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Family Control and the Rent-Seeking Society

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A high level of trust within a small elite, like a low level of trust in society at large, may be a serious impediment to economic development. This is because such concentrated high trust among the elite promotes political rent seeking, known to retard growth. We propose that entrusting the governance of a country's great corporations to a few wealthy families promotes this undesirable distribution of trust. Preliminary empirical evidence and arguments grounded in game theory support this view.

Introduction

Big businesses in the United States and many other developed economies are run by professional managers for dispersed shareholders. Despite well-known agency problems in such firms, these economies sustain high levels of economic and social development.[1] In contrast, La Porta et al. (1999) show that most large firms elsewhere are organized into vast corporate groups controlled by a few extremely wealthy families, with dispersed ownership the rarest of curiosities. These differences in ownership structure are important to economic prosperity.

Many economists now concur with Krueger (1974) that official corruption is a critical barrier to growth. Murphy et al. (1991) argue that official corruption diverts resources and talent away from real investments into political rent seeking: lobbying politicians, influencing judges, and currying favor with bureaucrats.[2] Lucrative returns from political rent-seeking investments "crowd out" real investment in physical assets, research, and the like, which pay only normal returns. Murphy et al. (1993) argue that this diversion is often large enough to starve real investments, especially in innovation, of capital. Since Schumpeter (1934), Solow (1957), and Romer (1986) are widely accepted as correct in arguing that innovation is critical to growth, Krueger (1974), Murphy et al. (1991, 1993), and others argue that this diversion seriously impedes growth.

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1. See Jensen and Meckling (1976) for the essential theory, and Morck et al. (1988, 1989, 1990) and others for empirical evidence on the importance of agency problems and on the mechanisms whereby they are constrained.

2. We follow standard practice from the economics and finance literatures in using the term *political rent seeking* to describe self-interested dealings between the political and business elites. The term *rent* is appropriate in its economic usage, which includes unearned income of any kind. Also, we use the term corrupt, rather than illegal, to describe these transactions and the parties to them. This is because political rent seeking is legal, if not socially acceptable behavior, in many countries.

Fukuyama (1995a,b), La Porta et al. (1997b), and others hold that an absence of trust prevents large, professionally managed businesses from developing, and that this impedes growth for two reasons. First, not trusting outsiders causes family firms to avoid hiring professional managers and to shun growth that requires external capital. Second, not trusting insiders causes public investors to be wary of buying stocks. Without disputing these, we propose yet another reason. A high level of trust between members of a small elite magnifies the returns to political rent seeking by this elite. We present empirical evidence consistent with this thesis, and argue that it follows naturally from viewing political rent seeking as a cooperative game among members of the elite and a non-cooperative game between the elite and the rest of society.

Of course our results are statistical averages. Every very large family-controlled firm or group of firms is probably not primarily engaged in political rent seeking. Some entrenched oligarchic mercantile families might be enlightened and benevolent. Moreover, professional management leads to a well-known set of agency problems that can also impede growth. Further work is needed to clarify how these tradeoffs between the problems of entrenched family oligarchic control and those of professional management differ in different circumstances.

Family Control over Large Firms and Economy Performance

Table 1 shows the fraction of the top 20 publicly traded firms, ranked by market capitalization in each country, that are controlled by families in December 1995, as reported

Table 1

Measures of the Incidence of Oligarchic Family Control in Different Countries

	Twenty Largest Firms		Ten Middle-size Firms			Twenty Largest Firms		Ten Middle-size Firms	
Threshold	20%	10%	20%	10%	Threshold	20%	10%	20%	10%
Argentina	65%	65%	80%	80%	Japan	5%	10%	10%	10%
Australia	5%	10%	50%	50%	Mexico	100%	100%	100%	100%
Austria	15%	15%	17%	17%	Netherlands	20%	20%	20%	20%
Belgium	50%	50%	40%	40%	New Zealand	25%	45%	29%	86%
Canada	25%	30%	30%	50%	Norway	25%	25%	40%	40%
Denmark	35%	35%	40%	40%	Portugal	45%	50%	50%	50%
Finland	10%	10%	20%	20%	Singapore	30%	45%	40%	60%
France	20%	20%	50%	50%	South Korea	20%	35%	50%	80%
Germany	10%	10%	40%	40%	Spain	15%	25%	30%	30%
Greece	50%	65%	100%	100%	Sweden	45%	55%	60%	60%
Hong Kong	70%	70%	90%	90%	Switzerland	30%	40%	50%	50%
Ireland	10%	15%	13%	25%	United Kingdom	0%	5%	40%	60%
Israel	50%	50%	60%	60%	United States	20%	20%	10%	30%
Italy	15%	20%	60%	80%					

Note: Family control is inferred if the largest shareholder is a family and if its stake is greater than either a 20% or 10% voting-control threshold. Samples are the twenty largest publicly traded firms, ranked by December 1995 market capitalization, in each country; and the ten firms with market capitalization just greater than $500 million in December 1995.

by La Porta et al. (1999). As a robustness check, control is defined in two ways: first as a 20% voting block, and then as a 10 % voting block. A majority block is not normally required for control because most small shareholders do not vote.

