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CORPORATE GOVERNANCE REFORMS AND FIRM OWNERSHIP AROUND THE WORLD*

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Abstract

Corporate governance reforms have traditionally been studied from the opposing perspectives of global convergence and local persistence, but empirical support for each of these alternatives is mixed at best. Our study of corporate governance reforms in no less than 22 wealthy nations around the world suggests an alternative conceptualization of the reform process: local repairs in light of global ideals. We find that the direction of governance change can be predicted from the dominant ownership patterns in a given country, if we assume that all developed nations seek greater wealth through the broadening and deepening of capital markets.

Keywords: (1) Corporate governance; (2) Comparative studies; (3) Governance reforms; (4) Managerial control; (5) Information disclosure; (6) Privatization.

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NEITHER CONVERGENCE NOR PERSISTENCE?

Agency theory's principal-agent corporate governance model has taken the field of economic organization by storm since it was first introduced by Jensen & Meckling (1976). Its employment by finance economists and strategic management scholars has since then largely shaped the language we employ to describe the modern corporation (Lubatkin, Lane, Collin, & Very, 2005). In fact, the large American industrial corporation is presently primarily discussed, both in the business press and by security analysts, in financial terms like debts, assets, and cash flow (Fligstein & Freeland, 1995). In turn, managers and owners of firms have largely begun to see their firms in exactly the same way (Useem, 1993). Firms in the United States are therefore presently evaluated according to a financial economics framework, and governed in light of a financially inspired view of the modern corporation (e.g., Fama, 1980; Fama & Jensen, 1983; Roe, 1994).

Yet, the popularity of agency theory-informed financial control that has arisen in the United States presents us with a difficult puzzle, because its behavioral assumptions may too closely reflect the US institutional context to explain the governance traditions that exist elsewhere (Lubatkin *et al.*, 2005). The international corporate governance landscape is founded on such dissimilar premises that whereas corporate success in the US can legitimately be measured as returns on financial capital (Useem, 1996), a more appropriate yardstick for South-East Asia would be returns on social capital and for Germanic and Scandinavian countries returns on human capital (Rubach & Sebora, 1998). But not only is the corporate governance landscape decidedly diverse around the world, there are also no definitive trends toward convergence (Whitley, 1999). Corporate ownership has long been dispersed in

the US and UK, but property rights and governance structures in most regions in continental Europe, Asia, and South- and Central America are still under the control of a few rich families and government officials. These parties owe their prosperity to current arrangements, and can be trusted to oppose any action that calls for conformance to someone else's standards.

What makes this persistence of local governance arrangements puzzling is that while the finance conception of firm governance may not be universal, parties from other nations have nevertheless looked upon the US financial landscape with great envy. Certain macro-economic aspects of the US financial landscape – most certainly its stock market depth and breadth – are admired all over the world by local policy makers. Private individuals and other market parties too look with great hopes and expectations to the huge sums of money to be made in US financial markets, whether through initial public offerings, leveraged buy-outs, hostile take-overs, or any other complex financial transaction. It would be a profound mistake to believe that owners of Japanese (Rubach & Sebor, 1998), German (Kogut & Walker, 2001), Russian (Filatotchev, Buck, & Wright, 1992), and Latin American firms (Biggart & Guillén, 1999) would be any less concerned with financial returns than their US-counterparts. Thus, macro-economic indicators like stock market breadth and depth, and possibilities for private wealth accumulation represent a set of *global ideals*,¹ whose international appeal is much stronger than the lure of the specific financial controls that have been used to bring them about in the US itself.

It is inevitable that the attraction of the US example, with its vibrant economy and unprecedented possibilities for private wealth accumulation, will eventually bring about some changes in corporate governance systems around the world. But it would be unwise to assume that this would automatically lead local elites to surrender their

present privileges in exchange for a completely different system with new opportunities for all. Even though the discussion in the comparative corporate governance literature is often framed in terms of convergence versus persistence, we in fact expect corporate governance reforms to proceed along neither of these lines. We anticipate that the ruling elites in many countries around the world will sooner or later embrace the global ideals of stock market breadth and depth, and endorse the institutions necessary for effective corporate restructuring.² But they will not give up their existing rights and privileges to reach those ideals. Thus, we expect that the simultaneous embrace of these global ideals and protection of the status quo will produce a series of *local repairs*, by which national elites seek to gear their own institutions for better performance while maintaining their predating privileges.

It is this assumption – the view that corporate governance reforms around the globe are progressing along the lines of local repairs to existing systems in light of globally held ideals (other than stubborn persistence or uncritical convergence towards US standards) – we seek to test in the present paper. This first of all requires an in-depth view of how corporate governance reforms are moving ahead in the international context. To this end, we study the official corporate governance reform codes – defined here as authoritative documents with “soft-law” status, outlining a comprehensive series of corporate governance reforms, usually legitimated by the state, Securities and Exchange Commission, or the stock exchange through concrete endorsement, and typically enforceable through corporate law or via private compliance structures (cf. Aguilera & Cuervo-Cazurro, 2004; Heugens & Otten, 2005) – of no less than 38 of the world’s dominant economies. Secondly, we proceed by examining the aggregate ownership structures in 22 of these nations (cf. La Porta,

Lopez-de-Silanes, & Shleifer, 1999), thus paving the way for an assessment of how the structure of locally vested interests influences corporate governance reforms.

Controlling for relevant factors such as income per capita and stock market size, we find considerable support for the idea that corporate owners stand where they sit with respect to corporate governance reforms. In countries already dominated by dispersed ownership, the focus is not on stiffening traditionally strong external corporate governance mechanisms (like the market for corporate control; Walsh & Seward, 1990), but on complementing these with stronger internal governance mechanisms (like a greater emphasis on board composition; Gedajlovic & Shapiro, 1998). Similarly, in countries with strong family ownership traditions, which have long been hampered by an atmosphere of murkiness and parochialism (Carney & Gedajlovic, 2002; Hamilton & Biggart, 1988), there are strong calls for greater openness and a larger influence of the press. Furthermore, in countries with high levels of state ownership, we find that corporate governance reforms go hand-in-hand with the privatization movement. Here, the proposed corporate governance mechanisms are clearly aimed at avoiding the installment of new national elites at the expense of both the state and minority shareholders (Wright, Filatotchev, Hoskisson, & Peng, 2005). Finally, in countries where the corporate landscape is characterized mostly by small- and medium-sized firms, stock market reforms are aimed squarely at limiting the influence of blockholders. Policy makers in such contexts seek to stimulate corporate growth by increasing the influx of funds from smaller investors, who would otherwise be crowded out of the market by the prospect of becoming captives to the interests and influence of controlling shareholders.

THEORY BUILDING AND HYPOTHESES

The one question that occupies most of the literature on comparative corporate governance is: will national systems of corporate governance converge towards a single most-efficient system, or will national institutional differences prove to remain rather “sticky” (e.g., Aguilera & Jackson, 2003; Guillén, 2000; Kogut & Walker, 2001; La Porta, Lopez-de-Silanes, Shleifer, Vishny, 1998; La Porta *et al.*, 1999; Rubach & Seborá, 1998)? Proponents of the globalization thesis argue that cross-national patterns of corporate governance are converging, possibly (and most likely) towards the Anglo-Saxon, shareholder-centered model of corporate governance (cf. Coffee, 1999; Gilson, 2004; Hansmann & Kraakman, 2002; Khanna & Palepu, 2004).

The reasons for assuming convergence towards this model are compelling. Ever since the emergence of corporate governance as a field of academic study, scholars have argued that the securing of stakeholder rights and a sharp separation of dispersed ownership from managerial control will lead to a more “efficient” and “modern” state of affairs, in which stock market depth and breadth, and the ease of starting and terminating public corporations will be unprecedented (Berle & Means, 1932; Kerr, Dunlop, Harbison, & Myers, 1960). Ultimately, or so the argument goes, countries favoring the Anglo-Saxon system of corporate governance ought to prove more competitive and prosperous than regions in which institutional alternatives like family firms, conglomerates, bank-led groups, or worker cooperatives continue to dominate the economic landscape (Guillén, 2000; Khanna & Palepu, 2000a, 2000b). These differences in regional- and firm-level competitiveness would ultimately drive institutional alternatives out of the market, and leave nation-states with the simple

choice of complying with Anglo-Saxon standards or withering away in the global economic realm.

But there are also strong arguments against convergence on the shareholder-centered model. A certain group of contributors have pointed at formidable manufacturing powers other than the US, which tend to have completely different corporate governance traditions (such as Germany and Japan; Fleming, 1998; Gerlach, 1999), to question the claim that the Anglo-Saxon model is necessarily more efficient than any of its alternatives. There appear to be a number of different ways of achieving “social peace” (Roe, 2003), which may not be as efficient as the Anglo-Saxon system on all dimensions, but which are at the very least effective enough to “get the job done” (Aguilera & Jackson, 2003; Biggart & Guillén, 1999).

