

Family Firms, Paternalism, and Labor Relations*

Holger M. Mueller[†]

Thomas Philippon[‡]

July 2009

Abstract

This paper examines the relation between family ownership and the quality of labor relations. Across countries, we find that family ownership is relatively more prevalent in countries in which labor relations are hostile, consistent with firm-level evidence suggesting that family firms are particularly effective at coping with difficult labor relations. Our cross-country results are robust to controlling for minority shareholder protection and other potential determinants of family ownership, such as union bargaining power and measures of trust and social capital. We address causality in two ways. First, we instrument our measure of the quality of labor relations using ‘Labor Origin’, a variable describing the extent to which the emerging European liberal states in the 18th and 19th centuries confronted guilds and labor organizations. Second, we show that—controlling for industry and country fixed effects—industries that are more labor dependent have relatively more family ownership in countries with worse labor relations.

*For helpful comments and suggestions, we thank Steven Davis (the editor), three anonymous referees, our discussants Randall Morck (NBER) and Raghu Rau (WFA), as well as Raj Aggarwal, Lucian Bebchuk, Nick Bloom, Andrew Clark, Michael Faulkender, Radha Gopalan, Todd Gormley, Oliver Hart, Winfried Koeniger, Lubo Litov, John Matsusaka, Fausto Panunzi, Mark Roe, Paola Sapienza, Jose Scheinkman, Antoinette Schoar, Andrei Shleifer, Jeremy Stein, Guido Tabellini, Paolo Volpin, Jeff Wurgler, Bernie Yeung, and seminar participants at Harvard, Stanford, Princeton, Berkeley, NYU, Kellogg, Washington University in St. Louis, Minnesota, USC, Bocconi, DELTA-PSE, the PSE-IZA Workshop on Cultural Economics in Paris, the WFA meetings in Keystone, and the NBER Corporate Finance Summer Institute in Cambridge. This is a substantially revised version of an earlier paper entitled ‘Concentrated Ownership and Labor Relations’.

[†]New York University, NBER, CEPR, and ECGI. Email: hmueller@stern.nyu.edu.

[‡]New York University, NBER, and CEPR. Email: tphilipp@stern.nyu.edu.

*I think the fact that I'm in the Heinz family helps make
for a better climate in labor negotiations.*

Charles Heinz¹

1 Introduction

Empirical evidence suggests that family ownership might have important implications for economic fluctuations and growth. On the one hand, family firms appear to provide more employment insurance to their workers than do widely held firms (Sraer and Thesmar, 2007), and they also appear to take fewer risks, as evidenced by their lower credit spreads (Anderson, Mansib, and Reeb, 2003). On the other hand, family firms—at least second- and later-generation family firms in which the CEO is a family member, especially if the CEO succession is based on primogeniture—appear to perform poorly (Pérez-González, 2006; Bennedsen et al., 2007; Bloom and van Reenen, 2007), which has negative implications for growth.² Moreover, the reluctance of many families to accept dilution of their ownership stakes impairs their ability to raise equity capital, which again has negative implications for growth.

Across countries, there is considerable variation in the extent of family ownership (e.g., La Porta, Lopez-de-Silanes, and Shleifer, 1999). One explanation is that these differences are due to differences in minority shareholder protection (La Porta, Lopez-de-Silanes, and Shleifer, 1999). This paper focuses on another explanation: Family firms are better at coping with hostile labor relations; so they arise as a natural response when labor relations are difficult. Specifically, we argue that family firms have a comparative advantage at sustaining implicit labor contracts,

¹Vice president of industrial relations at H. J. Heinz Company. The quote is from Perrin Stryker, “Would You Hire Your Son?” March 1957, p. 228, cited in Donnelley (1965).

²When first-generation family firms and those run by professional (i.e., non-family) managers are included in the definition, then family firms are generally found to *outperform* other firms (Anderson and Reeb, 2003; Villalonga and Amit, 2006; Bloom and van Reenen 2007; Sraer and Thesmar, 2007). However, as these results are purely based on cross-sectional variation, a causal interpretation is problematic. Bennedsen et. al (2007), using the gender of the departing CEO’s firstborn child as an instrument, show that firms in which the successor CEO is a family member perform worse than firms in which the successor CEO is unrelated. By construction, their study does not speak to the issue of whether first-generation family firms perform poorly, or whether family-owned but professionally managed firms perform worse than non-family owned firms.

which is reciprocated by workers with cooperative behavior and loyalty towards the company. Accordingly, we would expect more family ownership in countries in which labor relations are hostile, and where the value of inducing cooperative behavior is therefore particularly high.

We test this hypothesis using aggregate ownership data and survey-based measures describing the quality of a country's labor relations. Consistent with our hypothesis, we find that family ownership is relatively more prevalent in countries with more hostile labor relations. This result holds for different measures of family ownership as well as for different subsamples (e.g., Europe, Asia). We also investigate a number of alternative hypotheses. Specifically, we run 'horse races' between our measure of the quality of labor relations and other potential determinants of family ownership, such as measures of trust and social capital, minority shareholder protection, creditor rights, rule of law, union bargaining power, labor regulation, a country's political orientation, income inequality, and financial development. While some of these other measures are significant, our measure of the quality of labor relations is always significant at the 1% level, and it captures much of the cross-country variation in family ownership.

Some of the alternative hypotheses warrant more discussion. First, while minority shareholder protection is significant in our regressions, it is not clear which way the causality goes. (On the issue of causality with respect to the quality of labor relations see below.) For instance, if families expect not to sell out (e.g., due to reasons put forward in this paper), then poor minority shareholder protection could also be due to low demand from business players, implying the causality is reversed. Second, with one exception, (other) measures of trust and social capital are not significant in our regressions. We believe this is good news for advocates of social capital theories, for it implies that we can distinguish among different aspects of social capital that are each relevant in different social and economic contexts. Third, neither union bargaining power nor labor regulation is significant. Accordingly, it is not just *some* aspect of labor pressure that matters for family ownership, but it is precisely the issue of whether labor is hostile or cooperative.³ Fourth, measures of a country's political orientation—such as Pagano and Volpin's (2005)

³Compare, for instance, Sweden and Italy. Employment protection is tighter, and labor unions are stronger, in Sweden than in Italy (Table III in Botero et. al, 2004). In 1994, for example, Sweden's trade union density was 91%, while in Italy it was only 39% (OECD, 1997). Likewise, the bargaining power of labor unions, as perceived by executives, is much higher in Sweden (Table 2a in this paper.) And yet, labor relations are much more hostile

voting index or Roe’s (2003) left-right political index—are not significant, though these measures appear to be well suited to explain *state* ownership. Pagano and Volpin’s model implies a substitution effect between labor rights and minority shareholder rights, where countries with proportional voting systems have stronger labor rights but weaker shareholder rights than do countries with majoritarian voting systems. Our results suggest that political economy—and the postulated substitution effect between labor and shareholder rights in particular—might not be as important for the organization of private businesses as are historical and cultural factors, such as the quality of a country’s labor relations.