Family control is least important in the United Kingdom, where no family controls more than 20 % of any of the top 20 public firms. In Mexico, all large firms are family controlled. Other countries range between these extremes, with Italy having 15% of its top 20 firms controlled by families, Belgium having 50% family control, and Sweden having 45% family control. Using a ten-percent threshold gives a broadly similar distribution.

The top 20 U.S. firms are larger than the top 20 firms in Singapore. It also makes sense to compare roughly similar sized firms. Table 1 therefore also shows the incidence of family control in each country for the ten smallest firms with market capitalization exceeding U.S.$500 million. The rankings of countries change somewhat, with Germany and Italy exhibiting greater family control of medium-sized firms than of their largest firms.

These middle-sized firms are still quite large by any standards. Table 1 does not include information about small firms. Thus, all the measures in Table 1 gauge the power of the great mercantile families of each country. Consequently, we say all four of these variables measure *oligarchic family control*, as opposed to merely *family control*.[3]

We take family ownership as implying family control. This is an assumption, for wealthy families might be passive shareholders, relegating actual management decisions to hired professionals. However, much recent work in finance supports our approach. A passive portfolio should be as widely diversified as possible across both industries and countries. Families intent only on passive investment should own small stakes in many companies, not stakes in individual companies of the magnitudes shown in Table 1. Also, much empirical evidence supports the view that large shareholders, especially families, manage firms and corporate groups to extract private benefits and to preserve their control. See Morck et al. (1988), Barclay and Holderness (1989), Barclay et al. (1993), Morck et al. (2000), Nenova (2000), Faccio et al. (2001), Rajan and Zinglaes (2001), Johnson and Mitton (2002), Claessens et al. (2002), and others. This implies an active role in at least certain dimensions of strategic management.

In Table 1, higher income countries, by and large, have less oligarchic family control. Table 2 tests this formally. Economic prosperity, measured by the logarithm of 1995 *per capita* gross domestic product (GDP), is highly significantly negatively correlated with all four oligarchic family control measures. Great families are more important in poorer countries.

Per capita income measures economic development, but misses other things. Table 2 thus also correlates oligarchic family control with measures of public goods provision—including physical infrastructure, health care, education, and good government—and social development.

To gauge physical infrastructure, we average five scores—one for each of roads, air, ports, telecommunications, and electric power—from the 1996 *Global Competitiveness Report*. These scores are from surveys asking businesses about the extent to which each aspect of the country's infrastructure meets the needs of business. Higher scores signify

3. Table 1 contains all major rich and middle-income countries, but no poor ones. Studies of particular poor countries or regions by Fisman (2001), Johnson and Mitton (2002), Khanna and Palepu (1997, 1999, 2000, 2001, 2002), Khanna (2002), and others reveal corporate control almost exclusively vested with a few very wealthy families. We are currently expanding our list to pursue further work, and find virtually all private-sector large firms in other poor countries to be family controlled. This suggests that adding poor countries would strengthen our results.

Table 2

Simple Correlations of Economy Characteristics with Oligarchic Family Control

		Oligarchic Family Control Measures				
		Twenty Largest Firms		Ten Middle-size Firms		
	Threshold	20%	10%	20%	10%	Sample
Economic Development	*Logarithm of 1995 per capita GDP in current international dollars at purchasing power parity*	–0.514 (0.01)	–0.577 (0.00)	–0.560 (0.00)	–0.564 (0.00)	27
Physical Infrastructure	*Average scores for roads, air, ports, telecom, & power for how well each meets business needs*	–0.354 (0.08)	–0.398 (0.05)	–0.553 (0.00)	–0.480 (0.02)	25
Health Care Provision	*Logarithm of infant mortality rate per 1,000, 1993*	0.757 (0.00)	0.749 (0.00)	0.653 (0.00)	0.665 (0.00)	25
Education System	*Percentage of respondents agreeing that education system meets the needs of a competitive economy*	–0.439 (0.03)	–0.422 (0.04)	–0.551 (0.00)	–0.519 (0.01)	25
Quality of Government	*Average monthly inflation from 1990–2002*	0.709 (0.00)	0.699 (0.00)	0.689 (0.00)	0.602 (0.00)	25
Social Development	*Income inequality as measured by a Gini coefficient*	0.547 (0.00)	0.541 (0.00)	0.504 (0.01)	0.491 (0.01)	27

Note: Numbers in parentheses are probability levels for the null hypothesis of zero correlation. Incidences of oligarchic family control measures are shown in Table 1.

more adequate infrastructure. All four measures of the incidence of oligarchic family control are highly significantly negatively correlated with physical infrastructure quality. The less adequate the country's physical infrastructure, the more important are great families.

To measure health care provision, we use infant mortality per thousand live births, as reported by the World Bank. More oligarchic family control accompanies worse infant mortality.

Table 2 also correlates oligarchic family control with education quality, gauged by responses to a survey, summarized in the *1996 Global Competitiveness Report*, asking if "the education system meets the needs of a competitive economy". The quality of education is highly negatively correlated with the importance of great families.

To measure of the quality of government, we compare average monthly inflation from 1990 to 2002, provided by the World Bank. We interpret chronic high inflation as a sign of irresponsible government. Countries with more oligarchic family control have worse inflation.