Differences between these alternatives and the Anglo-Saxon system are likely to persist rather than crumble off over time, as the make-up of national corporate governance systems is not strictly determined by the outcome of market forces, but rather shaped and contested by cultural, social, and political factors (Hamilton & Biggart, 1988; Kogut & Walker, 2001). In fact, the comparative corporate governance literature is overflowing with detailed studies of how domestic political conditions mediate the effect of economic conditions on corporate governance outcomes (Djelic, 1998; Fligstein, 1990; Orrù, Biggart, & Hamilton, 1997). La Porta and his colleagues (1998, 1999) have further argued that the internationalization of capital markets is not enough to break down existing ownership structures. Given the fact that firm ownership around the world has everywhere and always been concentrated in the hands of a few powerful individuals (with the notable exception of ownership structures in the contemporary United States and the United Kingdom), they (and with them many others, e.g., Biggart & Guillén, 1999; Fligstein & Freeland, 1995; Kogut

& Walker, 2001) remain “skeptical about the imminence of convergence of corporate ownership patterns, and of corporate governance systems more generally, to the Berle & Means model” (1999: 513).

But even though the case for persistence seems convincing, empirical comparative corporate governance researchers have at least noted some degree of change in national corporate governance systems. Guillén (2000), for example, concludes on the basis of an impressive comparative study involving 41 nation states that “some countries have adopted certain isolated features of the shareholder-centered model” (p. 178). Our aim with this paper is to demonstrate that while the adoption of these features may as of yet be sporadic, the adoption pattern is by no means coincidental but rather follows coherent and explicable patterns. More precisely, corporate governance reforms around the world are comprised of a series of *local repairs in light of global ideals*. Contingent upon a nation’s dominant ownership structure, local policy makers will propose and implement a set of corporate governance reforms that aim to bring the local system of corporate governance closer to the global ideal of a deep and broad stock market with ample opportunities for private wealth creation, while preserving the integrity and power balance of the system in its entirety.

Governance reforms in countries with dispersed ownership

Perhaps paradoxically, some of the most far-reaching corporate governance reform attempts have recently taken place in countries that have already realized the aforementioned global ideals of stock market depth, breadth, and their correlates. This is because the traditional weakness of dispersed ownership at the firm level is that

there are diminished incentives to exercise control by owners (Fama, 1980; Thomsen & Pedersen, 2000), such that managers are not convincingly kept in check by means of internal control mechanisms. Shareholders in these countries are inevitably cast in the role of passive investors, who do not interfere with the day-to-day operations of the firm, but rather do “the Wall Street Walk” and vote with their feet if they disagree with the way the company is being administered (Rubach & Sebor, 1998). Firms in countries with dispersed ownership are therefore traditionally governed by means of what Walsh and Seward (1990) call “external” governance mechanisms (in the sense of being external to the firm’s internal hierarchy and influence structure): the market for corporate control (Jensen & Ruback, 1983), the product market, and the managerial labor market.

But like any other governance arrangement, the dispersed ownership/external control system does not provide perfect protection against managerial opportunism and neither is it fool-proof. One only has to point at the operational mismanagement and managerial entrenchment at General Motors, Apple Computer, Disney Corporation, and Eastman Kodak in the 1980s and 1990s, and at the financial obfuscation scandals at Enron, WorldCom, Tyco, and Arthur Andersen in the new millennium to convincingly make the case that in countries with dispersed ownership it is precisely the internal governance mechanisms that require substantial reinforcement. Traditionally, such internal mechanisms are expected to involve guidelines for the composition of and rules of operation pertaining to the board of directors and its standing committees. But we also know that employees are often in a much better position to oversee executives’ actions than shareholders (Hansmann, 1996), such that better rules for the protection of whistleblowers might also contribute to better internal governance. Thus, internal governance mechanisms ought to keep

managers in check by means of a coherent set of measures that demarcate the boundaries of managerial discretion. We therefore expect that, in order to maintain their leading position in terms of stock market depth and breadth, policy makers in countries with strong ownership dispersion traditions will opt for reinforcing internal governance mechanisms:

Hypothesis 1: Countries with higher levels of ownership dispersion will focus their governance reforms on the reinforcement of internal governance mechanisms.

Governance reforms in countries with concentrated family ownership

In significant parts of the world, however, public companies are not owned and controlled by dispersed shareholders at all, but by elite families (La Porta *et al.*, 1999).³ In such countries, control over even the largest corporations tends to be concentrated in the hands of a few wealthy individuals, whom are amongst themselves associated via kin relationships. It has been noted that the concept of corporate governance takes on a rather counter-intuitive connotation in the context of the family-controlled firm (Schulze, Lubatkin, Dino, & Buchholtz, 2001). As ownership is not separated from control – families typically manage the firms they control and tend to enjoy control rights significantly in excess of their cash flow rights (La Porta *et al.*, 1999) – a straightforward agency theory analysis would suggest that agency costs for these firms ought to be minimal (Jensen & Meckling, 1976).

Yet, Schulze and his colleagues (2001) have demonstrated that these firms are not by any means “safe from agents’ harm,” but face at least three agency problems of

a different kind. First, family-controlled public firms largely lack the disciplinary force of the market for corporate control, due to anti-takeover protections like preferred stockholdings and pyramid schemes. Second, the owner-manager may experience “agency problems with oneself” (Jensen, 1998: 48) due to cravings, addictions, and limited self-knowledge (Elster, 1979). Third, altruism may make even well-intending family managers “bad agents” in the sense that their generosity towards their kin can easily lead to the exploitation of non-family shareholders, a prime example of so-called principal-principal agency problems (Wright *et al.*, 2005).

Private investors in countries dominated by family ownership thus face considerable disincentives to invest in the equity of public firms, which reduces the chance that such countries will reach the global ideals of stock market depth and breadth. To offset the relative frailty of the stock markets through which they seek to attract capital, ruling families must therefore convey the message to potential investors that their investments will be well-protected. Perhaps the greatest obstacle facing these families is breaking the *omertà*-like cordon of silence that typically surrounds family-owned enterprises, by making the executives of these firms more accountable and responsive to outside pressures.⁴

From an agency cost-minimizing perspective it is critical to control the flows of blame and praise family executives receive for three reasons. First, most individuals are to some extent “hardwired” to desire the esteem of others, which tends to make their behavior more norm-abiding once it is brought in public (Brennan & Pettit, 2004; Fodor, 1983). Second, since the purity of the family name is sacrosanct in the eyes of many family members, greater openness provides them with an incentive to refrain from public deeds that might taint it. Third, internal governance mechanisms like incentive pay are also likely to gain effectiveness from greater

information disclosure, because it provides family agents with the means to better calculate the short- and long-term value of their efforts (Bergstrom, 1989). We thus expect that, in order to deepen and widen their stock markets, policy makers in countries dominated by concentrated family ownership will opt for governance mechanisms promoting a wider distribution of policy-related information:

Hypothesis 2: Countries with higher levels of concentrated family ownership will focus their governance reforms on the reinforcement of governance mechanisms promoting greater openness and transparency.

Governance reforms in countries with concentrated state ownership

After WWII – when many companies were nationalized for strategic or political reasons and when many state firms grew rapidly because of war-related manufacturing opportunities – the world was left with massive state ownership. To date, 70 percent of the largest traded firms in Austria, 45 percent in Singapore, and 40 percent in Israel and Italy are state-controlled (La Porta *et al.*, 1999). Nevertheless, the trend towards privatization appears unstoppable, as governments are trying to reduce state supervision costs, turn assets into revenues, increase the efficiency of operations by exposing them to the whip of the market, and spend less on deficit activities (Filatotchev *et al.*, 1992).

Privatization comes with problems of its own, however, especially in emerging markets. When non- or only partially competitive state firms are privatized, there is the danger of social collapse. The provision of essential services and utilities can often no longer be guaranteed, and mass lay-offs can usually not be prevented.

Furthermore, when substantial state assets are rapidly passed from public to private hands, the ones most likely to benefit are incumbent enterprise managers and well-connected ministry officials (Filatotchev *et al.*, 1992). This usually leads to the creation of a few dazzlingly wealthy and powerful oligarchs, rather than a vibrant and socially resilient *Mittelstand*. Finally, the development of a truly private sector is often hampered in countries with state-dominated economies due to burdensome taxation laws, a lack of entrepreneurial credits, and delays in payments for orders delivered to public-sector firms (Kornai, 1992). The private sector often responds in kind with tax evasion, off-the-books payments to workers, and lagging capital investment (Stark, 1996).

How can privatizing, formerly state-dominated economies then reach the global ideals of a wide and deep stock market? Borrowing arguments from institutional economists (e.g., see: Buchanan, 1986; Coase, 1992), we argue that the more promising road to institutionalizing private property seems to reside in the development of a broader class of private proprietors. Public policy should first of all aspire to facilitate truly private ventures by lowering the barriers to entry for small and medium-sized ventures, in recognition of the fact that entrepreneurs are the basic building block of an emerging market economy (Stark, 1996). But in the longer run, policy makers ought to ensure that the rights of minority shareholders are well-protected in their markets. Only when smaller investors can be certain that their investments will be safeguarded by law and by dominant economic institutions from predatory behaviors by managers and larger, controlling shareholders can stock markets be expected to significantly broaden and deepen (Rajan & Zingales, 2003; La Porta *et al.*, 1998; Zingales, 1995). Thus, we expect policy makers in countries

dominated by state ownership to promote measures protecting the investments of all shareholders, including those made by smaller minority investors:

Hypothesis 3: Countries with higher levels of state ownership will focus their governance reforms on the reinforcement of governance mechanisms protecting the rights of dispersed shareholders.