We address causality in two ways. We first look into the historical causes for the observed differences in the quality of labor relations across countries. In his classic book, historian Colin Crouch (1993) documents the struggles by the emerging European liberal states in the 18th and 19th centuries to maintain a political monopoly, or to claim what he calls “political space”. According to Crouch, there is substantial variation in the way the liberal states dealt with the attempts of guilds and labor organizations to occupy political space—ranging from confrontation to co-optation—which had a lasting effect on the countries’ industrial relations until the present. Based on Crouch’s classification, we construct an instrument, ‘Labor Origin’, describing the extent to which the emerging European liberal states confronted guilds and labor organizations. When we instrument our measure of the quality of labor relations using Labor Origin, we find strong support for our previous OLS results. The second way to address causality follows the methodology suggested by Rajan and Zingales (1998). The hypothesis we test is whether—controlling for industry and country fixed effects—industries that are more labor dependent have relatively more family ownership in countries with worse labor relations. We again find strong support for our OLS results.

The final part of our study explores whether the documented relationship between family ownership and the quality of labor relations also extends to non-survey-based measures, such as strike activity. When looking at different regions within Canada, we note that Quebec has a higher average strike activity but also more family ownership than does the rest of Canada.

in Italy (Table 2a of this paper.) Hence, Sweden has strong yet cooperative labor unions, while Italy has weaker yet hostile and, to a considerable degree, anti-capitalist labor unions.

We then return to our original cross-country study (Western countries only), except that we use strike data from the 1960s instead of survey-based measures of the quality of labor relations. The 1960s are ideal for our study as many of the factors that commonly affect strike activity were relatively uniform across Western countries, implying that these factors are ‘naturally being controlled for’. Consistent with our hypothesis, we find that high strike activity in the 1960s is positively related to the extent of family ownership more than thirty years later. This result also holds if we instrument strike activity in the 1960s using Labor Origin.

The rest of this paper is organized as follows. Section 2 develops our main hypothesis and provides some supporting (empirical and historical) evidence. Section 3 describes the data. Section 4 presents our basic OLS regressions and considers various alternative hypothesis. Sections 5 and 6 address the issue of causality. Section 7 uses strike data from the 1960s to predict cross-country variation in family ownership in the 1990s. Section 8 concludes.

2 Family Firms and Implicit Labor Contracts

This section develops our main hypothesis and provides some evidence in support of the ‘micro-mechanism’ that underlies the hypothesis. Specifically, we will argue that family firms have a comparative advantage at sustaining implicit labor contracts, which is reciprocated by workers with cooperative behavior and loyalty towards the company. Hence, we would expect relatively more family ownership in countries in which labor relations are hostile, and where the value of inducing cooperative behavior is therefore particularly high.

2.1 Hypothesis Development

Benefits of family ownership. The ability to sustain implicit labor contracts in which workers are promised quasi rents is a valuable asset of any company (Shleifer and Summers, 1988). The prospect of receiving quasi rents induces cooperative behavior and makes workers loyal towards the company, much like in Shapiro and Stiglitz’s (1984) repeated game analysis of efficiency wages. As Shleifer and Summers argue, family firms have a particular advantage at sustaining implicit labor contracts:

“To take advantage of implicit contracts, shareholders must be trusted by potential

stakeholders. [...] In a family enterprise, for example, offspring could be raised to believe in the company's paternalism toward all the parties involved in its operation [...] thus making them credible upholders of implicit contracts.”

We hypothesize that family firms have a comparative advantage at sustaining implicit labor contracts, for three reasons. First, families have a longer time horizon than do managers of widely held firms.⁴ Second, family firms are immune from hostile takeovers, allowing them to credibly commit to a long-term relationship with workers. In contrast, managers of widely held firms are unable to make such a commitment.⁵ Third, and this reinforces the ability to sustain implicit labor contracts, family owners can credibly commit to ‘punish’ workers who deviate from the cooperative equilibrium, as they *personally* bear a large fraction of the company's losses resulting from such deviation. In contrast, managers of widely held firms, who typically only own a small stake in the company, are less likely to be tough on workers, especially if doing so imposes a personal cost on them (Bertrand and Mullainathan, 2003).

With regard to these arguments, it should make little difference if a family firm is managed by a family member or a professional manager. Given the controlling family's significant ownership stake in the company, it has strong incentives to monitor and discipline management, thus ensuring that the company is run in the family's best interest. On the other hand, these arguments do not easily extend to non-family blockholders, such as institutional investors and widely held corporations, who have shorter time horizons and/or are run by managers who have little *personal* wealth invested in the company, meaning their incentives (to monitor and discipline management, or to sustain implicit contracts with labor) differ fundamentally from those of family owners. This is precisely why the empirical literature focuses on *ultimate ownership*

⁴Donnelley (1964) notes that “in some family companies, the loyalty of employees and nonrelated managers to the family and the company is found to be particularly significant. Unlike the loyalty felt towards nonrelated managers, it is not lost when the recipient retires but tends to be carried over to his son and through him to the company.” Likewise, Morck and Yeung (2004) argue that “professional CEO's careers are relatively brief. In contrast, family control endures, with patriarchs grooming scions, sometimes for decades.”

⁵“If the stakeholders anticipate a hostile takeover, they will realize the trustworthiness of the incumbent managers is worthless, since they will be duly removed when shareholder interest so demands” (Shleifer and Summers, 1988).

as the relevant criterion: From an incentive perspective, a firm with a large blockholder who is itself widely held is not much different from a firm that is widely held to begin with.