Finally, to gauge social development, we measure inequality using *gini coefficients*. To construct these, one graphs a country's income distribution, and then measures the area between that curve and a perfect equality distribution—a 45° line. Worse inequality

makes this area larger. Table 2 shows oligarchic family control highly positively correlated with inequality.

To summarize, countries whose large firms are controlled by great mercantile families are more backward in a number of dimensions. They are poorer. They provide worse public goods—including worse infrastructure, worse health care, worse education, and more irresponsible macroeconomic policies. They are less egalitarian.

Why Are Family Controlled Economies Backward?

Table 2 illustrates a correlation, but is silent about what causes what. Some exogenous latent factor might induce both oligarchic family control and backwardness. Or, backwardness might create conditions where oligarchic family control makes economic sense. Or, might a high incidence of oligarchic family control actually *cause* economies to be backward?

All of these views probably have some validity, and none of the authors cited herein would insist on a single direction of causality. Social and economic phenomena on this scale seldom have simple patterns of cause and effect, and complicated interactions are to be expected. However, some simple observations and deductions are possible.

Absence of Trust as a Latent Variable?

Latent factors can never be excluded categorically. The list of things that might potentially cause both oligarchic family control and retarded development is infinite. All that can be done is to test the explanatory power of likely candidates. If the most plausible of these can be ruled out, it makes sense to think about direct causal relationships, though the possibility that a previously unsuspected latent variable is important always remains.

Much recent work points to a candidate for such a latent factor—"trust", or ethical norms. Students of the Italian economy have long noted a correlation between the economic and social importance of families in southern Italy and that region's backward economic and social situation. Most famously, Banfield (1958) dubs the ethical system of southern Italy *amoral familism*. Under this system, keeping faith with blood kin and close friends is honored, but breaking faith with others, especially strangers, is seen as inevitable. Banfield (p. 116) summarizes, "Towards those who are not of the family, the reasonable attitude is suspicion. The parent knows that other families will envy and fear the success of his family and that they are likely to seek to do it injury. He must therefore fear them and be ready to do them injury in order that they may have less power to injure him and his."

Putnam (1993) provides survey evidence supporting this thesis. Southern Italians report less trust in the law-abiding nature of others than do northern Italians. Few participate in clubs, associations, political parties, and the like. In the richer north, such memberships are common. Putnam defines *social capital* as a general trust in the good faith of others, and argues that southern Italy's backwardness is due to a dearth of social capital. Amoral familism encourages pervasive ill faith among strangers, leaving families as the only viable economic structures.

Fukuyama (1995) broadens this reasoning, arguing that amoral familism is pervasive in most of the world's traditional cultures. He argues that only northwestern Europe, North America, and Japan have achieved ethical systems where people trust strangers in day-to-day business and other interactions. Fukuyama suggests that this reduces the cost of economic activity and lets the most talented take charge of the country's

Table 3

Simple Correlations of Trust Measures with Oligarchic Family Control

	Oligarchic Family Control Measures				
	Twenty Largest Firms		Ten Middle-size Firms		
Threshold	20%	10%	20%	10%	Sample
Survey results of the extent to which people trust strangers	–0.234 (0.31)	–0.243 (0.29)	–0.359 (0.11)	–0.332 (0.14)	21
Survey results for how much people trust their families	–0.015 (0.95)	0.043 (0.86)	–0.037 (0.88)	0.106 (0.66)	20
The incidence of membership in professional associations	–0.278 (0.22)	–0.276 (0.23)	–0.337 (0.14)	–0.216 (0.35)	21
Index of the extent of civic participation	–0.140 (0.54)	–0.182 (0.43)	–0.326 (0.15)	–0.273 (0.23)	21

Note: Numbers in parenthesis are probability levels for the null hypothesis of zero correlation. Incidence of oligarchic family control measures are shown in Table 1. Data are from the World Values Survey for 1990.

economic and political life, allowing professionally run large corporations and stable democracy.

The *World Values Survey* gauges trust in strangers and social capital by polling 1,000 randomly selected people in 1990 in each of forty countries. La Porta et al. (1997b) describe these measures in detail and find they are positively correlated with economic growth. If family control correlates with poverty because both are due to low trust, oligarchic family control should also be correlated with these same measures of trust. However, Table 3 shows all of these measures of social capital to be uncorrelated with oligarchic family control.[4]

These results suggest that the relationship between oligarchic family control and backwardness operates through some other mechanism. (Or that our small sample and unavoidably noisy measures fail to detect this mechanism.)

However, tentatively rejecting "trust" as a latent variable is defensible on other bases too. First, society's ethical norms may themselves depend on economic factors. Fisman and Khanna (1999) report that easier two-way communications, particularly in urbanized economies, causes increased trust in strangers. Locke (2002) argues that local pockets of high trust in archetypical low-trust regions like southern Italy undermine the thesis that certain cultures cannot sustain prosperity. But, perhaps most fundamentally, ethical systems are the essence of culture. The idea that some cultures are incapable of sustaining prosperity, let alone democracy, has deeply pessimistic implications. For it means that

4. Typical analyses explain dependent variables with predetermined independent variables. Trust variables are only available for 1980 and 1990, and family control is only available for 1995. However, these variables probably change little over time. For example, La Porta et al. (1997) find trust in 1980 and 1990 highly correlated.

large fractions of the world's population are doomed to poverty and tyranny by their prized traditional cultures and deeply felt ethical systems.