Governance reforms in countries dominated by medium-sized enterprises

Numerous empirical studies have demonstrated that very few of the publicly-owned medium-sized firms around the world are widely held. This fact has been established by independent studies of Germany (Edwards & Fischer, 1994), Japan (Prowse, 1992), Italy (Barca, 1995), a panel of 12 European countries (Pedersen & Thomsen, 1997), and a panel of 27 wealthy economies from several continents (La Porta *et al.*, 1999). Agency theorists tend not to be too surprised by this pattern, because they see ownership concentration (“blockholdership”) as an efficient response to potential managerial opportunism in governance regimes lacking appropriate shareholder protection measures. They argue that in such regions blockholdership is the most powerful way of reducing the agency costs of separated ownership and control, as blockholders have greater incentives to monitor managers than dispersed shareholders (Fama & Jensen, 1983), often enjoy greater informal access to the top management team (Shleifer & Vishny, 1997), and are not seldomly powerful enough to hand-pick the managers and directors destined to lead the firms they own.

But ownership concentration is only an imperfect substitute for formalized shareholder protection mechanisms (such as one-share-one-vote rules or a legal ban

on pyramid schemes). It comes with numerous hidden costs, which especially hurt medium-sized corporations with profound ambitions for further growth. Blockholders are, to some extent, able to curb managerial opportunism through the exercise of direct, informal influence. But different categories of shareholders differ in terms of their interests and preferences, and what is good for a blockholder (e.g., a focus on the longer term, an arena in which to exercise influence, et cetera) may not be good for a small minority investor (who may have a greater need for excellent short-term results, a liquid stock market through which shares may be sold efficiently, and so on).

Thus, financiers contemplating on investing their money in a closely-held medium-sized firm not only face potential managerial opportunism, but also the kind of self-interested behaviors by more influential classes of shareholders which Perrow refers to as “owner opportunism” (1986: 227). When rational minority investors decide to evade these double agency problems by putting their money elsewhere (in banks, bonds, or foreign markets, for example), expanding medium-sized enterprises will face diminished success on the stock market. We thus expect policy makers in countries dominated by medium-sized enterprises to do away with measures that were once especially designed to protect the interests of blockholders, in an attempt to broaden and deepen their national stock markets:

Hypothesis 4: Countries in which medium-sized firms are the dominant economic actor will focus their governance reforms on the abandonment of governance mechanisms protecting the privileges of large shareholders.

Governance reforms in an era of managerial malfeasance

Not a single study of governance reforms in the present day and age can allow itself to ignore the influence of managerial malfeasance and associated accountancy scandals like those at Enron and WorldCom in the US, Parmalat in Italy, Elf in France, Ahold in the Netherlands, and Yukos in Russia. These “incidents” have painfully unearthed the weaknesses of national systems of corporate governance around the world, as they demonstrated that traditional mechanisms of corporate governance no longer sufficed to control the opportunism of persons in positions of authority. Unsurprisingly, these scandals have had major effects on governance reforms around the world. In mere quantitative terms, for example, the number of corporate governance reform codes issued by the international community of governmental commissions, national stock exchanges, and shareholder representatives has increased significantly from slightly under 7 per year over the 1992-2000 period to more than 17 per annum over the 2001-2004 window (Aguilera & Cuervo-Cazurro, 2004; Heugens & Otten, 2005).⁵

But what does this avalanche of new rules and regulations have to say, in a qualitative sense, about how the managerial malfeasance problem ought to be tamed? We perceive that the recent wave of scandals has seriously hurt policy makers’ confidence in professional managers, regardless of the dominant ownership patterns in their nations. More in particular, we believe that policy makers are seeking to stop the “managerialist” movement and turn back the decades-long trend towards managerial empowerment.

In previous years, a number of widely respected and well-intending scholars had the courage to argue against the bleak image the “Neo-Hobbesian” (Bowles, 1985)⁶ tradition in organizational economics had painted of the professional manager

(see, for example, Davis, Schoorman, & Donaldson, 1997; Ghoshal, 2005; Ghoshal & Moran, 1996; Perrow, 1986). The argument they put forward was that most managers are quite unlike the ruthless a-moral hawks that feature so prominently in many organizational theories, and that many managers are in fact benevolent stewards who will do many good things for corporations once the ties of control that prevent them from doing so are cut. But regardless of whether the managers in which these scholars have put their trust have categorically betrayed them or whether a relatively minor fraction of the population has tainted the lot, we are experiencing a profound swing of the *Zeitgeist*, which clearly gravitates back to Neo-Hobbesianism and away from the dictums of the stewardship approach. Thus, we believe that policy makers worldwide, in an attempt to restore investor confidence in their stock markets, are presently doing away with measures that were once put in place to facilitate and empower managers:

Hypothesis 5: All countries, regardless of their dominant ownership pattern, will focus their governance reforms on the abandonment of governance mechanisms that were once put in place to empower professional managers.

SAMPLE AND METHODS

Data and sample

Reliable comparative data on national systems of corporate governance is difficult to obtain, and most contributors have therefore limited their analyses to a small sample of nation states. Many studies are restricted to an analysis of three (Lubatkin *et al.*, 2005; Roe, 1993; Rubach & Sebor, 1998), four (Biggart & Guillén, 1999; Prowse,

1995), five (Charkham, 1994; Gedajlovic & Shapiro, 1998), or six (Thomsen & Pedersen, 1996) national jurisdictions. Furthermore, a fairly limited set of countries has attracted the bulk of the research action (notably: the United States, Germany, and Japan), whereas other nations have more often than not been left unexplored. The foremost challenges facing comparative corporate governance scholars are therefore to (a) expand the scope of their studies, and (b) develop better comparative measures for corporate governance mechanisms. In the words of Guillén, we “need better data and on more countries. Better indicators will facilitate making comparisons on specific dimensions as opposed to looking for wholesale convergence of entire corporate governance systems” (2000:200).

In order to both expand the scope of our observations beyond that of most comparative studies to this date and develop a set of more fine-grained indicators that will allow us to study corporate governance systems on specific dimensions, we decided to study the content of so-called national corporate governance reform codes. These codes may be defined as authoritative documents with “soft-law” status, outlining a comprehensive series of corporate governance reforms, usually legitimated by the state, Securities and Exchange Commission, or the stock exchange through concrete endorsement, and typically enforceable through corporate law or via private compliance structures (see Aguilera & Cuervo-Cazurro, 2004; Heugens & Otten, 2005). In total, we were able to draw on a pool of no less than 131 of such codes, derived from 49 countries.⁷

We then applied a number of ex-ante screening criteria to the data. First, we decided to go with the single-most important code per country, such that our final sample would in any case not exceed 49 observations. Second, we sampled for comprehensiveness, only allowing codes commenting on a given country’s entire

corporate governance tradition into the final sample. Partial codifications – such as memos commenting strictly on executive compensation or on the role of independent directors on corporate boards – were discarded as non-representative. Third, for countries with more than one reform code, we sampled for authoritativeness by focusing only on documents that were officially commissioned by the state, the Securities and Exchange Commission, or the stock exchange. Fourth, in case more than one comprehensive and authoritative reform code could be identified (such as in the United States and the United Kingdom, for example), we consistently opted for the most recent document. In conjunction, these four screens reduced our potential sample to 38 eligible codes.

Dependent variables

We developed five multi-item measures, which jointly provide a fine-grained representation of the corporate governance reforms taking place in any of the countries in our sample. We first developed a list of 17 individual items,⁸ each measuring a highly specific aspect of a nation's corporate governance system. Sample items include *media information rights*, a measure for determining the extent to which policy makers in a given nation involve the news media in corporate governance; *remuneration committee*, an indicator expressing the degree of attention policy makers pay to the appointment, composition, and rules of operation of the board committee overseeing executive compensation, and *auditor rules of operation*, an item expressing to what extent policy makers attempt to bind external auditors through rules controlling their behavior. The complete list of items is presented in Table 1.

Insert Table 1 about here

We then used content analysis (Carney, 1972; Holsti, 1969) to systematically code the messages communicated in the corporate governance reform codes. Specifically, we used NVivo 2.0 – a qualitative data analysis software package – for managing our sampled textual documents. We converted each of the items listed in Table 1 into a “node,” and then went through each document manually to link relevant text messages to the appropriate node. A special sub-sample of ten documents was selected, and coded independently by both the first and second author. A subsequent inter-coder reliability analysis revealed a convergence percentage of 91 percent, which should be considered satisfactory given the complexity of the task at hand. All instances of divergent coding were subsequently discussed, and the authors’ coding routines were harmonized whenever the divergence could be traced to differences of interpretation related to the meaning of a given pair of nodes. The remaining 28 codes were then divided up equally between the first and second authors for subsequent coding.