Costs of family ownership. There are many potential costs of family ownership, such as forgone diversification benefits, agency costs arising from conflicts with minority shareholders, and poor operating performance—at least when the CEO is a family member who is chosen by primogeniture (see Introduction). Given their poor performance, one might conjecture that family firms—at least those in which the CEO is chosen by primogeniture—have lower survival rates than do other firms, running counter to the notion that they have longer time horizons. While this is a plausible argument, it should be noted that poor performance by (some) family firms does not automatically imply that these firms have lower survival rates. Indeed, it is a widely held view that family control is associated with significant “amenity potential” (Demsetz and Lehn, 1985; Burkart et al., 2003)—i.e., non-pecuniary private benefits of control—implying that family owners may keep their companies alive (by tapping the family’s private wealth, if necessary) even if the company performs poorly.⁶

Optimal degree of family ownership. If family ownership is chosen optimally, the marginal benefits (including amenity potential) should equal the marginal costs. As argued above, a main benefit is that families have a comparative advantage at sustaining implicit labor contracts inducing cooperative behavior. Accordingly, we would expect more family ownership in countries in which labor relations are hostile, and where the value of inducing cooperative behavior is therefore particularly high. This is the main hypothesis that we will test in this paper.⁷

2.2 Welfare Paternalism during the Gilded Age

In their above quote, Shleifer and Summers (1988) allude to the notion of family firms practicing “paternalism toward all the parties involved”. While we will argue below that family firms still

⁶“Companies may choose family management even though this is suboptimal for company performance because family members receive amenity value from managing the family firm, which often bears the family name and has been managed by several previous generations. In this case, the family may accept lower economic returns from their capital in return for the private utility of managerial control“ (Bloom and van Reenen, 2007).

⁷In repeated games parlor, hostile labor relations imply a lower payoff in the stage (or ‘one-shot’) game, making long-term implicit labor contracts more valuable.

practice a mild version of paternalism even today, a classic historical example is the ‘welfare paternalism’ practiced by founding families and industrial pioneers in the late 19th century, a time when labor conflict turned so severe that Charles Henderson, the famous University of Chicago industrial sociologist, warned that industrial warfare would destroy not only work relations but the very fabric of American society.

Welfare paternalism is best understood as an implicit labor contract between the firm and its workers, whereby the firm provides its workers with basic family needs—medical care, relief, recreation, housing, job security—in exchange for their loyalty. For example, at Endicott Johnson, the Binghamton, New York, shoe manufacturer, new workers received a booklet declaring “You have now joined the Happy Family” (Zahavi, 1983, p. 605). The notion of being part of one family connoted more than just a collegial corporate culture. It represented a personal bond between Endicott Johnson’s workers and the Johnson family, especially George F. Johnson, the family’s patriarch:

“The family connoted harmony, security, authority, and stability—all values that the corporation sought to develop and exploit. It was a powerful metaphor, an image both confining and comforting and one that promoted internal resolution of conflict. Furthermore, the deliberate transposition of George F. Johnson into a father figure, a role that suited his temperament, was aimed at making industrial protest and rebellion the equivalent of patricide” (Zahavi, 1983, p. 607).

Intended as an “antidote to late-nineteenth-century social conflict,” [corporate] “welfare work promised to fight labor activism by weakening the attraction of unions and redirecting workers’ loyalty to the company” (Mandell, 2002, p. 18 and 21). How successful was welfare paternalism in accomplishing these goals? According to historian David Brody, it managed to bring about a decline in union membership and a muting of labor militancy (Brody, 1993). Similarly, historian Gerald Zahavi (1988, p. 119) writes that “workers [at Endicott Johnson] were loyal workers. [...] The vast majority of them repeatedly rejected unionization. Prolonged strikes were unheard of. By the criteria of unionists, radical critics, and labor historians, then, welfarism at Endicott Johnson was a success, creating and sustaining a labor loyalty to the corporation that endured even the Depression.”

2.3 Family Firms Today

Today's family firms rarely provide the kind of generous welfare programs they used to provide in the Guilded Age. Yet there is evidence suggesting that they still practice a mild version of welfare paternalism even today. Like in the case of Endicott Johnson, where layoff rates were 24 times lower than the industry average (Zahavi, 1988), today's family firms appear to provide more employment insurance to their workers than do widely held firms. Using French panel data, Sraer and Thesmar (2007) find that employment in family firms is less sensitive to industry shocks than it is in widely held firms, which they argue is "consistent with a view of heir-managed family firms as providing their workers with long-term implicit insurance contracts." We find a similar result for the United States (not reported): Among the 1,000 largest publicly traded companies in the United States, those with a significant ultimate owner (5% or more) are less likely to reduce employment than are widely held firms. (The result is obtained after controlling for firm size, age, and industry fixed effects.) The question is, again, whether workers reciprocate with cooperative behavior and loyalty towards the company. To address this question, we will now present evidence from French publicly listed companies as well as medium-sized firms from twelve different countries.

Evidence from French Publicly Listed Companies

We match Sraer and Thesmar's (2007) data with data from the Enquête Réponses, a survey of managers conducted in 1998 to study plant level work organization in France. Using Sraer and Thesmar's definition, we classify a family firm as one in which the founder or a member of the founder's family holds at least 20% of the voting rights. Two questions from the survey are of interest to us. One question asks whether there has been a strike in the three years prior to the survey. The other question asks what is the percentage of workers that are unionized.

A first look at the data suggests that strikes are indeed less prevalent in family firms. While only 18% of family firms witnessed strikes in the three years prior to the survey, the number for widely held firms is 35%. To verify that this result is not driven by family firms' clustering in particular industries, or by the (often smaller) size of family firms, we run a logit regression in which we control for industry dummies, firm age, and the number of employees. (We use 36 industry dummies based on the French NAF 36 industry classification.) The results, which

are shown in column (i) of Panel A of Table A, confirm the impression that family firms are less likely to experience strikes than are widely held firms. We obtain similar results if we use the percentage of unionized workers as our dependent variable. While on average only 10% of workers in family firms are unionized, the corresponding number for widely held firms is 15%.⁸ The OLS results, which are shown in column (ii), and which are again obtained after controlling for industry dummies, firm age, and the number of employees, confirm that widely held firms have a higher percentage of unionized workers than do family firms.

An important concern is that these results are only based on publicly listed firms. Family firms are less likely to be publicly listed than other firms, implying that those that are publicly listed might be positively selected, feeding concerns that our results might be driven by selection bias. To address this concern, we will now present evidence from medium-sized firms—most of them private—from twelve different countries.

Evidence from Medium-sized Firms from Twelve Countries

In an influential paper, Bloom and van Reenen (2007) examine the management practices of 732 medium-sized companies in the United States, France, Germany, and the United Kingdom based on survey data collected during 2004-2005. In 2006, the authors conducted a second wave of their survey covering 3,889 medium-sized companies from twelve countries, increasing the sample size more than fivefold. The following analysis is based on data from this second survey wave.⁹ Most of the firms in the sample are private, and the average (median) firm has about 800 (300) employees.