Eliminating "trust" still leaves the possibility of another latent factor. What other candidates are plausible? Latent factors must be truly exogenous—unchanging historical residues. La Porta et al. (1998) argue that a country's legal system is such a factor; however the variables they use to distinguish legal systems do not explain Table 2 either.[5] We concede that yet another latent factor might explain Table 2, but feel that exploring other patterns of causation makes more sense than an exhaustive search for increasingly problematic latent factors.

Family Control as an Eroding Historical Residue?

A second possibility is that underdeveloped economies "cause" oligarchic family control. One simple explanation for this might be that industrial economies are a newer phenomenon in developing countries. If the probability a family sells out in any given generation is π, with $0 < \pi < 1$, then the probability that the family will sell out at some point over an n generation long interval is $1 - (1 - \pi)^n$. Obviously, as n, grows large, the probability that the family sells out becomes arbitrarily close to one.[6] If different countries are at different stages of development, and thus have different levels of residual family control, we might observe Table 2.

We therefore revisit the results in Table 2 controlling for current level of development. Table 4 displays coefficients on the oligarchic control measures in regressions explaining economy characteristic controlling for the log of 1995 *per capita* GDP. Infant mortality, income inequality, and inflation remain highly significantly correlated with oligarchic family control.

Since we cannot use *per capita* GDP as a dependent variable (it is the control), we regress real growth in *per capita* GDP from 1990 to 2000 on the logarithm of 1995 *per capita* GDP and oligarchic family control. Table 4 shows that countries with the same 1995 *per capita* income grow faster if fewer of their large firms are family controlled.

In short, although their significance falls, most of the Table 2 correlations remain significant.[7] This suggests that we need to explore the alternative direction of causality. Again, this is defensible on other grounds. The view that development simply proceeds at an exogenous pace cannot explain why different countries develop at different rates. France began industrialization long before Germany or Japan, but is now arguably the least rich and has the highest family control. Furthermore, that economic development

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5. Stronger laws protecting public investors from abuse by controlling shareholders, corporate insiders, or capricious officials are correlated with lower levels of family control, however these laws cannot be regarded as exogenously ordained. They might, for example, reflect the relative lobbying power of different sorts of investors.

6. The Borel-Cantelli Lemma, a basic tool of probability theory, states that an event with a non-zero probability of occurring at any given time is certain to occur given an arbitrarily long period of time.

7. The statistical results in Tables 2 through 4 are robust to sensible changes in the variables, including using gross national product rather than GDP, using GDP growth from 1970 to the present, using 1970 per capita GDP as the control variable, measuring inflation from 1970, and using various other measures of economic development, physical infrastructure, health care standards, human development, macroeconomic policy, and income equality. For example, an alternative measure of physical infrastructure is an assessment of "the facilities for and ease of" communications and transportation within the country" by Business Environment Risk Index Corp., generates qualitatively similar results to those shown, though with lower significance levels in the regressions. "The fraction of males aged 25 and over who completed high school is an alternative measure of the quality of the education. And the variation in a country's inflation rate is an alternative indicator of irresponsible government.

Table 4

Economy Characteristics and Oligarchic Family Control, Controlling for *Per Capita* Income

		Regression coefficient of Oligarchic Family Control Measure				
		Twenty Largest Firms		Ten Middle-size Firms		
	Threshold	20%	10%	20%	10%	Sample
Economic Development	*Growth in per capita GDP at purchasing power parity, 1990 to 2000*	–2.37 (0.10) [0.66]	–2.57 (0.09) [0.62]	–3.31 (0.00) [0.62]	–3.10 (0.02) [0.55]	27
Physical Infrastructure	*Average scores for roads, air, ports, telecom, & power for how well each meets business needs*	0.398 (0.45) [0.53]	0.431 (0.44) [0.53]	–0.340 (0.51) [0.52]	–0.055 (0.91) [0.51]	25
Health Care Provision	*Logarithm of infant mortality rate per 1,000, 1993*	0.879 (0.00) [0.73]	0.802 (0.01) [0.69]	0.454 (0.14) [0.62]	0.491 (0.09) [0.64]	25
Education System	*Percentage of respondents agreeing that education system meets the needs of a competitive economy*	–0.811 (0.26) [0.18]	–0.681 (0.37) [0.16]	–1.26 (0.07) [0.26]	–1.05 (0.10) [0.23]	25
Quality of Government	*Average monthly inflation from 1990–2002*	0.00483 (0.00) [0.66]	0.00443 (0.01) [0.62]	0.00399 (0.00) [0.62]	0.00266 (0.09) [0.55]	25
Social Development	*Income inequality as measured by a Gini coefficient*	13.6 (0.01) [0.24]	14.1 (0.01) [0.23]	11.5 (0.03) [0.19]	10.9 (0.03) [0.18]	27

Note: Numbers in parentheses are probability levels for the null hypothesis of a zero coefficient on oligarchic family control in regressions of economy characteristic of that variable and the logarithm of 1995 per capita GDP. Numbers in square brackets are regression R^2 statistics.

just happens with the passage of time rests uneasy with the presumption that the social sciences matter.