Once this task was completed, we used NVivo to convert coded text into numerical measures. This resulted in a 17 traits/items by 38 stimuli/countries matrix, for subsequent use in statistical procedures.⁹ The matrix was then subjected to a factor-analytical procedure yielding a clean and interpretable five-factor solution (see Table 2). We tested whether we could treat each factor as an independent multi-item measure for a specific dimension of corporate governance by exploring its theoretical

interpretability as well as its empirical reliability, discriminant validity, and unidimensionality. The results of this assessment are provided below.

Insert Table 2 about here

The four-item first factor proved to be readily interpretable, and we labeled it *organizational design*. The factor is exclusively composed of items referencing what Walsh & Seward (1990) call internal governance mechanisms. Three of its items pertain to prescriptions considering the appointment, composition, and rules of operation of the board of directors' standing committees (i.e., the ubiquitous nominating, audit, and remuneration committees). The fourth item is also clearly related to the internal functioning of a corporate governance system, as it involves measures to protect employees who "blow the whistle" on managers displaying unethical conduct. The *organizational design* construct displayed favorable measurement properties. It is sufficiently reliable, as evidenced by a Cronbach's alpha statistic (on standardized items) of .81. A principal components analysis revealed the construct's unidimensionality, as the first component explained 64 percent of the variance contained in the four items (no other component had an Eigenvalue > 1.0). The construct also showed discriminant validity, as it is not significantly correlated with any of the four other factors we will discuss below (the highest absolute correlation with any other factor is .24 (not significant); the average absolute correlation is .19; see Table 3). We will hereafter use the *organizational design* construct to test Hypothesis 1.

 Insert Table 3 about here

The four-item second factor also was readily interpretable and labeled *ownership concentration*, as it is clearly composed of items regulating and facilitating blockholdership. An important item is “institutional investors,” which codes for blockholding institutions as a separate category over and above dispersed shareholders, regulating their specific rights and responsibilities. Another important item was “stakeholder equity,” which describes how a blockholder ought to behave vis-à-vis non-shareholding constituencies, whose interests it is sometimes argued to represent in the governance arena. The final two items were “bonus,” referring to blockholders’ obligations to directly monitor managers and dampen their hunger for cash, and “media information rights,” which establishes the public information rights of all shareholders to prevent principal-principal agency problems between blockholders and dispersed shareholders. The *ownership concentration* construct is sufficiently reliable (α on standardized items is .74), unidimensional (first component explains 57 percent of the variance and none of the Eigenvalues of the other components > 1.0), and discriminately valid (highest absolute correlation is .13 (not significant); average absolute correlation is .07; see Table 3). We will use the *ownership concentration* construct for testing Hypothesis 4.

Four-item factor three was straightforward to interpret and labeled *dispersed ownership*, as it is composed of items stimulating and facilitating dispersed shareholdings. A first item, “shareholder voting,” codes for all substantive issues dispersed shareholders can vote on during the shareholder meetings. A related item,

“shareholder rights,” codes for all ancillary rights (other than voting rights) extended to dispersed shareholders. The item “auditor rules of operation” also seeks better protection for dispersed stakeholders, as it regulates the conduct of the mandatory external auditor. Finally, the “equal treatment” item seeks to directly address principal-principal agency problems by giving dispersed shareholders rights similar to those of blockholders. The *dispersed ownership* construct was measured with acceptable reliability (α on standardized items is .63), and good unidimensionality (the first component explaining 48 percent of the variance, while all other components had Eigenvalues < 1.0) and discriminant validity (highest absolute correlation is .24 (not significant); average absolute correlation is .11; see Table 3). We will subsequently use the *dispersed ownership* construct for testing Hypothesis 3.

Three-item factor four could be interpreted and labeled as *managerial empowerment*, as it appeared to follow the dictums of stewardship theory (Davis *et al.*, 1997) quite closely. First of all, this factor scored *negatively* on the item “board of directors.”¹⁰ Given the fact that the board is seen by many as the foremost instrument of managerial control (Gedajlovic & Shapiro, 1998), it is evident that the present construct seeks to loosen the bonds that normally restrict managerial autonomy. The factor also consists of two positively empowering items. “Options” are a component of managers’ variable compensation package – more popular in the pre-Enron era than they are now – that do not constrain managers to specific targets but rather reward them for doing things that are generally good for the company. Similarly, the “employee ownership” item codes for all measures enabling more extensive ownership of the firm by its managers, which in turn empowers them through the transfer of greater control rights. The *managerial empowerment* construct was measured with good reliability (α on standardized items is .75), unidimensionality (the

first component explaining 66 percent of the variance with all other components possessing Eigenvalues < 1.0), and discriminant validity (highest absolute correlation is .30 (not significant); average absolute correlation is .13; see Table 3). We will hereafter use the *managerial empowerment* construct to test Hypothesis 5.

Factor 5 only consisted of two items, but was readily interpretable and labeled *esteem responsiveness*. Both items were clearly aimed at improving upon weaker informational regimes and at making top managers more responsive to outside pressures. “Auditor appointment” codes for all regulations related to the selection and appointment of the mandatory external auditor. The item stiffens existing informational regimes by improving upon the quality and reliability of disclosed information about a firm’s conduct and performance in financial and product market arenas. The “social reporting” item controls the flows of blame and praise executives receive in non-market arenas (cf. Baron, 1995), as it urges them to report their performance on health, safety, and environmental issues. The measurement properties of the *esteem responsiveness* construct are as follows: α on standardized items is .59; variance explained by the first component is 71 percent while the second component had an Eigenvalue < 1.0 ; highest absolute correlation is .30 (not significant); average absolute correlation is .15; see Table 3). We will use the *esteem responsiveness* construct to test Hypothesis 2.

Independent variables

We ask how corporate governance reforms are influenced by corporate ownership patterns. We therefore use country-level ownership data for our independent variables, which we derived from La Porta and his colleagues (1999). The focus of

this data is on voting rather than cash flow rights. The data is divided into four clusters, based on two sets of criteria. The first set of criteria entails the size of the controlling stake (20 percent or 10 percent). It divides up a sub-sample of the listed firms in a given nation into a group that does have an ultimate owner (recognizing the identity – family, state, or other – of that owner) and a group that lacks one (i.e., the share of widely-held firms). The second set of criteria is concerned with firm size. It both samples for the 20 largest firms in a given country and for the smallest 10 firms with a market capitalization of at least \$500 million. The first data cluster thus entails ownership fractions (dispersed, state, family, or other) for the largest firms in a given nation using the 20 percent control criterion; the second cluster also focuses on the largest firms but reports ownership fractions using on the 10 percent control criterion; the third cluster reports 20 percent ownership fractions for medium-sized firms, and the fourth cluster 10 percent fractions for medium-sized firms. We will hereafter test each of our hypotheses on each of these four clusters of data.

Control variables

We included two covariates to reduce variance that is extraneous to the research question. *Equity market size* captures the level of development of a given country's equity market in 2001. It is measured as the aggregated market capitalization of all listed firms in a given nation, divided by that country's gross domestic product (World Bank, 2002). Controlling for equity market size is important, because this variable is known to correlate positively with levels of dispersed ownership (La Porta *et al.*, 1999). It furthermore controls for the relative importance of a country's equity market for its economy, economic performance, and capital structure (Pedersen &

Thomsen, 1997; Thomsen & Pedersen, 1996, 2000). *Gross national income per capita* captures the overall level of economic development in a given nation (World Bank, 2002). It represents an important control, because wealthier countries are likely to have larger equity markets with higher extents of ownership dispersion (Barca & Becht, 2001). Furthermore, this variable is likely to capture specific effects of the affluence of an economy on ancillary corporate governance variables (Pedersen & Thomsen, 1997; Roe, 2003; Thomsen & Pedersen, 2000).

RESULTS

After matching our own sample of 38 countries with the 27 countries covered in La Porta *et al.* (1999), we are left with a final sample of 22 countries (as corporate governance reform codes could not be identified for five of the countries covered in the La Porta study). Table 4 reports the aggregated scores for all dependent variables, for each country in our sample. Regression results for all four of the data clusters described above are reported in Tables 5 through 8.

Insert Tables 4, 5, 6, 7, & 8 about here

In total we report 4 (data clusters) * 5 (dependent variables) = 20 OLS regression models. The sample size for these models ($N = 22$) is undeniably small, but small sample regressions are certainly not uncommon in studies on comparative corporate governance (e.g., see Finkelstein & Hambrick, 1989; Roe, 2003).

Furthermore, with OLS we have chosen for a conservative estimation method which will remain unbiased and efficient even at small sample sizes, as long as first-order autocorrelation is absent from the OLS residuals. If residuals are not autocorrelated, valid inferences can still be drawn from *t*- and *F*-tests, even at smaller sample sizes (Greene, 1993). Reassuringly, Durbin-Watson statistics for our 20 regression models demonstrate that first-order positive or negative autocorrelations are not a systemic problem in our data.¹¹ One concern that needs to be mentioned, however, is the limited statistical power of our tests – the probability that they will yield significant results (Cohen, 1988). Given low power, it will be difficult to detect meaningful effects, even if they do exist in practice. It is therefore best to interpret our study as a conservative test of our hypotheses, as only very pronounced effects will show up as statistically significant in the results. In general, the fit of our models is good (see Tables 5 through 8). The mean R^2 across these 20 models is .349, whereas the mean R^2 adjusted is .146. Eight models are significant at conventional levels (see Tables 5 through 8).