Bloom and van Reenen (2007) define a family firm as one in which a single family, combined across all family members who are second generation and beyond, is the largest shareholder. We broaden this definition slightly by also including first-generation family firms to make the results comparable to our study of French publicly listed companies. We again control for industry dummies, firm age, and the number of employees. (We use the full set of 105 three-digit

⁸ Across all firms, the average (median) percentage of unionized workers is 13% (8%).

⁹ We thank Nick Bloom for kindly providing us with the data. The twelve countries are: China (418 firms), France (249), Germany (293), United Kingdom (662), Greece (187), India (460), Italy (168), Japan (120), Poland (223), Portugal (157), Sweden (275), and the United States (677). None of our results change if we exclude China.

industry dummies used by Bloom and van Reenen.) To account for unobserved heterogeneity across countries, we also include country dummies. Unfortunately, we do not have data on strikes at the firm level. However, we do have data on the percentage of unionized workers per firm. The OLS results, which are shown in Panel B of Table A, confirm that family firms have a lower fraction of unionized workers than do non-family firms. The coefficient on the family-firm dummy is stable regardless of whether we include industry dummies or control variables.

Taken together, the results from both studies suggest that family firms are particularly successful at winning workers' loyalty and mitigating labor militancy, as witnessed by their lower unionization rates and their lower incidence of strikes.

3 Data

3.1 Ownership Data

Ownership of Publicly Held Companies

The main focus of our study lies on the ownership of publicly held companies. Our ownership data come from four sources: Claessens, Djankov, and Lang (2000) (henceforth CDL), Faccio and Lang (2002) (henceforth FL), Gadhoun, Lang, and Young (2005) (henceforth GLY), and La Porta, Lopez-de-Silanes, and Shleifer (1999) (henceforth LLS). All these papers examine the ultimate ownership of publicly held companies, meaning ownership is traced back to the family and individual level. Each paper contains a discussion of the data sources and how the respective ownership measures are constructed. We refer the reader to these papers for further information.

CDL provide ownership data for nine East Asian countries for 1996: Hong Kong, Indonesia, Japan, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. The final sample includes 2,980 firms, representing 56% of all publicly traded firms in these countries. CDL measure family control both in terms of the fraction of firms controlled by families (20% cutoff) and the fraction of the total market capitalization controlled by the top 5 families. (The correlation between these two measures is reported in Table 3a.) As is shown in Table 2a, with the exception of Japan, family control is pervasive in East Asia. While only 10% of Japanese firms are controlled by families, the fraction of family-controlled firms in the other eight countries ranges from 45% (Philippines) to 72% (Indonesia). A similar picture emerges with respect to

the fraction of the total market capitalization controlled by the top 5 families. While the top 5 families in Japan only control 2% of the total market capitalization, the corresponding number for the other eight countries ranges from 20% (Singapore) to 43% (Philippines).

FL provide ownership data for 13 Western European countries for the period from 1996 to 1999: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. The final sample includes 5,232 firms, representing 94% of all publicly traded firms in these countries. FL construct the same two measures of family control as CDL do. (The correlation between these two measures is reported in Table 3b.) As is shown in Table 2a, family control is also pervasive in Western Europe: The fraction of firms controlled by families ranges from 24% (United Kingdom) to 65% (France and Germany), while the fraction of the total market capitalization controlled by the top 5 families ranges from 4% (United Kingdom) to 25% (Portugal).

GLY provide ownership data for 3607 publicly traded companies in the United States for 1996. As is shown in Table 2a, only 20% of the firms are controlled by families (20% cutoff), which implies that the United States ranks second only after Japan as the country with the most widely dispersed (ultimate) ownership.

LLS provide ownership data for 27 wealthy countries, primarily for 1995 and 1996. The focus is on the 20 largest firms in each country as measured by the firms' market capitalization of equity. As is shown in Table 2a, the fraction of family-controlled firms (20% cutoff) among the top 20 firms ranges from 0% (United Kingdom) to 70% (Hong Kong). Using value-weighted measures yields similar results. LLS also construct a sample of 10 medium-sized publicly traded firms for each country. There, the fraction of family-controlled firms (20% cutoff) is higher, ranging from 10% (Japan and the United States) to 100% (Greece). The correlation among all three measures used by LLS is reported in Table 3e.

There are 30 countries for which we have both ownership data and data on the quality of labor relations. Unfortunately, CDL-FL-GLY and LLS construct their ownership measures in different ways. Moreover, while CDL-FL-GLY cover a large fraction of all publicly traded firms in each country, LLS only cover the 20 largest firms, and their selection criteria make it difficult to compare large and small countries. To obtain consistent measures for all 30 countries, we

proceed in two steps. Whenever possible, we use the two measures of family control from CDL-FL-GLY: the fraction of firms controlled by families (20% cutoff), and the fraction of the total market capitalization controlled by the top 5 families. This provides us with 23 countries. For the remaining seven countries—Australia, Canada, Denmark, Greece, Israel, Netherlands, and New Zealand—we use predicted values using data from LLS based on the following regression:¹⁰

$$\text{Fam}_{i,j} = \alpha_j + \beta'_j \text{LLS}_i + \varepsilon_{ij}, \quad (1)$$

where $\text{Fam}_{i,j}$ is the particular measure j of family control for country i in CDL-FL-GLY, and where LLS_i is the vector of the three measures of family control for country i in LLS. For the first measure in CDL-FL-GLY—the fraction of firms controlled by families—we obtain an R^2 of 43% for the 18 countries that are included in both CDL-FL-GLY and LLS. For the second measure—the fraction of the total market capitalization controlled by the top 5 families—we obtain an R^2 of 41%.

State Ownership

In some of our regressions, we will use state ownership as our dependent variable. Our measure of state ownership is constructed in the same way as our measure of family control. That is, whenever possible, we use the measures from FL-GLY. (The regressions in question do not include Asian countries.) For the remaining countries, we use predicted values using data from LLS based on a regression similar to that in equation (1).

Ownership of Publicly and Privately Held Business Groups

Fogel (2006) provides various measures of the ultimate ownership of the ten largest non-government business groups in each country for 1996. Unlike our main ownership variables, which are only based on publicly traded companies, Fogel’s sample includes both publicly and privately held business groups. Fogel constructs four measures of family control, which are all highly correlated. The particular measure we will use in our regressions is the labor-weighted fraction of the 10 largest business groups controlled by families (20% cutoff).

¹⁰As we will show below, our basic results are robust to dropping those countries for which we only have predicted values based on the data from LLS.