Family Control as Growth Retardant?

These findings, deductions, and concerns lead us to consider the possibility that a high incidence of family control over a country's great corporations *per se* might retard development. We in no way argue that Banfield (1958), Putnam (1993), Fukuyama (1995), and others are mistaken in stressing the importance of a society's ethical norms. Nor do we object to the argument that, given a longer time period, founding families are more likely to sell out. Rather, we argue that an additional mechanism is likely also at work.

The view that oligarchic family control "causes" poor economic performance is not new. Landes (1949) argues that the generally poor performance of the French economy

compared to those of Germany, Great Britain, and the United States, throughout the 19th century was caused by the predominance of family firms in France. He argues that French family firms were more interested in survival and succession than in growth and innovation. This made them reluctant both to go public and to undertake high-risk ventures. According to Landes, this profound conservatism retarded the performance of the overall economy because 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).

We propose that such behavior is typical where great mercantile families exercise widespread corporate control, and that this, in addition to the other explanations discussed above, accounts for the correlations in Table 2 and the regression coefficients in Table 4. This proposition requires considerable explanation, which is the purpose of the next two sections.

Family Control and the Determinants of Growth

Mainstream development economists regard two factors as critical to growth—restraints on political rent seeking and rapid innovation.

Krueger (1974) argues that the key barrier to economic growth is political rent seeking. If investing a million dollars in research and development yields a $50,000 per year perpetual profit, it has a 5% return. If investing the same million dollars in a bribe to a politician to change a law or provide a subsidy increases profits by $100,000 per year in perpetuity, this political rent-seeking investment has a 10% return. Krueger's essential point is that, if the payoff from bribing corrupt politicians exceeds the payoff from real investment, real investment declines and bribery grows prevalent. Murphy et al. (1991), Lenway et al. (1996), Mauro (1995), and others present empirical evidence supporting Krueger's hypothesis.

Solow (1957) shows that more capital and labor cannot explain the greater part of economic growth. This finding is now regarded as strong support for the thesis of Schumpeter (1934), formalized by Romer (1986), that innovation is the main engine of economic growth. Much other work also points in this direction. See Porter (1990) and Aghion and Howitt (1997).

Innovation is a positive sum game. Profit maximizing behavior by innovators creates new wealth, increasing the size of the economic pie and thus fueling long-term growth. Rent seeking, in contrast, is a negative sum game. Political rent seeking may be the highest return investment from the viewpoint of each individual or firm, but for society as a whole, it destroys value. This is because the legislative favoritism, subsidies, and the like that reward successful rent seeking are not new wealth. They are transfers from others. Collecting and redistributing these transfers is costly, and also introduces distortions and inefficiencies.

Murphy et al. (1991, 1993) model how highly remunerative rent seeking diverts talent and resources away from real investment, and argue that this stalls growth. They propose that, once talented individuals become either innovators or rent seekers, they are locked into that career and steadily become better at it. That is, rent seeking and innovation both have path-dependent increasing returns to scale.[8] Innovative economies become steadily more innovative, and consequently grow ever faster because innovation is a positive sum

8. See Morck, Sepanski, and Yeung (2001) for empirical evidence of such path dependency in U.S. corporate management.

game. Economies characterized by pervasive rent seeking become ever more encumbered by it, and consequently grow ever more slowly because rent seeking is a negative sum game.

This suggests how oligarchic family control might retard growth. Perhaps oligarchic family control is associated with less innovation, more political rent seeking, or both. That oligarchic family control is associated with less innovation is shown elsewhere.[9] In this article, we consider how oligarchic family control might increase returns to political rent seeking.

Rent Seeking and the Prisoners' Dilemma

Political rent seeking can be thought of as a prisoner's dilemma game, as in Nash (1950, 1953). In the archetypal prisoner's dilemma, the police can convict two suspects of a misdemeanor, but suspect they committed a felony. The police put a plea bargain to each suspect separately: immunity on the misdemeanor for evidence against the other suspect on the felony. In the absence of trust, a so-called *non-cooperative equilibrium* ensues: each rats on the other and both get long sentences. Had they trusted each other, both would have served only brief sentences—a *cooperative equilibrium*.

Many economic situations are prisoner's dilemmas. If a customer fears a supplier might use substandard materials, she buys low value-added items so the potential damage is less. If workers fear an employer might cheat them, they minimize the damage by shirking. If an inventor cannot trust a backer to pay him fairly, he does not develop his invention. This reasoning is the basis of Fukuyama's (1995) thesis that higher trust causes greater prosperity.