Consistent with the notion that policy makers in countries characterized by high degrees of ownership dispersion will be more concerned with repairing relatively deficient internal governance mechanisms rather than stiffening the already adequate external governance mechanisms, the data indicate support for Hypothesis 1. At the 10 percent cut-off point, countries with a greater share of large, widely-held firms concentrate significantly on *internal design* mechanisms ($p \leq .05$; see Table 6). A similar concentration can be found at the 20 percent cut-off point for countries with medium-sized, widely held corporations ($p \leq .05$; see Table 7).

The data also show support for Hypothesis 2, in that policy makers in countries dominated by family-owned firms tend to opt for governance reforms that

strengthen their traditionally weak information regimes (cf. Khanna & Palepu, 2000a, 2000b). For the largest firms, a concentration on *esteem responsiveness* mechanisms may be noted at both the 20 percent ($p \leq .05$; see Table 5) and 10 percent cut-off points ($p \leq .05$; see Table 6).

Consonant with the idea that policy makers in countries with strong state ownership traditions will try to reinforce governance institutions promoting a greater degree of dispersed ownership, we find support for Hypothesis 3. Where state ownership of especially smaller firms is considerable, policy makers consistently opt for *dispersed ownership* mechanisms. This effect is observable at both the 20 percent ($p \leq .05$; see Table 7) and 10 percent cut-off points ($p \leq .05$; see Table 8).

The data also furnish support for the idea captured in Hypothesis 4, namely that policy makers from countries dominated by smaller firms will try to move away from *ownership concentration* measures in order to stimulate further growth through wider dispersion. In fact, all six effects are in the hypothesized direction, and three of these are significant at conventional levels. At the 20 percent cut-off point, the effect is significant for countries with high shares of widely held firms ($p \leq .10$) and those with considerable state ownership ($p \leq .05$; see Table 7). At the 10 percent cut-off point, the effect is significant only for countries with a high proportion of state-owned firms ($p \leq .05$; see Table 8).

Hypothesis 5 was not supported. Especially for the largest firms the effects are not trivial, and they are all in the expected direction, but not significant at conventional levels. This is in part due to two outliers: Ireland and Sweden report rather extreme scores on the *managerial empowerment* variable, but as their scores on all other variables show conventional values we decided not to eliminate them from the dataset.

DISCUSSION AND CONCLUSION

We attempted to explain the direction of the momentous shifts in national systems of corporate governance that are taking place in our day and age, and that have thus far not yet been conceptualized in a wholly satisfactory manner. In contradistinction with predictions made by proponents of the globalization thesis (cf. Guillén, 2000), our results indicate that corporate governance reforms are not resulting in wholesale convergence across most of the wealthy nations around the globe. But in equally sharp contrast with conjectures made by advocates of the divergent capitalisms thesis (cf. Aguilera & Jackson, 2003; Hollingsworth, Schmitter, & Streeck, 1994; Orrù, Biggart, & Hamilton, 1997; Whitley, 1999), neither do we see a blind faith in existing institutions with persistence at the local level as its consequence. Instead, we perceive of a “third way” of conceptualizing corporate governance reform – a perspective of local repairs in light of global ideals.

The idea of “global ideals” certainly illuminates a number of the core processes that are evolving at present under the banner of (worldwide) corporate governance reforms. The lion’s share of the countries in our sample is currently trying to make their equity markets broader, deeper, and more liquid. This should provide companies within their jurisdiction with access to more and cheaper financing, facilitate the diversification of financial and operational risks, and smoothen the transition of ownership stakes. A secondary but still important consideration is that policy makers are striving to make financial markets more effective vehicles for private wealth accumulation, thus stimulating economic growth by providing entrepreneurs with the right set of incentives (Rajan & Zingales, 2003). The number

of references made to these motives attest to the fact that certain financial and economic ambitions are truly global (also see our first endnote).

But the idea of global ideals is incomplete without the supplementary notion of “local repairs.” Policy makers tend to have a number of common reservations against the foolhardy “transplantation” of governance policies from countries that have historically enjoyed better performance against these global ideal standards to their own national context. A first, oft-heard objection is that no national system of corporate governance is inherently superior to all others. Those nations that have been “blessed” with considerable stock markets and a high degree of dispersed ownership – such as the US and the UK – have also simultaneously been “cursed” by a traditionally weaker emphasis on internal governance mechanisms and a history of episodic paper wealth destruction of unfathomable proportions. So policy makers claim (often quite explicitly) that it may not be *wise* to follow the US and the UK in their tracks. A second, wide-spread reservation against uncritical convergence is that there is considerable equifinality across corporate governance systems (Rubach & Sebor, 1998) and that there are multiple pathways towards “social peace” (Aguilera & Jackson, 2003; Roe, 2003). The US and the UK are certainly rich nations with vibrant economies, but many nations in Western Europe and South-East Asia fare equally well – in spite of their vastly different corporate governance traditions. So policy makers also claim that it may not be *necessary* to adopt Anglo-Saxon-style governance arrangements.

So, by and large, countries tend to “stand where they sit” with respect to their corporate governance reforms. Policy makers honor local corporate governance traditions. They are careful not to touch the power bases of the ruling elites. And they are often not hesitant to stand by choices they made in previous policy cycles. So, in

spite of numerous claims to the contrary (e.g., see Burt & Doyle, 1993, for the US; Gordon, 1999, for Germany; and Dore, 2000, for Japan), policy makers tend not to be too interested in experiments with “exotic” forms of corporate governance. Instead, reformers from countries with dispersed ownership traditions seek local (and incremental) changes to their traditionally weaker internal corporate governance mechanisms (Gedajlovic & Shapiro, 1998; Walsh & Seward, 1990). Similarly, policy makers from countries that are dominated by family-controlled firms realize that the adoption of Anglo-Saxon governance principles would not do much for their ability to reach global economic and financial ideals. Instead, they decide to rub their governance systems where they hurt most, and appear to concentrate on creating stronger informational regimes and on bringing greater openness to firms previously less prone towards disclosure. Furthermore, where state ownership rules the economic landscape, policy makers are trying to protect and empower the local *Mittelstand* in order to pave the way for greater ownership dispersion. Finally, in jurisdictions with many smaller firms, policy makers are actively trying to discourage blockholdership in the hope of the type of alleviating the type of principal-principal agency problems that are shying minority investors and slowing economic growth.

In sum, the field of comparative corporate governance may have to start asking itself a different set of questions. What is at stake is not whether national systems of corporate governance are engaged in a sweeping process of convergence towards some kind of global ideal state, or whether corporate governance systems around the world will continue to show evidence of stubborn persistence in local idiosyncrasies. The real challenge is to reconceptualize corporate governance reforms in a way that does justice to the equifinality of all the major systems of corporate governance. Until we learn to recognize and respect the marvel in each of the main

corporate governance traditions around the world, we will not be ready to conceive of measures and remedies that are simultaneously capable of making these traditions more effective *and* wholly legitimate in the eyes of the ruling elites that will have to endorse them.

REFERENCES

- Aguilera RV, Jackson G. 2003. The cross-national diversity of corporate governance: Dimensions and determinants. *Academy of Management Review* **28**(3): 447-465
- Aguilera RV, Cuervo-Cazurro A. 2004. Codes of good governance worldwide: What's the trigger? *Organization Studies* **25**(3): 415-443
- Barca F. 1995. *On corporate governance in Italy: Issues, facts and agency*. Bank of Italy, unpublished manuscript.
- Barca F, Becht M. 2001. *The control of corporate Europe*. Oxford University Press: Oxford
- Baron DP. 1995. The nonmarket strategy system. *Sloan Management Review* **37**(Fall): 73-85
- Bergstrom TC. 1989. A fresh look at the rotten kid theorem and other household mysteries. *Journal of Political Economy* **97**: 1138-1159
- Berle AA, Means GC. 1932. *The modern corporation and private property*. Macmillan: New York
- Biggart NW, Guillén MF. 1999. Developing difference: Social organization and the rise of the auto industries of South Korea, Taiwan, Spain, and Argentina. *American Sociological Review* **64**: 722-747
- Bowles S. 1985. The production process in a competitive economy: Walrasian, Marxian, and Neo-Hobbesian models. *American Economic Review* **76**(1): 16-36
- Brennan G, Pettit P. 2004. *The economy of esteem: An essay on civil and political society*. Oxford University Press: Oxford
- Buchanan JM. 1986. *Liberty, market, and state: Political economy in the 1980s*. New York University Press: New York