3.2 Labor Relations Data

Cooperative Labor Relations

Our measures of the quality of labor relations are taken from two different surveys. The first survey, conducted by the International Institute of Management Development (IMD), is published in the World Competitiveness Yearbook. It is sent to thousands of executives each year. In 2003, for instance, it was sent to 4,256 executives in 59 countries. Besides other questions, the executives are asked to respond to the following statement: “Labor relations are generally ... (hostile, productive)”. Responses may vary from 1 to 10, a low number indicating hostile labor relations. Table 2b reports the survey results for 1999 and 2003. While we have this survey data from 1996 onwards, the country rankings are highly correlated over time. For instance, the correlation between the 1999 and 2003 rankings is 90% (see Table 3d).

The second survey is conducted by the World Economic Forum and published in the Global Competitiveness Report (GCR). Similar to the IMD survey, it is sent to thousands of executives in over 50 countries. The question that is most relevant for our study asks the executives if they agree with the statement “Labor/employer relations are generally cooperative”. Responses may vary from 1 (strong disagreement) to 7 (strong agreement). Table 2b reports the survey results for 1993, 1999, and 2003. While we have this survey data also for other years, the country rankings are again highly correlated. As is shown in Table 3d, the correlations between the 1993, 1999, and 2003 rankings are between 89% and 97%.

In 1999 the GCR survey asked a more nuanced question: The executives were asked if they agree with the statement “Strikes are rare and always quickly resolved with minimum economic losses”. The survey result is reported in Table 2b. As is shown in Table 3d, the country ranking correlates strongly with that from the question asking whether “Labor/employer relations are generally cooperative”.

Not only are our various measures of the quality of labor relations highly correlated over time, but there is also a strong correlation across the two surveys. For example, the correlation between the IMD and GCR measures in 1999 (2003) is 94% (91%) (see Table 3d). On the other hand, our measures of the quality of labor relations are uncorrelated with the perceived bargaining power of workers. Each year, the GCR survey asks executives to respond to the

statement “The collective bargaining power of workers is high”. For brevity, Table 2a only shows the result for one particular year, 1999, but the results are similar for other years. As is shown in Table 3d, there is no correlation between the (perceived) bargaining power of workers and any of our six measures of the quality of labor relations.

Given the high correlation among our measures of the quality of labor relations—both across different surveys and over time—none of the problems encountered in the construction of our ownership variables arises here. In fact, all the results we present here are robust to using any of the six measures from Table 2b. For brevity, we only use a single measure, the IMD measure from 2003, which we call ‘Cooperative Labor Relations’.

Strike Activity in the 1960s

Our survey measures of the quality of labor relations reflect the opinions of executives. It would be useful to know if these opinions also correspond to more readily observable measures of labor hostility, such as strike activity. The problem with using strike data is that strike activity commonly depends on many factors, notably unemployment. Given that we have a limited number of countries, controlling for all of these factors would leave us with too few degrees of freedom. Alternatively, we can consider a time period in which those factors that commonly affect strike activity are ‘naturally being controlled for’, e.g., because they were relatively uniform across countries. The 1960s were such a period: Unemployment was uniformly low across Western countries, while TFP growth was high. Our measure of strike activity in the 1960s—adopted from Blanchard and Philippon (2004)—is a combination of the number of days lost due to strikes and the number of workers involved in strikes, normalized by employment. As Blanchard and Philippon show, there exists a significant negative relation between strike activity in the 1960s and the quality of labor relations in the 1990s. Indeed, the correlation between strike activity in the 1960s and our measure, ‘Cooperative Labor Relations’, is minus 63%, suggesting that high strike activity in the 1960s can predict hostile labor relations more than thirty years later.

4 Family Ownership and Labor Relations

4.1 Basic OLS Regressions

Table 4 presents our basic OLS regressions. We use robust standard errors in all regressions to account for heteroskedasticity. The first two regressions, shown in columns (i) and (ii), consider the relation between Cooperative Labor Relations and our two measures of family control: the fraction of firms controlled by families (20% cutoff) and the fraction of the total market capitalization controlled by the top 5 families. Given the way these two measures are constructed, there is likely a systematic effect of country size. All else equal, the top 5 families in Sweden are likely to control a greater fraction of the national stock market capitalization than the top 5 families in the United States. Therefore, we shall always include the log of the total population in 1995 as a control variable in our regressions. The basic equation we estimate is:

$$\text{Fam}_i = \alpha + \beta \text{ Cooperative Labor Relations}_i + \gamma \log(\text{Population}_{i,1995}) + \varepsilon_i. \quad (2)$$

As columns (i) and (ii) of Table 4 show, irrespective of which of our two measures of family control we use, there is a significant negative relation between Cooperative Labor Relations and the extent of family control.

Tables 3a and 3b show that the correlation between our two measures of family control, while strong, is not perfect. From a theoretical perspective, it is unclear which is a better measure of family control. From an empirical perspective, both are probably noisy estimates of the truth, and we have just shown that Cooperative Labor Relations is significantly negatively related to either measure. Moreover, given the large number of robustness checks we wish to perform, keeping both measures would not be convenient. We therefore construct the first principal component of our two measures of family control and use it as our main dependent variable. The first principal component, which is displayed in the last column of Table 2a, is normalized to have a mean of zero and a variance of one. It accounts for 79% of the variance in the two measures, which have approximately equal weight.

One major shortcoming of our ownership data is that the samples in CDL-FL-GLY and LLS only include publicly held firms. To verify that our measure of family control is also representative of a broader population of firms, we can check whether it correlates with the

respective measure in the sample provided by Bloom and van Reenen, which is based on 3,889 medium-sized companies, most of them private, from twelve different countries (see Section 2.3). Nine of these countries are also represented in our sample: France, Germany, Greece, Italy, Japan, Portugal, Sweden, the United Kingdom, and the United States. For each of these countries, we compute the mean fraction of family firms based on the ownership data provided by Bloom and van Reenen and correlate it with our measure, the principal component of family control. The correlation is 68.5%, and it is significant at the 5% level. As it is only based on nine observations, we need to verify that it is not driven by outliers. The rank correlation (Spearman's rho) is only slightly lower (58.3%), and it is significant at the 10% level.

Using the principal component of family control as our main dependent variable, we next estimate equation (2) separately for different subsamples, for two reasons. First, we want to allow for systematic differences between Asian and Western countries. Second, we want to make sure that our results are robust to dropping those seven countries for which we only have predicted values using data from LLS based on equation (1). Column (iii) of Table 4 shows the results for Asia, column (iv) shows the results for Western countries, excluding those countries for which we only have predicted values, and column (v) shows the results for all Western countries, including those countries for which we only have predicted values. The first point to notice is that Cooperative Labor Relations is negatively related to family control and significant at the 1% level in all regressions. The second point is that the coefficients associated with country size and GNP per capita are different for Asian and Western countries. In fact, GNP per capita is not significant among Western countries, which is not surprising given that these countries are relatively homogeneous in their developments. On the other hand, the coefficient associated with GNP per capita is negative and significant in Asia, suggesting that family ownership is more prevalent in less developed economies.

