2000)
Mexico	0	100	0	100	La Porta et al. (1999, Tables 2 & 3)
Netherlands	30	20	30	20	La Porta et al. (1999, Tables 2 & 3)
New Zealand	5	45	30	25	La Porta et al. (1999, Tables 2 & 3)
Norway	5	25	25	25	La Porta et al. (1999, Tables 2 & 3)
Philippines	1.7	42.1	19.2	44.6	Claessens, Djankov, Lang (2000)
Portugal	0	50	10	45	La Porta et al. (1999, Tables 2 & 3)
Singapore	5	45	15	30	La Porta et al. (1999, Tables 2 & 3)
	1.4	52	5.4	55.4	Claessens, Djankov, Lang (2000)
Spain	15	25	35	15	La Porta et al. (1999, Tables 2 & 3)
	12.74	67.33	28.06	55.79	Faccio, Lang (2002)
Sweden	0	55	25	45	La Porta et al. (1999, Tables 2 & 3)
Switzerland	50	40	60	30	La Porta et al. (1999, Tables 2 & 3)
Taiwan (China)	2.9	65.6	26.2	48.2	Claessens, Djankov, Lang (2000)
Thailand	2.2	56.5	6.6	61.6	Claessens, Djankov, Lang (2000)
United	90	5	100	0	La Porta et al. (1999, Tables 2 & 3)
Kingdom	27.06	33.75	69.08	19.88	Faccio, Lang (2002)
United States	80	20	80	20	La Porta et al. (1999, Tables 2 & 3)
	38.95	23.37	69.26	6.13	Attig, Gadhoum, Lang (2003)

a. The figures from La Porta el at (1999) are for the 20 largest publicly listed firms. The Attig, Gadhoum and Lang (2003) sample is comprised of the 1121 firms in the Toronto Stock Exchange, for which they could find ownership data. Faccio and Lang (2002) and Claessens, Djankov, and Lang (2000) also construct samples of all publicly traded firm for which ownership information is available.

b. The published version of Faccio and Lang (2002) does not have tables with the 10% cutoff. We report statistics in their earlier unpublished draft.

Table 3 **Estimated Private Benefits of Control in Different Countries Measured as Block and Voting Premiums and Expressed as Percentage Premium over Market Value**

Country	Block Premium [a]	Voting Premium [b]	Country	Block Premium [a]	Voting Premium [b]
Argentina	27		Netherlands	2	
Australia	2	23	New Zealand	3	
Austria	38		Norway	1	6
Brazil	65	23	Peru	14	
Canada	1	3	Philippines	13	
Chile	15	23	Poland	11	
Colombia	27		Portugal	20	
Czech Republic	58		Singapore	3	
Denmark	8	1	South Africa	2	7
Egypt	4		South Korea	16	29
Finland	2	-5	Spain	4	
France	2	28	Sweden	6	1
Germany	10	10	Switzerland	6	5
Hong Kong	1	-3	Taiwan (China)	0	
Indonesia	7		Thailand	12	
Israel	27		Turkey	30	
Italy	37	29	United Kingdom	2	10
Japan	-4		United States	2	2
Malaysia	7		Venezuela	27	
Mexico	34	36			

a. Block premium is average across control transactions of the difference between the price per share paid for the control block and the exchange price two days after the announcement of the control transaction, dividing it by the exchange price two days after the announcement and multiplying the ratio by the proportion of cash flow rights represented in the controlling block and expressed as a percentage premium. See Dyck and Zingales (2003), Table 2, for details.

b. Voting premium is average of estimated total vote value as a percent of firm value. See Nenova (2003), Table 5, for details.