- Burt DN, Doyle MF. 1993. *American keiretsu: A strategic weapon for global competitiveness*. McGraw-Hill: Columbus, OH
- Carney TF. 1972. *Content analysis*. University of Manitoba Press: Manitoba
- Carney M, Gedajlovic ER. 2002. The co-evolution of institutional environments and organizational strategies: The rise of family business groups in the ASEAN region. *Organization Studies* **23**(1): 1-29
- Coase RH. 1992. The institutional structure of production: The 1991 Alfred Nobel memorial prize lecture in economic sciences. *American Economic Review* **82**: 713-719
- Coffee JC. 1999. The future as history: The prospects for global convergence in corporate governance and its implications. *Northwestern University Law Review* **93**: 641-707
- Cohen J. 1988. *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates: Hillsdale, NJ
- Davis JH, Schoorman FD, Donaldson L. 1997. Toward a stewardship theory of management. *Academy of Management Review* **22**: 20-47
- Djelic M-L. 1998. *Exporting the American model: The post-war transformation of European business*. Oxford University Press: Oxford
- Dore R. 2000. *Stock market capitalism: Welfare capitalism - Japan and Germany versus the Anglo-Saxons*. Oxford University Press: Oxford
- Edwards J, Fischer K. 1994. *Banks, finance and investment in Germany*. Cambridge University Press: Cambridge
- Elster J. 1979. *Ulysses and the Sirens: studies in rationality and irrationality*. Cambridge University Press: Cambridge

- Fama EF. 1980. Agency problems and the theory of the firm. *Journal of Political Economy* **88**: 288-307
- Fama EF, Jensen MC. 1983. Separation of ownership and control. *Journal of Law and Economics* **26**: 301-326
- Filatotchev I, Buck T, Wright M. 1992. Privatisation and buy-outs in the USSR. *Soviet Studies* **44**(2): 265-282
- Finkelstein S, Hambrick DC. 1989. Chief executive compensation: A study of the intersection of markets and political processes. *Strategic Management Journal* **10**(2): 121-134
- Fleming RW. 1998. Worldwide changes in corporate governance. *The Corporate Board*(November-December): 1-4
- Fligstein N. 1990. Organizational, demographic, and economic determinants of the growth patterns of large firms. *Comparative Social Research* **12**: 19-44
- Fligstein N, Freeland R. 1995. Theoretical and comparative perspectives on corporate organization. *Annual Review of Sociology* **21**: 21-43
- Fodor J. 1983. *The modularity of mind*. MIT Press: Cambridge, MA
- Gedajlovic ER, Shapiro DM. 1998. Management and ownership effects: Evidence from five countries. *Strategic Management Journal* **19**: 533-553
- Gerlach ML. 1992. *Alliance capitalism: The social organization of Japanese business*. University of California Press: Berkeley, CA
- Ghoshal S, Moran P. 1996. Bad for practice: A critique of the transaction cost theory. *Academy of Management Review* **21**(1): 13-47
- Ghoshal S. 2005. Bad management theories are destroying good management practices. *Academy of Management Learning and Education* **4**: 75-91

- Gilson RJ. 2004. Globalizing corporate governance: Convergence of form or function. In JN Gordon, MJ Roe (Eds.), *Convergence and persistence in corporate governance*: 128-158. Cambridge University Press: Cambridge
- Gordon JN. 1999. Pathways to corporate convergence? Two steps on the road to shareholder capitalism in Germany: Deutsche Telekom and Daimler Chrysler. *Columbia Journal of European Law* **5**: 219-241
- Greene WH. 1993. *Econometric analysis* (2nd ed.). Macmillan: New York
- Guillén MF. 2000. Corporate governance and globalization: Is there convergence across countries? *Advances in Comparative International Management* **13**: 175-203
- Hamilton GG, Biggart NW. 1988. Market, culture and authority: A comparative analysis of management and organization. *American Journal of Sociology* **94**(S52-S94)
- Hansmann H. 1996. *The ownership of enterprise*. Harvard University Press: Boston, MA
- Hansmann H, Kraakman R. 2002. Toward a single model of corporate law? In JA McCahery, P Moerland, T Raaijmakers, L Renneboog (Eds.), *Corporate governance regimes: Convergence and diversity*: 56-81. Oxford University Press: Oxford
- Heugens PPMAR, Otten JA. 2005. *Corporate governance reforms around the world*. Paper presented at the Annual Meeting of the Academy of Management, August 7-11, Honolulu, USA
- Hollingsworth JR, Schmitter PC, Streeck W. 1994. *Governing capitalist economies: Performance and control of economic sectors*. Oxford University Press: Oxford

- Holsti CR. 1969. *Content analysis for the social sciences and humanities*. Addison Wesley: Reading, MA
- Jensen MC, Meckling WH. 1976. The theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* **3**: 305-360
- Jensen MC, Ruback RS. 1983. The market for corporate control: The scientific evidence. *Journal of Financial Economics* **11**: 5-50
- Jensen MC. 1998. Self-interest, altruism, incentives, and agency. In MC Jensen (Ed.), *Foundations of Organizational Strategy*: 39-50. Harvard University Press: Cambridge, MA
- Kerr C, Dunlop JT, Harbison FH, Myers CA. 1960. *Industrialism and industrial man: The problems of labor and management in economic growth*. Harvard University Press: Cambridge, MA
- Khanna T, Palepu K. 2000. The future of business groups in emerging markets: Long run evidence from Chile. *Academy of Management Journal* **43**(3): 268-285
- Khanna T, Palepu K. 2000. Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *Journal of Finance* **55**(2): 867-891
- Khanna T, Palepu K. 2004. Globalization and convergence in corporate governance: Evidence from Infosys and the Indian software industry. *Journal of International Business Studies* **35**(6): 484-507
- Kogut BM, Walker G. 2001. The small world of Germany and the durability of national networks. *American Sociological Review* **66**: 317-335
- Kornai J. 1992. The post-socialist transition and the state: Reflections in the light of Hungarian fiscal problems. *American Economic Review* **82**(2): 1-21

- La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny RW. 1998. Law and finance. *Journal of Political Economy* **101**: 678-709
- La Porta R, Lopez-de-Silanes F, Shleifer A. 1999. Corporate ownership around the world. *Journal of Finance* **65**(2): 471-517
- Lubatkin MH, Lane PJ, Collin S-O, Very P. 2005. Origins of corporate governance in the USA, Sweden, and France. *Organization Studies* **26**(6): 867-888
- Orrù M, Biggart NW, Hamilton GG. 1997. *The economic organization of East Asian capitalism*. Sage: Thousand Oaks, CA
- Pedersen T, Thomsen S. 1997. European patterns of corporate ownership: A twelve-country study. *Journal of International Business Studies* **28**(4): 759-778
- Perrow C. 1986. *Complex organizations: A critical essay* (3rd ed.). McGraw-Hill: New York
- Prowse SD. 1992. The structure of corporate ownership in Japan. *Journal of Finance* **47**: 1121-1140
- Prowse SD. 1995. Corporate governance in international perspective: A survey of corporate control mechanisms among large firms in the US, UK, Japan and Germany. *Financial Markets, Institutions and Instruments* **4**(1): 1-63
- Rajan RG, Zingales L. 2003. *Saving capitalism from the capitalists: Unleashing the power of financial markets to create wealth and spread opportunity*. Crown Business: New York
- Roe MJ. 1993. Some differences in corporate structure in Germany, Japan and the United States. *Yale Law Review* **102**(8): 1927-1947
- Roe MJ. 1994. *Strong managers, weak owners: The political roots of American corporate finance*. Princeton University Press: Princeton, NJ

- Roe MJ. 2003. *Political determinants of corporate governance: Political context, corporate impact*. Oxford University Press: Oxford
- Rubach MJ, Sebor TC. 1998. Comparative corporate governance: Competitive implications of an emerging convergence. *Journal of World Business* **33**(2): 167-184
- Schulze WS, Lubatkin MH, Dino RN, Buchholtz AK. 2001. Agency relationships in family firms: Theory and evidence. *Organization Science* **12**(2): 99-116
- Shleifer A, Vishny RW. 1997. A survey of corporate governance. *Journal of Finance* **52**(2): 737-783
- Stark D. 1996. Recombinant property in East European capitalism. *American Journal of Sociology* **101**(4): 993-1027
- Thomsen S, Pedersen T. 1996. Nationality and ownership structures: The 100 largest companies in six European nations. *Management International Review* **36**(2): 149-166
- Thomsen S, Pedersen T. 2000. Ownership structure and economic performance in the largest European companies. *Strategic Management Journal* **21**: 689-705
- Useem M. 1993. *Executive defense: Shareholder power and corporate reorganization*. Harvard University Press: Cambridge, MA
- Useem M. 1996. *Investor capitalism: How money managers are changing the face of corporate America*. Basic Books: New York
- Walsh JP, Seward JK. 1990. On the efficiency of internal and external corporate control mechanisms. *Academy of Management Review* **15**(3): 421-458
- Whitley R. 1999. *Divergent capitalisms: The social structuring and change of business systems*. Oxford University Press: Oxford

World Bank. 2002. *World Development Indicators 2002*. World Bank: Washington, DC

Wright M, Filatotchev I, Hoskisson RE, Peng MW. 2005. Strategy research in emerging economies: Challenging the conventional wisdom. *Journal of Management Studies* **42**(1): 1-33