We next run a regression based on the entire sample, which includes a dummy for Asia as well as interaction terms of this dummy with country size and GNP per capita. For parsimony, we restrict the coefficient associated with GNP per capita to zero for Western countries, for it is otherwise small and insignificant. The results are shown in column (vi) of Table 4. Like previously, Cooperative Labor Relations is negatively related to family control and significant

at the 1% level.

Before we examine alternative hypotheses, let us verify that our results are not driven by outliers. To do so, we regress Cooperative Labor Relations and our measure of family control separately on the remaining control variables in column (vi) of Table 4. Figure 1 plots the residuals of the two regressions. The correlation between the residuals is minus 72%. Importantly, the figure suggests that our results are not driven by outliers. This is also confirmed in column (vii) of Table 4, where we estimate a robust regression using the same specification as in column (vi). The results are practically the same.

As discussed above, one shortcoming of our ownership data is that they are only based on publicly held firms. We have already shown that our measure of family control is highly correlated with the measure in the sample provided by Bloom and van Reenen, which is based on medium-sized companies, most of them private. Another way to address this issue is to estimate the regression in column (vi) using Fogel’s (2006) measure of family control: the labor-weighted fraction of the 10 largest business groups controlled by families. Unlike our measure, Fogel’s measure is based on a sample that includes both publicly and privately held firms. Given the small number of observations per country in Fogel’s sample, we use this measure only here, and only as a robustness check. The results, which are shown in column (viii) of Table 4, are consistent with our previous results: Cooperative Labor Relations is negatively related to family control and significant at the 1% level.

4.2 Labor-specific or General Social Capital?

The quality of labor relations is part of a country’s social capital. While social capital invokes notions of trust and cooperation—trust being either a facilitator of cooperation or the outcome of past cooperation—the question is: What aspect of a country’s social capital is it precisely that matters for family ownership? The concern is that our measure, Cooperative Labor Relations, might be merely proxying for some other aspect of a country’s social capital, in which case it should become insignificant once the other measure is included in our regression. We believe this is an important concern, and one that is more than just a robustness check, as it goes to the heart of the issue of what Cooperative Labor Relations is actually measuring. Thus, we would

like to put forward as a viable alternative hypothesis that what matters for family ownership is not the quality of labor relations but rather some other (context-specific or general) aspect of a country's social capital.

To examine this hypothesis, we include six alternative (survey-based) measures of social capital in our regressions that all measure peoples' trust and confidence, either generally or with regard to specific institutions. The results are reported in Table 5. The best known of these measures is probably 'General Trust' (column (i)). This measure, which has been widely used in the social capital literature, shows the percentage of survey respondents who answer that most people can be trusted.¹¹ The other measures are: 'Importance of Family' (column (ii)), which shows the percentage of respondents who answer that family is very important, 'Confidence in Major Companies' (column (iii)), which shows the percentage of respondents who either have a great deal or quite a lot of confidence in major companies, 'Trust in Politicians' (column (iv)), which measures the respondents' confidence in the honesty of politicians, 'Trust in Judiciary' (column (v)), which measures the respondents' confidence in the independence of the judiciary, and 'Trust in Management' (column (vi)), which measures the respondents' confidence in the credibility of managers.

Table 3e reports the correlations between these alternative measures of social capital and our measure, Cooperative Labor Relations. As is shown, some of these measures are correlated with ours. However, when we include them in our regressions (see Table 5), only one of them—'Importance of Family'—is marginally significant, while Cooperative Labor Relations is significant at the 1% level in all regressions. Accordingly, it is not just some aspect of a country's social capital that is relevant for family ownership, but it is precisely the issue of whether labor relations are hostile or cooperative. We believe this is good news for advocates of social capital theories, for it means that we can distinguish among different aspects of social capital that are each relevant in different social and economic contexts.

¹¹Perhaps most relevant for this study, 'General Trust' has been used in La Porta et al. (1997), who show that it is positively related to the share of sales over GNP by the 20 largest firms in each country.

4.3 Legal Determinants of Family Ownership

This section considers various legal determinants of family ownership: minority shareholder protection, creditor rights, and law enforcement. As before, we again run a horse race between our measure, Cooperative Labor Relations, and the alternative legal determinant in question. The results are reported in Table 6.

Minority Shareholder Protection

The leading explanation for the observed variation in family ownership across countries—due to La Porta, Lopez-de-Silanes, and Shleifer (1999)—is based on differences in minority shareholder protection. The authors find that countries with poor minority shareholder protection have more family ownership than do countries with good minority shareholder protection.

La Porta et al. (1997, 1998) collect data on various rights protecting minority shareholders, which they aggregate into a single ‘Anti-director Rights Index.’ The following analysis is based on a revised version of this index provided by Djankov et al. (2008a), which consists of six provisions: a) the right to vote by mail, b) the absence of a requirement to deposit shares prior to a general shareholders meeting, c) the right to cumulative voting for directors and proportional representation on the board, d) judicial venues to challenge the decisions of management (‘Oppressed Minorities Mechanism’), e) preemptive rights to buy new issues of stock, and f) a low minimum percentage of share capital to call an extraordinary shareholders meeting. As column (i) of Table 6 shows, provisions b) and e) are particularly important determinants of family ownership, while provisions a) and c) are insignificant but only barely so. (Provisions d) and f) are clearly insignificant and have been omitted for brevity.) Importantly, however, Cooperative Labor Relations is significant at the 1% level. In column (ii), we use the (revised) ‘Anti-director Rights Index’ in place of the individual provisions. The results confirm our previous impression that minority shareholder protection is an important determinant of family ownership. But so is Cooperative Labor Relations, which remains significant at the 1% level.¹²

The original ‘Anti-director Rights Index’ introduced by La Porta et al. (1997, 1998) has been

¹²We obtain similar results if we use the original set of indicators from La Porta et al. (1997, 1998) instead of the revised set of indicators from Djankov et al. (2008a). Cooperative Labor Relations is always significant at the 1% level.

criticized for its ad hoc nature and conceptual ambiguity. In response to this criticism, Djankov et al. (2008a) have constructed a revised version of the index, which we have used above. Equally important, however, Djankov et al. also provide another index of minority shareholder rights, the ‘Anti-self-dealing Index’, which is more theoretically grounded and which measures the extent to which minority shareholders are protected against self-dealing by controlling shareholders. As column (iii) of Table 6 shows, the ‘Anti-self-dealing Index’ is marginally significant in our regression, while Cooperative Labor Relations is again significant at the 1% level.