Note, however, that society prefers the non-cooperative equilibrium in the archetypical prisoners' dilemma game. We want the felons caught and punished. Cooperative behavior, though beneficial to the prisoners, is not socially desirable. Likewise, if one producer can trust another not to undercut prices, both can collect monopoly profits—to the detriment of consumers. Anti-trust laws deliberately subvert such trust.[10]

Political rent seeking is another prisoners' dilemma game where a type of cooperation is undesirable. The bribe-paying tycoon and the corrupt official must trust each other. The official could take a bribe and not deliver the promised subsidy or tilted playing field. Or, the official could provide the boon but get no kickback. Since political rent seeking is technically illegal in most countries, the courts cannot punish defectors. Trust requires personal credibility.

Our current knowledge of game theory points to specific conditions that make cooperative outcomes more likely:

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9. Morck et al. (2000) find that economies with more old family wealth spend less on private sector R&D and file fewer patents. They also find that Canadian firms controlled by old families spend less on R&D than other comparable firms. Morck and Yeung (2003) discuss several possible explanations: entrepreneurial talent is not inherited; innovation threatens the *status quo*, as in Olson (1963); Schumpeter's (1934) creative destruction becomes "creative self-destruction" in economies where the potential backers of innovation are also the owners of old corporate assets. Innovators are usually not rich, and require outside backing. Morck et al. (2000), Rajan and Zingales (2001), and Johnson and Mitton (2002) argue that the established wealthy of many countries support policies that undermine their financial systems, thus blocking entry by innovative competitors. There is no empirical support for hypotheses that family control promotes innovation by lengthening planning horizons.

10. The use of the term trust to describe a monopoly originates in the 1890s practice of organizing corporate mergers by placing control blocks of individual companies' stocks with a central governing body of trustees.

1. Axelrod and Hamilton (1981) argue that cooperative behavior provides an evolutionary advantage, and that many species, from social insects to humans, have a genetic *predisposition to cooperate*. However, this cooperation seems restricted to near kin, not to all members of the species. This is consistent with the preference of family firms to limit the influence of outsiders.[11] But in humans, such cooperation can break down, for corrosive feuds wipe out the occasional family corporate empire.[12] Stewart (2003), Gersick et al. (1997), and others argue that family cooperation in humans need not be genetic, and is induced by ethical and economic considerations. Regardless, Faccio (2002) shows that top executives of the largest family firms in many countries are blood relatives of top officials. Consequently, the cooperation blood kin accord each other facilitates political rent seeking by large family controlled firms.

2. In *repeated games*, players learn to cooperate. This is because one player can punish the other for defecting in one game by defecting in the next. Axelrod (1984) shows this policy of "tit-for-tat" (with occasional forgiveness) to yield better overall payoffs that a wide range of other strategies in repeated prisoners' dilemmas. Axelrod (1987) shows that behavior resembling tit-for-tat emerges spontaneously in repeated prisoners' dilemmas if survival into the next period depends on a player's payoff this period and strategies are randomly modified each period by a genetic algorithm. Cooperative behavior in repeated games, even if learned rather than innate, is a survival trait. This logic underlies the need to establish long relationships with business partners in countries where cooperative behavior with strangers is not legally or ethically mandated. Professional CEO's careers are relatively brief. In contrast, family control endures, with patriarchs grooming scions, sometimes for decades. Long-serving officials—the sort who can best do favors—should find oligarchic family-controlled firms preferable rent-seeking partners because of the prospect of repeated games.

3. Olson (1965) shows that cooperative behavior is more likely with *few players*. This is because detecting and punishing defection is easier if fewer players must be monitored and coordinated. As the number of players grows very large, Olson shows that the non-cooperative outcome emerges with virtual certainty. La Porta et al. (1998) and others show that large corporations in most countries belong to pyramidal groups. In such a group, a family firm controls other firms, which control yet more firms, and so forth.[13] Morck et al. (2000) describe how such structures allow a few very wealthy families to control the greater parts of the corporate sectors of many countries. The first row of Table 5 shows oligarchic family control highly correlated with the incidence of pyramidal groups. La Porta et al. (1998) construct the latter variable using the same methodology as in the family control variables of Table 1. Thus, oligarchic family control lets top officials deal with only a few big players, making cooperation easier.

4. A *precommitment* can induce trust. Fukuyama (1995) argues that some legal and ethical systems facilitate credible precommitment, while others do not. Established wealthy families controlling substantial assets can pay corrupt officials up front for subsequent favors. Upstart firms, even ones with great potential, require political favors first but must promise kickbacks out of *uncertain future revenues*.

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11. For example, see Hebbard, C. (2002). Family Firms Fret Over Role of Outsiders. *The Nation*, April 18.
12. See e.g., Waldie (1997).
13. See Barca and Becht (2000) for a description of these groups in Europe, Claessens et al. (2000) for East Asian family groups, and Morck et al. (2000) for Canadian family groups. See Faccio and Lang (2001), Claessens et al. (2002), and Morck et al. (2000) for discussions of the behavior of such groups in different economies.