Zingales L. 1995. What determines the value of corporate votes? *Quarterly Journal of Economics* 110: 1047-1073

TABLE 1: Individual corporate governance items

Construct	Item	Description
<i>Organizational design</i>	Nominating Committee	% of CGR code text devoted to the appointment, composition, and rules of operation of the board of director's (BOD) subcommittee involved with the selection and training of new BOD members
	Audit Committee	% of CGR code text devoted to the appointment, composition, and rules of operation of the BOD's subcommittee involved with overseeing the company's principal information flows and selecting an external auditor to verify the content of that information
	Remuneration Committee	% of CGR code text devoted to the appointment, composition, and rules of operation of the BOD's subcommittee involved with determining the company's overall executive pay policy as well as the specific amount of monetary incentives to be paid out to executives in a given year
	Whistleblower Protection	% of CGR code text devoted to a description of all rules of operation firms must follow in order to ensure the protection and economic independence of employees that seek to publicly address corporate wrongdoings
<i>Ownership concentration</i>	Bonus	% of CGR code text devoted to executive compensation in the form of cash bonuses and other forms of short-term incentive pay
	Institutional Investors	% of CGR code text devoted to a description of institutional investors as a separate category of investors, usually in contradistinction with dispersed shareholders, with distinct rights and obligations such as the right to engage in a direct dialogue with executives and the obligation to actively monitor them on behalf of all shareholders
	Stakeholder Equity	% of CGR code text devoted to a description of all rules of operation firms must follow in order to ensure the equitable treatment of all parties with a social or political stake in the company (other than shareholders)
	Media Information Rights	% of CGR code text devoted to a description of all media channels firms ought to utilize to inform shareholders and other stakeholders of important corporate decisions and results

<i>Dispersed ownership</i>	Shareholder Voting	% of CGR code text devoted to a description of all issues on which shareholders are allowed to vote during the shareholder's meeting, as well as the rules of operation pertaining to that meeting in general and the voting process in particular
	Shareholder Rights	% of CGR code text devoted to a description of all ancillary rights granted to shareholders, including the right to call shareholder meetings, the right to be informed about important corporate decisions, and the right of interpellation
	Auditor Rules of Operation	% of CGR code text devoted to the rules of operation to be followed by the company in terms of facilitating the external auditor's job as well the rules of operation to be followed by the auditor him- or herself
	Equal Treatment of Parties	% of CGR code text devoted to a description of all rules of operation firms must follow in order to ensure the equitable treatment of all parties with a financial or competitive stake in the company (including minority shareholders)
<i>Managerial empowerment</i>	Option	% of CGR code text devoted to executive compensation in the form of stock options and other forms of long-term incentive pay
	Board	% of CGR code text devoted to the appointment, composition, and rules of operation of a company's BOD
	Employee Ownership	% of CGR code text devoted to a description of all rules of operation firms must follow in order to provide managerial and other salaried employees with the opportunity to become co-owners of the firm
<i>Esteem responsiveness</i>	Auditor Appointment	% of CGR code text devoted to the selection and appointment of the external auditor
	Social Reporting	% of CGR code text devoted to a description of all social, health, and environmental issues about which firms are expected to report, either integrated with or separated from their report of key financial indicators and results

TABLE 2: Factor analysis^a

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Description	Organi- zational design	Ownership concentra- tion	Dispersed ownership	Managerial empower- ment	Esteem responsive- ness
Eigenvalue	3,126	2,627	2,260	1,896	1,409
% Var. Expl.	18,39	15,45	13,30	11,15	8,29
% Cum. Var. Expl.	18,39	33,84	47,14	58,29	66,58
1. Nom. Comm.	0,754*	0,053	-0,012	-0,013	-0,275
2. Aud. Comm.	0,891*	-0,011	-0,063	-0,163	0,139
3. Rem. Comm.	0,638*	0,067	-0,341*	0,038	-0,187
4. Whistleblw.	0,833*	-0,123	0,071	0,017	-0,016
5. Bonus	0,095	0,688*	-0,461*	-0,117	-0,273
6. Inst. Invest	0,014	0,759*	-0,029	0,136	0,136
7. Stake. Equi.	-0,012	0,808*	0,162	-0,113	-0,137
8. Media Info.	-0,121	0,696*	0,293	0,090	0,057
9. Share Vote	-0,348*	0,086	0,544*	-0,167	-0,203
10. Share Right	-0,154	-0,087	0,735*	0,175	-0,250
11. Aud. Rules	0,135	-0,040	0,606*	-0,140	0,384*
12. Equal. Treat	0,028	0,430*	0,733*	0,015	-0,019
13. Option	-0,050	-0,010	-0,137	0,854*	0,014
14. Board	-0,060	0,026	-0,205	-0,681*	0,309*
15. Empl. Own.	-0,065	0,083	-0,026	0,842*	-0,039
16. Aud. App.	0,031	-0,130	-0,066	-0,139	0,742*
17. Soc. Report	-0,204	0,114	-0,029	-0,055	0,830*

^a Extraction method: Principal Component Analysis; rotation method: Varimax rotation with Kaiser normalization; rotation converged in 6 iterations; * significant factor loadings (> 0.3); highest factor loadings for each variable are printed in bold.

TABLE 3: Pearson correlation matrix^a

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Org. Design																		
2. Own. Concentration	-.133																	
3. Disp. Ownership	-.242	-.087																
4. Man. Empowerment	-.149	-.045	.020															
5. Esteem Resp.	-.220	.006	-.097	-.289														
6. Widely Large 20%	.555***	.237	-.314	.080	-.296													
7. Family Large 20%	-.313	-.123	-.011	-.021	.537***	-.670***												
8. State Large 20 %	-.305	-.136	.511**	-.259	-.058	-.478**	-.194											
9. Widely Large 10%	.672***	.071	.320	.013	-.186	.921***	.580***	.506**										
10. Family Large 10%	-.338	-.091	-.008	.025	.527***	-.650***	.983***	-.199	-.568***									
11. State Large 10 %	-.295	-.144	.464**	-.277	-.084	-.451**	-.220	.983***	-.499**	-.221								
12. Widely Med 20%	.610***	-.129	-.206	.255	-.157	.742***	-.374*	-.545***	.805***	-.371*	-.561***							
13. Family Med. 20%	-.262	-.007	.038	-.129	.425**	-.521**	.757***	-.064	-.439**	.800***	-.064	-.503**						
14. State Med. 20 %	-.264	-.249	.499**	-.121	-.098	-.448**	-.045	.694***	-.471**	-.091	.635***	-.385*	-.258					
15. Whidely Med. 10%	.414*	-.031	-.173	.435**	-.055	.538**	-.266	-.528**	.645***	-.243	-.543***	.868***	-.462**	-.358				
16. Family Med. 10%	-.069	-.088	.001	-.127	.427**	-.390*	.680***	-.136	-.260	.726***	-.128	-.316	.953***	-.370*	-.314			
17. State Med. 10 %	-.269	-.267	.478**	-.148	-.113	-.468**	-.071	.743***	-.492**	-.109	.704***	-.427**	-.255	.989***	-.393*	-.357		
18. Equity Market	.201	-.213	-.354	.174	-.328	.182	.057	-.379*	.272	.069	-.395*	.213	.133	-.385*	.181	.148	-.407*	
19. GNI-CAP	.308	.108	.147	.155	-.532**	.491**	-.420*	-.132	.398*	-.455**	-.142	.539***	-.519**	-.101	.476**	-.496**	-.139	.311

^a * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

TABLE 4: Countries and aggregated system scores^a

Country	Organizational Design	Ownership Concentration	Dispersed Ownership	Managerial Empowerment	Esteem Responsiveness
Australia	0.17	0.05	0.02	0.25	0.01
Austria	0.03	0.00	0.14	0.33	0.03
Belgium	0.14	0.04	0.02	0.34	0.01
Canada	0.18	0.00	0.05	0.34	0.06
Denmark	0.00	0.00	0.03	0.28	0.00
Finland	0.09	0.00	0.00	0.39	0.02
France	0.25	0.03	0.01	0.33	0.00
Germany	0.01	0.06	0.08	0.45	0.05
Greece	0.03	0.06	0.08	0.22	0.05
Hong Kong	0.05	0.02	0.00	0.00	0.00
Ireland	0.03	0.02	0.01	-0.85*	0.01
Italy	0.13	0.02	0.05	0.53	0.01
Japan	0.05	0.15	0.00	0.36	0.01
Mexico	0.00	0.02	0.01	0.51	0.14
Netherlands	0.03	0.02	0.04	0.15	0.01
Norway	0.06	0.03	0.25	0.14	0.00
Portugal	0.00	0.01	0.15	0.25	0.00
Spain	0.04	0.01	0.00	0.23	0.01
Sweden	0.05	0.04	0.10	-0.41*	0.01
Switzerland	0.07	0.00	0.04	0.21	0.01
U.K.	0.26	0.01	0.06	0.35	0.00
U.S.	0.45	0.01	0.01	0.20	0.01

^a Values represent aggregate scores for each construct per country, expressed as percentages of total coded text and obtained by adding the scores for all individual items comprising that construct. The negative scores for some countries on the *Managerial empowerment* construct result from one of its items – *Board* – being reversely coded (due to that item's negative loading on Factor 4).