Creditor Rights

The clash between secured creditors and managers/employees is probably as important, or even more important, than the clash between minority shareholders and the latter. This is because when firms enter into distress, secured creditors in many countries can seize the collateral and shut the firm down, which is bad for both managers and employees. Hence, like rights protecting minority shareholders, creditor rights might be an important determinant of family ownership. To test this hypothesis, we include an index of creditor rights and a measure of the efficiency of debt enforcement in our regression (both from Djankov et al., 2008b). The results are shown in column (iv) of Table 6. While the creditor rights index is not significant, the measure of the efficiency of debt enforcement is significant and enters with the predicted (negative) sign, implying that countries in which debt enforcement is more efficient have less family ownership. Cooperative Labor Relations is again significant at the 1% level.

Law Enforcement

La Porta et al. (1998) argue that a strong system of law enforcement might, in principle, substitute for weak minority shareholder protection, as courts could then step in and “rescue investors abused by the management”. The authors provide data on various measures of law enforcement. Two of these measures, ‘Efficiency of Judicial System’ and ‘Rule of Law’, pertain to law enforcement proper. As column (v) of Table 6 shows, neither measure is significant in our regression. Two other measures, ‘Repudiation of Contracts by Government’ and ‘Risk of Expropriation’, are not related to law enforcement proper but instead to the government’s stance towards private contracting and property rights. While the second measure is marginally significant, Cooperative Labor Relations is again significant at the 1% level.

4.4 Other Determinants of Family Ownership

This section consider various other determinants of family ownership: union power, labor regulation, pro-labor orientation of governments, income inequality, and financial development. In each case, we run a horse race between Cooperative Labor Relations and the alternative measure in question. The results are reported in Table 7.

Union Bargaining Power and Labor Regulation

Both Roe (2003) and this paper argue that family firms are particularly effective at coping with labor pressure. The question is: Where does this labor pressure come from? Roe focuses on measures of formal labor empowerment, such as labor regulation and the pro-labor orientation of governments. Another such measure, which is not the focus of Roe’s work, is the bargaining power of labor unions. We begin by looking at labor regulation and union power.

To examine the role of labor regulation and union bargaining power for family ownership, we include three additional variables in our regression: (i) a measure of employment protection, (ii) a measure of the collective bargaining power of labor unions (both from Botero et al., 2004), and (iii) a measure of the bargaining power of workers, as perceived by executives, from the 1999 GCR survey. As Table 3d shows, the correlation between this last measure and Cooperative Labor Relations is virtually zero. Moreover, as is shown in column (i) of Table 7, labor regulation and union bargaining power are not well suited to explain family ownership. Controlling for the quality of labor relations, none of the three measures is significant, neither collectively nor individually (not reported). On the other hand, Cooperative Labor Relations is significant at the 1% level. Accordingly, it is not just *some* aspect of labor pressure that is relevant for family ownership, but it is precisely the issue of whether labor is hostile or cooperative.

Political Theories

Another measure of formal labor empowerment relates to a country’s left-right political orientation. Countries at the left end of the political spectrum—“social democracies” in Roe’s (2003) terminology—are more likely to be labor friendly. To examine whether this has any impact on family ownership, we include Roe’s left-right political index in our regression.¹³ The

¹³For brevity, we only consider aspects of politics related to labor issues. There may be other links between

results, which are displayed in column (ii) of Table 7, show that a country's left-right political orientation has no effect on family ownership. In related work, Pagano and Volpin (2005) develop a political theory of investor and employment protection, arguing that countries with proportional voting systems have weaker investor protection but stronger employment protection than do countries with majoritarian voting systems. Thus, Pagano and Volpin's voting index might provide us with an alternative measure of a country's pro-labor orientation. As is shown in column (iv), this index—like Roe's index above—is not significant in our regression. Cooperative Labor Relations is significant at the 1% level in both regressions.

That Pagano and Volpin's voting index is not significant in our regression is interesting in its own right. Their model implies a substitution effect between labor rights and minority shareholder rights, where countries with proportional voting systems have stronger labor rights but weaker shareholder rights while countries with majoritarian voting systems have stronger shareholder rights but weaker labor rights. Our results suggest that political economy—and the postulated substitution effect between labor and shareholder rights in particular—might not be as important for the organization of private businesses as are historical and cultural factors, such as the quality of a country's labor relations.

While our results suggest that measures of a country's political orientation are not well suited to explain family ownership, this does not mean that politics do not matter. As columns (iii) and (v) of Table 7 show, these measures are well suited to explain *state ownership*. In both regressions, the respective measure—the left-right political index by Roe and the voting index by Pagano and Volpin—has some explanatory power, while our measure, Cooperative Labor Relations, is not significant.

Stock Market Development and Income Inequality

Countries with more developed stock markets might have institutions that—similar to the legal protection of minority shareholders—are more conducive to widely held ownership. To test this hypothesis, we include the ratio of stock market capitalization to GDP in our regression, which is a widely used proxy for stock market development (e.g., Demirgüç-Kunt and Levine,

politics and (family) firms, such as lobbying and political connectedness. For work along these lines, see Faccio (2006), Fisman (2001), Morck, Stangeland, and Yeung (2000), and Morck and Yeung (2004).

1995; Fisman and Love, 2004). As column (vi) of Table 7 shows, this measure enters with the predicted (negative) sign, but is—unlike minority shareholder protection—not significant.

Finally, one might be worried that Cooperative Labor Relations might proxy for income inequality, in the sense that countries with high income inequality might also have worse labor relations. At the same time, family ownership might be related to income inequality, in the sense that countries with high income inequality might also be countries in which a few families control a large fraction of the stock market. For some countries, this argument might be true. Overall, it seems that it is not an important argument. As is shown in column (vi) of Table 7, income inequality (as measured by the Gini coefficient) is only marginally significant in our regression, while Cooperative Labor Relations remains significant at the 1% level.