Table 4 Measures of the Return to Political Rent Seeking and the Incidence of Family Firms

	Simple Correlation Coefficients				Regression Coefficients controlling for log of 1995 *per capita* GDP				
	Incidence of Family Control in 1995 in				Incidence of Family Control in 1995 in				
	Twenty Largest Firms		Ten Middle-size Firms		Twenty Largest Firms		Ten Middle-size Firms		
	20% Threshold	10% Threshold	20% Threshold	10% Threshold	20% Threshold	10% Threshold	20% Threshold	10% Threshold	Sample
Tax System Corruption									
Higher scores indicate general compliance with tax laws	-0.470	-0.444	-0.472	-0.270	-0.889	-0.588	-0.732	0.470	25
	(0.02)	(0.03)	(0.02)	(0.19)	(0.32)	(0.54)	(0.40)	(0.57)	
					[0.28]	[0.26]	[0.27]	[0.26]	
Political System Corruption									
Higher scores indicate a general absence of official corruption	-0.414	-0.438	-0.526	-0.523	0.367	0.188	-1.05	-0.980	27
	(0.03)	(0.02)	(0.00)	(0.01)	(0.73)	(0.87)	(0.31)	(0.33)	
					[0.49]	[0.49]	[0.51]	[0.51]	
Judicial System Corruption									
The efficiency and integrity of the judicial system, particularly as it affects business	-0.340	-0.375	-0.457	-0.426	0.501	-0.691	0.292	-0.036	27
	(0.08)	(0.05)	(0.02)	(0.03)	(0.56)	(0.55)	(0.78)	(0.97)	
					[0.55]	[0.55]	[0.55]	[0.55]	
Civil Service Corruption									
High scores indicate bureaucrats have "autonomy" and the "strength and expertise to govern"	-0.663	-0.685	-0.722	-0.630	-2.64	-2.59	-2.83	-1.82	27
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.02)	(0.00)	(0.07)	
					[0.70]	[0.69]	[0.73]	[0.66]	
Regulatory Barriers to Entry									
Estimated regulatory compliance cost of starting a new business, as % of GDP	0.521	0.501	0.578	0.424	0.195	0.160	0.218	0.080	27
	(0.01)	(0.01)	(0.00)	(0.03)	(0.12)	(0.23)	(0.06)	(0.50)	
					[0.36]	[0.33]	[0.39]	[0.30]	

Numbers in parenthesis are probability levels for the null hypothesis of a zero simple correlation or a zero coefficient on oligarchic family control in regressions of each rent-seeking variable of that variable and the logarithm of 1995 per capita GDP. Numbers in square brackets are regression adjusted R^2 statistics.

Figure 1. A Stylized Control Pyramid

A family firm controls a first tier of firms with dominant voting stakes, in this case greater than fifty percent. Each first tier firm controls several second tier firms, each of which controls yet more firms. The overall effect is to extend the family's control to encompass assets worth substantially more than its actual wealth.