Table 5

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

	Simple Correlation Coefficients Incidence of Family Control in 1995 in				Regression Coefficients controlling for log of 1995 *per capita* GDP 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
Control Concentration									
Incidence of pyramidal holding company structures	0.313 (0.11)	0.357 (0.07)	0.108 (0.59)	0.157 (0.43)	0.418 (0.13) [0.03]	0.529 (0.07) [0.07]	0.079 (0.77) [–0.07]	0.154 (0.56) [–0.06]	27
Tax System Corruption									
Higher scores indicate general compliance with tax laws	–0.470 (0.02)	–0.444 (0.03)	–0.472 (0.02)	–0.270 (0.19)	–0.889 (0.32) [0.28]	–0.588 (0.54) [0.26]	–0.732 (0.40) [0.27]	0.470 (0.57) [0.26]	25
Political System Corruption									
Higher scores indicate a general absence of official corruption	–0.414 (0.03)	–0.438 (0.02)	–0.526 (0.00)	–0.523 (0.01)	0.367 (0.73) [0.49]	0.188 (0.87) [0.49]	–1.05 (0.31) [0.51]	–0.980 (0.33) [0.51]	27
Judicial System Corruption									
The efficiency and integrity of the judicial system, particularly as it affects business	–0.340 (0.08)	–0.375 (0.05)	–0.457 (0.02)	–0.426 (0.03)	0.501 (0.56) [0.55]	–0.691 (0.55) [0.55]	0.292 (0.78) [0.55]	–0.036 (0.97) [0.55]	27
Civil Service Corruption									
High scores indicate bureaucrats have "autonomy" and the "strength and expertise to govern"	–0.663 (0.00)	–0.685 (0.00)	–0.722 (0.00)	–0.630 (0.00)	–2.64 (0.01) [0.70]	–2.59 (0.02) [0.69]	–2.83 (0.00) [0.73]	–1.82 (0.07) [0.66]	27
Regulatory Barriers to Entry									
Estimated regulatory compliance cost of starting a new business, as % of GDP	0.521 (0.01)	0.501 (0.01)	0.578 (0.00)	0.424 (0.03)	0.195 (0.12) [0.36]	0.160 (0.23) [0.33]	0.218 (0.06) [0.39]	0.080 (0.50) [0.30]	27

Note: Numbers in parentheses 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.

5. Political rent seeking is technically illegal in most countries, so such deals must be discrete. Marcus and Hall (1992, p. 131) write that "[t]he power of dynastic wealth is its power to be conspiratorial, to make secret deals, that is, to pull together resources from across various social and institutional spheres to pursue a single aim." See also Benedict (1968), Lomnitz and Perez-Lizaur (1987). On a practical level, La Porta et al. (1998) show that family controlled large pyramidal groups typically contain public and private firms. By using the revenues or assets of their private firms, wealthy families can provide more *discretion* to corrupt officials than could CEOs of free standing widely held firms.

6. If other players can detect and *punish defectors*, defection is less profitable and less likely. This is the case in games with a small number of players, but apparently can also explain some types of cooperation in large, anonymous groups. For example, Axelrod (1986) finds cooperative behavior with many players if they punish not only defectors, but also other players who fail to punish defectors. Fehr and Gächter (2000) show that players, given the opportunity, enthusiastically punish defectors—even at great cost. Their wealth and economic power make established wealthy families formidable disciplinarians of corrupt officials who fail to deliver. This should make them more willing to undertake rent-seeking deals in the first place.

7. Bernheim and Whinston (1990) show that *multiple simultaneous games* can achieve the same cooperation as repeated games. As Marcus and Hall (1992, p. 131) note, "[t]he residual strength of dynastic families . . . is that they integrate functions and activities that specialized institutional orders differentiate and fragment." Great families, controlling huge pyramidal groups, interact with officials simultaneously in many settings—economic and other. An official who breaks faith with an oligarchic family in one setting may find himself punished via another. Such multiple points of contact might plausibly induce the trust needed for political rent seeking.

In summary, oligarchic families plausibly have an innate advantage as political rent seekers because of their blood ties with political elites, longevity, small number, ability to precommit, discretion, power to punish, and multiple simultaneous business operations. These characteristics make them better able to establish and sustain the relationships of trust with public officials that raise the returns to political rent seeking. Moreover, it is hard to conceive of others who share these advantages. While non-family controlling shareholders might enjoy some of these advantages, and long-serving professional CEOs others, only long-established very wealthy families in control of a country's great corporations enjoy them all.

Table 5 presents evidence consistent with political rent seeking being significantly more important in economies with greater oligarchic family control. Political rent seeking is gauged by measures of corruption in each country's tax system, political system, courts, and civil service. In each case, a higher score indicates less corruption. Corruption in tax collection is gauged by an assessment of the level of tax compliance provided by *The Global Competitiveness Report 1996*. Political corruption is measured by responses to International Country Risk Guide (ICRG) surveys asking if "high government officials are likely to demand special payments and illegal payments are generally expected throughout lower levels of government in the form of bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans." Responses are averaged over April and October for 1982 through 1995. The quality of a country's judicial system is a score assigned in 1984 by the country risk rating agency Business International Corporation to reflect "the efficiency and integrity of the judicial system as it affects business, particularly foreign firms." Civil service corruption is gauged by responses to ICRG surveys asking if bureaucrats have "autonomy from po-

litical pressure" and the "strength and expertise to govern without drastic changes in policy or interruptions in services." Again, responses are averaged over April and October for 1982 through 1995. Regulatory Barriers to Entry are the estimated regulatory compliance cost of starting a new business, as a percentage of GDP, as reported by Djankov et al. (2002).