TABLE 5: Regressions predicting governance reforms (I)^a

Variables	Organizational Design	Ownership Concentration	Dispersed Ownership	Managerial Empowerment	Esteem Responsiveness
Widely held	.26 (.20)	.03 (.07)	-.01 (.09)	-.70 (.60)	.08 (.05)
Family owned	.08 (.21)	.01 (.07)	-.05 (.10)	-.67 (.64)	.12** (.05)
State owned	.06 (.24)	-.02 (.08)	.12 (.12)	-.67 (.64)	.05 (.06)
Controls					
Equity market	.02 (.04)	-.02 (.01)	-.03 (.02)	.01 (.12)	-.01 (.01)
GNI per capita	.00 (.00)	.00 (.00)	.00* (.00)	.00 (.00)	.00 (.00)
<i>N</i>	22	22	22	22	22
<i>F</i>	1.54	.56	2.49*	.59	4.02**
<i>R</i> ²	.325	.149	.437	.156	.557
<i>R</i> ² <i>adj.</i>	.114	-.117	.262	-.107	.418

^a Models for large firms at the 20 percent cutoff point. Standard errors are shown in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

TABLE 6: Regressions predicting governance reforms (II)^a

Variables	Organizational Design	Ownership Concentration	Dispersed Ownership	Managerial Empowerment	Esteem Responsiveness
Widely held	.37** (.15)	-.03 (.06)	.01 (.09)	-.66 (.51)	.07* (.04)
Family owned	.12 (.16)	-.03 (.06)	.09 (.09)	-.51 (.54)	.11** (.04)
State owned	.12 (.17)	-.07 (.06)	.15 (.10)	-.92 (.58)	.03 (.04)
Controls					
Equity market	.00 (.03)	-.02 (.01)	-.03 (.02)	.04 (.12)	-.02* (.01)
GNI per capita	.00 (.00)	.00 (.00)	.00* (.00)	.00 (.00)	.00 (.00)
<i>N</i>	22	22	22	22	22
<i>F</i>	2.92**	.59	2.18	.70	4.08**
<i>R</i> ²	.477	.155	.405	.179	.560
<i>R</i> ² <i>adj.</i>	.313	-.109	.220	-.077	.423

^a Models for large firms at the 10 percent cutoff point. Standard errors are shown in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

TABLE 7: Regressions predicting governance reforms (III)^a

Variables	Organizational Design	Ownership Concentration	Dispersed Ownership	Managerial Empowerment	Esteem Responsiveness
Widely held	.27** (.13)	-.08* (.04)	.02 (.06)	.24 (.43)	.04 (.03)
Family owned	.01 (.13)	-.03 (.04)	.14 (.06)**	-.07 (.42)	.05 (.03)
State owned	.01 (.15)	-.11** (.04)	.18 (.71)**	-.01 (.49)	-.01 (.04)
Controls					
Equity market	.01 (.04)	-.02* (.01)	-.04* (.02)	.07 (.13)	-.02 (.01)
GNI per capita	.00 (.00)	.00 (.00)	.00** (.00)	.00 (.00)	.00 (.00)
<i>N</i>	22	22	22	22	22
<i>F</i>	1.96	2.00	3.64	.29	2.62*
<i>R</i> ²	.380	.384	.532	.082	.450
<i>R</i> ² <i>adj.</i>	.187	.192	.386	-.205	.278

^a Models for small firms at the 20 percent cutoff point. Standard errors are shown in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

TABLE 8: Regressions predicting governance reforms (IV)^a

Variables	Organizational Design	Ownership Concentration	Dispersed Ownership	Managerial Empowerment	Esteem Responsiveness
Widely held	.21 (.19)	-.08 (.05)	.01 (.08)	.89 (.53)	.05 (.05)
Family owned	.04 (.14)	-.04 (.04)	.15** (.06)	-.04 (.38)	.04 (.03)
State owned	-.04 (.168)	-.11** (.05)	.20** (.07)	.12 (.46)	-.01 (.04)
Controls					
Equity market	.01 (.04)	-.02* (.01)	-.04* (.02)	.07 (.12)	-.15 (.10)
GNI per capita	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
<i>N</i>	22	22	22	22	22
<i>F</i>	.84	1.60	3.73**	.87	2.71*
<i>R</i> ²	.209	.334	.538	.214	.459
<i>R</i> ² <i>adj.</i>	-.038	.126	.394	-.032	.290

^a Models for small firms at the 10 percent cutoff point. Standard errors are shown in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

ENDNOTES

¹ That good corporate governance and a thriving stock market are in fact global ideals is easily demonstrated by citing the preambles of a sample of corporate governance reform codes from all five inhabited continents: (1) “The significance of corporate governance is now widely recognised, both for national development and as part of international financial architecture, as a lever to address the converging interests of competitiveness, corporate citizenship, and social and environmental responsibility (...) there are international standards that no country can escape in the era of the global investor” (*Africa, South Africa’s King Committee on Corporate Governance*); (2) “The continued success and optimal functioning of our economic system requires the confidence and trust of investors, employees, consumers, and the public at large” (*Americas, the US-based Conference Board*); (3) “the appropriate operation of corporate governance for listed companies is a vitally fundamental demand for enhancing corporate value on a continuous basis (...) Above all, it is crucial that the rights and interests of shareholders be protected and equally secured” (*Asia, Japan’s Tokyo Stock Exchange*); (4) “[The goal] is to promote the trust of international and national investors, customers, employees and the general public in the management and supervision of listed German stock corporations” (*Europe, Germany’s Government Commission German Corporate Governance Code*); (5) “Maintaining an informed and efficient market and preserving investor confidence remain the constant imperatives” (*Oceania; Australia’s Australian Stock Exchange*).

² There are at least four “ideal” properties of stock markets that policy makers everywhere around the globe can be expected to work towards. A stock market ought to be *efficient*, such that all parties who wish to trade on it can do so against minimal transaction costs. It must also be *liquid*, in the sense that even substantial holdings of corporate equity can change hands quickly. A *strong informational regime* must surround the market, such that all relevant information about listed companies’ conduct and relevant contingencies can be known and discounted into securities prices. The market should also be *protected* by high-quality

regulations that are efficiently enforceable. Only markets with these properties can be expected to grow deeper and broader, and offer individual entrepreneurs the right set of incentives to contribute to sustained economic growth.

³ Family-control is especially prominent in countries where shareholder protection is low (La Porta *et al.*, 1999). No less than 50 percent of the medium-sized firms in these countries are controlled by families. Apparently, the additional influence on management stemming from blockholdership is used as a substitute for legal protection in these countries (La Porta *et al.*, 1998).

⁴ Schulze and his colleagues (2001) found, for example, that roughly one-third of all U.S. family-controlled enterprises in their sample prefer not to disclose what they deem “sensitive” information, like their succession plans.

⁵ The decisive date for the Enron collapse – the unchallenged trigger of the most recent wave of managerial malfeasance – is October 16th 2001. On this date, Enron officials reported a \$618 million third-quarter loss and a \$1.2 billion reduction in shareholder equity, partly related to off-balance sheet partnerships run by the company’s CFO Andrew Fastow. Enron itself never recuperated from this blow, but – as the steep numerical increase in corporate governance reform codes since this date demonstrates – it did manage to trigger perhaps the greatest soul-searching effort the global financial community has ever experienced.

⁶ The Neo-Hobbesian tradition incorporates a number of highly influential theories, which have in common (and owe their predicate to the fact) that they share the behavioral assumption of managerial opportunism (usually in conjunction with the assumption of bounded rationality). These theories include, amongst others, agency theory, transaction cost theory, and team-production theory (see Perrow, 1986).

⁷ Full-text versions of most of these codes can be found on the website of the European Corporate Governance Institute (www.ecgi.org).

⁸ Each item was developed using a two-step procedure. The first step, which was inductive, was oriented towards grounding each item in the data. We identified potential items through a

thorough joint reading and rereading of all corporate governance reform codes, carefully tracking and selecting those items that recurred throughout five or more of the codes in our sample. This ensured the appropriateness of each item for comparative research. The second step, which was theoretical, was oriented towards grounding each item in the relevant literature. For each item, we identified one or more research articles that had previously defined and used that item, to calibrate our interpretation of a given construct with its prior usage in the field.

⁹ Interested readers can obtain the dataset by contacting the corresponding author.

¹⁰ A negative factor loading in an exploratory factor analysis on several conceptually related items may be interpreted in a similar fashion as an inverse-coded item in a psychometric measurement scale.

¹¹ The Durbin-Watson statistics for our 20 OLS models are (reported in the order in which they appear in Tables 5 through 8): (1) 1.76; (2) 1.72; (3) 1.61; (4) 2.03; (5) 2.57; (6) 2.09; (7) 1.58; (8) 1.71; (9) 1.77; (10) 2.27; (11) 1.99; (12) 2.33; (13) 1.63; (14) 1.87; (15) 2.27; (16) 1.43; (17) 1.88; (18) 1.49; (19) 1.95; (20) 2.08.