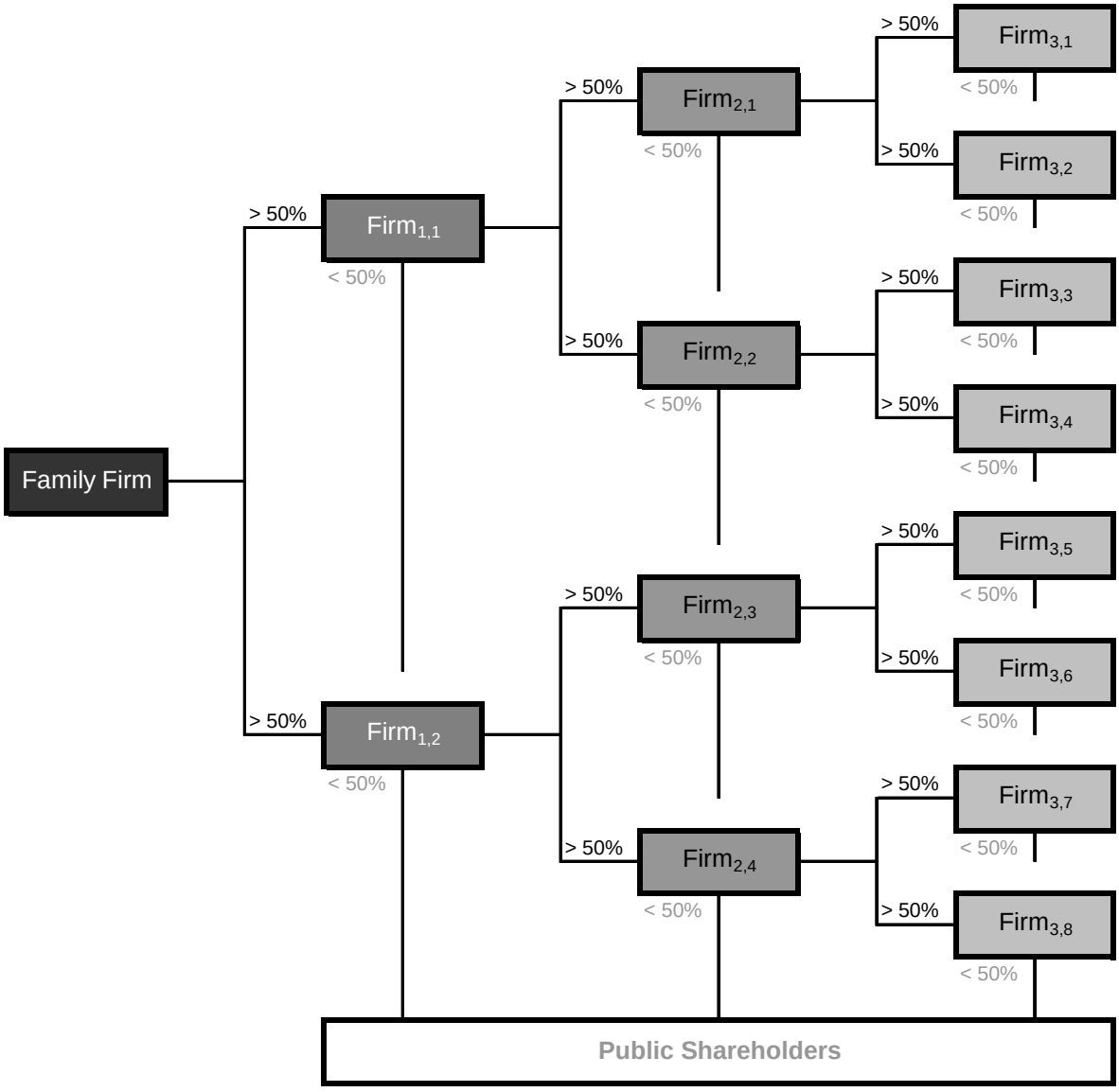
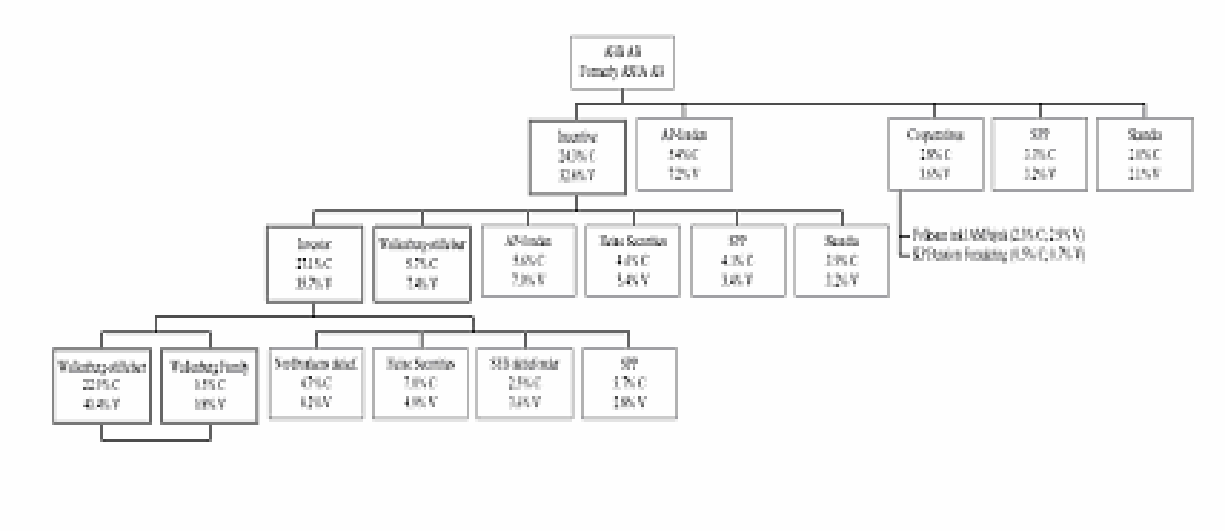
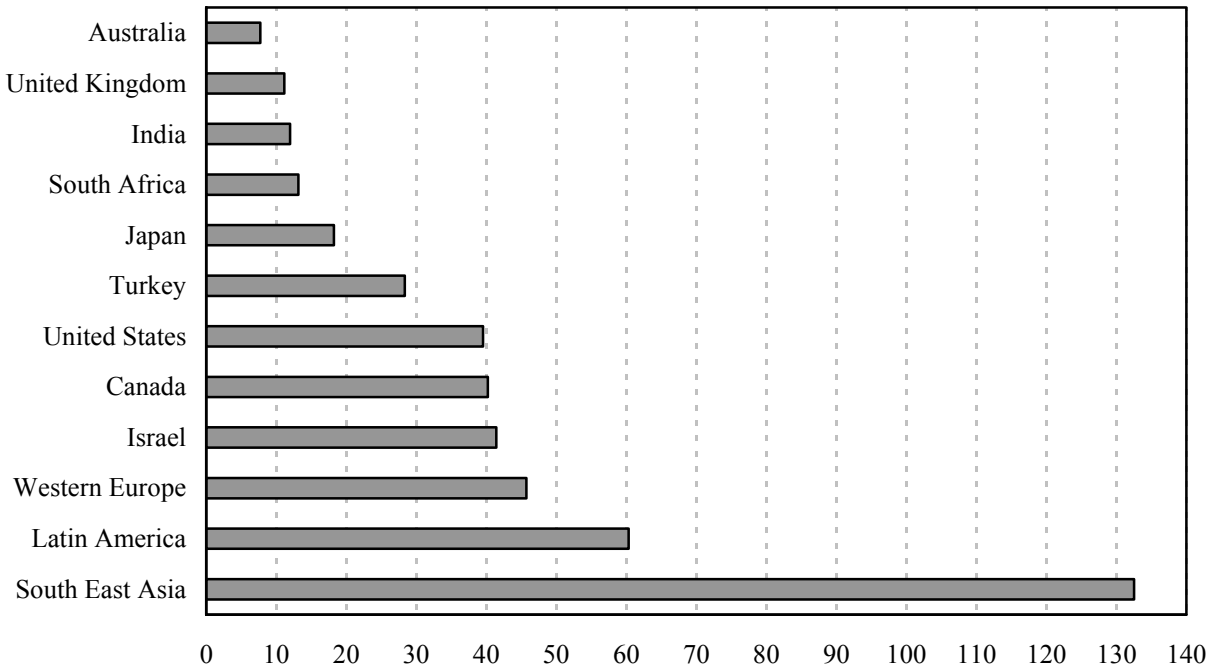


Figure 2. The ABB Control Pyramid of the Swedish Wallenberg Family
Ownership stakes are represented with C and voting stakes with V. Ultimate control is assigned to the Wallenberg family through a chain of stakes of at least 20%



Source: La Porta et al. (1999)

Figure 3. Billionaire Wealth per Billion Dollars of GDP
Billionaire nationalities are as listed in Forbes Magazine's annual list of US dollar billionaires for 1996.



Source: Morck, Stangeland, and Yeung (2000).