Tax authorities, politicians, judges, and bureaucrats are all more corrupt where oligarchic family control is greater. These correlations are highly significant, and perhaps the most critical one, that with bureaucratic corruption, remains highly significant after controlling for *per capita* income.

Cooperation as Virtue and Vice

Cooperation connotes virtue, yet cooperation between oligarchic families and officials is socially undesirable. As anti-trust economists have long known, trust is not always to be encouraged. In applying methods of anthropologists to family businesses, Stewart (2003) writes of trust within castes, classes, creeds, and tribes versus generalized trust. Fukuyama (1995) argues that general trust is generally advantageous. We do not dispute this, but argue that trust within the political and economic elites, like trust between alleged competitors intent on fixing prices or between suspects under police interrogation, is often undesirable. We propose that oligarchic family control over a country's great corporations inculcates such trust and thereby promotes political rent seeking.

Nonetheless, broader general trust might check such socially undesirable trust. Consumers, taxpayers, and investors harmed by political rent seeking might cooperate to punish the corrupt official and oligarch. But consumers, taxpayers, and investors are not blood kin, have few repeated dealings, are numerous, cannot precommit, cannot act discretely, cannot identify and punish defectors, and are usually unconnected with each other in other contexts. This makes effective cooperation to thwart political rent seeking difficult. Fukuyama (1995) argues that legal and cultural institutions of some, but not other countries mitigate these problems, so consumers, taxpayers, and investors can trust each other enough to form political and other associations. However, a broad popular understanding of the nature of the country's problems is needed for such collective action to succeed. Djankov et al. (2001) show that very wealthy families control the private sector mass media in most countries. The extent to which the mass media can promote or undermine general trust is ill understood at present. Regardless of the underlying reasons, some countries are clearly better than others at constraining political rent seeking, and these tend to be countries with less oligarchic family control.

All of this suggests a positive feedback trap where oligarchic family control, political rent seeking, and poverty all perpetuate each other. Oligarchic families are adept rent seekers, but fear innovation. With practice, they grow ever better at rent seeking and use their skill to undermine innovators in ways described by Morck and Yeung (2003) and Rajan and Zingales (2003). Economic growth is retarded, and the economy is trapped at a depressed level of development, as in Table 2.

Note that we are not proposing that low trust impedes growth as Fukuyama (1995) does, though this may well be so. Rather, we propose that the low-income trap associated with oligarchic family control involves well developed, but undesirably narrow trust among the elite. Too little trust elsewhere may also figure, though Table 3 fails to support this and the results of Djankov et al. (2001) raise the possibility that manipulation of the mass media might also be a factor. Regardless, referring to this low-income trap as a "low trust" problem is not strictly correct. The core problem here is not an absence of trust,

but an undesirable distribution of trust—*dystrust* with the Greek prefix *dys* meaning *diseased*, rather than *distrust* with its familiar Latin prefix of negation, *dis*.

The logic and empirical evidence outlined above, as well the other studies discussed, are consistent with such a state. However, it is worth reiterating that this does not prove the case. Correlations need not imply causation, and formal tests of causation require much more detailed panel data than are currently available. However, our purpose is not to unravel what is, in any case, a very complicated web of causality. Rather, we wish to highlight how the mechanisms discussed above might plausibly reinforce each other to create a low-income trap of *dystrust*, which we believe limits standards of living in many countries. An effective trap can be built in many ways, and we believe this concept describes the outline of a pernicious one, even if the attendant description of its precise mechanical workings is incomplete, or even wrong.

Implications and Conclusions

Standards of living vary substantially, even among countries that have escaped dire poverty. We propose that a failure to appreciate the economic implications of oligarchic family corporate groups may be at least partly responsible. In particular, we propose that a high level of trust within a small entrenched economic and political elite makes political rent seeking by that elite highly profitable, and that this retards economic growth and other dimensions of development.

The World Bank and International Monetary Fund have come to appreciate the importance of corruption in retarding development. This is the primary motivation for the current emphasis these institutions place on *structural reform*, which has become an abbreviation for cleaning up corruption of all sorts. The self-reinforcing nature of the low-income *dystrust* trap we describe suggests that ending corruption may be a hopeless task if a small number of oligarchic families continue to control most business interests in poor countries.

Equally, displacing the existing elite, as sometimes happens after abrupt shifts in political regimes, and as Olsen (1982) recommends, is also unlikely to bring about real change unless the relative return to political rent seeking is also lowered. After such a disruption, a few new leading families with political connections can quickly take the place of those who were ejected.

Ultimately, what is required is less trust within the elite. Relatives of business tycoons ought not to be political leaders. Professional managers with brief careers might be socially preferable to enduring family control over large corporations because this discourages repeated games of political rent seeking. Corporate groups should be dismantled to increase the number of independent players within the economic elite, to reduce any oligarchic family's power to punish officials, and to prevent multiple simultaneous contacts between oligarchic families and officials, thereby making undesirable cooperation harder. Strict disclosure rules should aim at exposing political payoffs to make oligarchic families less able to precommit and officials less able to trust them as partners in corruption.

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