4.5 Best-of Regression

Given that we only have few degrees of freedom—our sample only consists of 30 countries—we have examined each alternative hypothesis using an individual regression instead of a single regression that includes all the covariates from Tables 5 to 7. For completeness, let us briefly report what happens if we estimate a single regression that includes all the variables that are significant (at the 10% level or higher) in any of the individual regressions. Such a ‘Best-of regression’ includes—next to the variables from our basic specification in column (vi) of Table 4—the following six variables: ‘Importance of Family’ (from column (ii) of Table 5), ‘Anti-director Rights Index’, ‘Anti-self-dealing Index’, ‘Efficiency of Debt Enforcement’, and ‘Risk of Expropriation’ (from columns (ii), (iii), (iv), and (v), respectively, of Table 6), and ‘Income Inequality’ (from column (vi) of Table 7).¹⁴ As Table 8 shows, none of the six variables are significant when combined into a single regression, which is not surprising given that there are only few degrees of freedom. On the other hand, Cooperative Labor Relations is significant at the 1% level, and the coefficient is similar to that in previous regressions. Incidentally, the regression is only based on 26 countries, which is due to the inclusion of the ‘Importance of Family’ variable. If we drop this variable from our regression—so that we again have 30 countries—the results

¹⁴The results are similar if we use the individual shareholder rights from column (i) of Table 6 in place of the ‘Anti-director Rights Index’.

are similar, the only minor difference being that the ‘Anti-director Rights Index’ is marginally significant. In particular, Cooperative Labor Relations is significant at the 1% level, and the coefficient is identical to that in Table 8.

5 Labor Origin

We attempt to address the issue of causality by looking into the historical causes for the observed differences in the quality of labor relations across countries. In his classic book, historian Colin Crouch (1993) documents the struggles by the emerging European liberal states in the 18th and 19th centuries to maintain a political monopoly, or to claim what he calls “political space”. The liberal states’ exclusive claim to political space implied that they became “jealous” of organized interests who also sought to claim political space, notably guilds and labor organizations.¹⁵ According to Crouch, there is substantial variation in the way the liberal states dealt with the attempts of guilds and labor organizations to seek political space—ranging from confrontation to co-optation—which had a lasting effect on the countries’ industrial relations until the present. Crouch groups countries into three broad categories:

Political Inhibitors. This group includes France, Italy, Portugal, and Spain. In these countries, the liberal states’ exclusive claim to political space provoked the formation of highly oppositional labor movements. The paradigm case here is the French Republic. In an effort to maintain a political monopoly, the French republicans passed the ‘lois Le Chapelier’ in 1791, a powerful law banning all guilds and trade unions. Until 1884, for almost a century, labor organizations were illegal in France. Weak and ostracized from the beginning, the French labor movement became highly oppositional, which may help explain why it became anarchist in the early 20th century and later on communist:

“The [French] state rendering itself both inaccessible and dominant, the newly developing labour movement found little chance of influencing it and therefore became

¹⁵ “To the extent that the liberal state had to struggle to assert its autonomy [...] it became exceptionally ‘jealous’ of political space, reluctant to share it, and thus exclusive in its claims to sovereignty” (p. 302). All quotes in this section are from Crouch (1993).

highly oppositional, much of it embracing first syndicalism and then communism. This in turn reinforced the existing tendency of the state, because labour rendered itself increasingly unattractive as a potential ‘social partner’ for either the state or capital; a process of cumulative social hostility was thus set in train” (p. 302).

Political Facilitators. This group includes Austria, Germany, the Netherlands, and Switzerland. In these countries, the liberal states did not confront guilds but rather sought to co-opt them into a social partnership, for the states were dependent on the guilds’ organizational resources to manage their own public affairs. Far from being excluded, labor organizations became part of the liberal states’ very structure.¹⁶

Political Neutrals. This group includes Belgium, Denmark, Finland, Ireland, Norway, Sweden, and the United Kingdom. These countries had broadly neutral experiences. The liberal states did not depend on the guilds’ organizational resources to carry out their own basic functions, nor were the liberal states jealous of the guilds’ attempts to occupy political space.¹⁷

Based on this classification, we shall introduce a new variable, ‘Labor Origin’, indicating to which category a country belongs. If it is true that, as Crouch argues, the encounter between liberalism and guild society in the 18th and 19th centuries had a lasting effect on countries’ industrial relations until the present, then Labor Origin might provide us with an instrument that can explain differences in the quality of labor relations across countries today.

In Table 7 we instrument Cooperative Labor Relations using Labor Origin. Using the group of ‘political inhibitors’ as our default category, Labor Origin is represented by two dummies:

¹⁶ “There are instances where, for various reasons, states have been dependent on the existence of such structures for their own strength. The most outstanding instance is Germany. [...] The Prussian state did not confront guild structures” (p. 307). Likewise, “The Swiss state was so weak, so liberal, that it lacked the capacity to carry out its own basic functions and looked to functional interests—starting from guild structures that again faced no major [...] confrontation” (p. 308-309).

¹⁷ “This implies a noncommittal neutralism towards organized interests, not the positive organicism of the unreformed Hapsburg state. This lack of ‘jealousy’ reduced the extent to which these states confronted guilds and subsequently provoked the formation of highly oppositional labour movements; the spiral of mutual rejection of the French case did not apply here” (p. 310)

‘Neutral Labor Origin’, which takes the value one if a country belongs to the group of ‘political neutrals’, and ‘Cooperative Labor Origin’, which takes the value one if a country belongs to the group of ‘political facilitators’. On the other hand, La Porta et al. (1998) and La Porta, Lopez-de-Silanes, and Shleifer (1999) emphasize the importance of legal origin for family ownership. For this reason, we shall also include legal origin dummies in our regressions. We estimate the following equation:

$$\begin{aligned} \text{Fam}_i = & \alpha + \beta \text{ Cooperative Labor Relations}_i^* + \gamma \log(\text{Population}_{i,1995}) \\ & + \delta' \text{ Legal Origin}_i + \varepsilon_i, \end{aligned} \quad (3)$$

where $\text{Cooperative Labor Relations}_i^*$ is instrumented using Labor Origin_i , and where Legal Origin_i is a vector of two dummies representing English and German legal origin, respectively.¹⁸

The results of the first-stage regression, which are displayed in column (i) of Table 9, show that Labor Origin_i has a significant effect on the quality of labor relations today.¹⁹ Also interesting is that larger countries have systematically worse labor relations than smaller countries. On the other hand, a country’s legal origin appears to have no significant effect on the quality of labor relations.²⁰ According to the data, differences in the quality of labor relations between France and Sweden are well explained by the different sizes of the two countries and their different Labor Origin_i s. The results of the second-stage regression, which are displayed in column (ii), confirm that $\text{Cooperative Labor Relations}_i$ is negatively related to family control and significant at the 1% level. The coefficient is similar to that in our OLS regressions. Also, both legal origin dummies are significant and enter with the predicted sign (see La Porta et al., 1998).

¹⁸In La Porta et al. (1998) and La Porta, Lopez-de-Silanes, and Shleifer (1999) only French legal origin is significant in explaining family ownership. Rather than including a dummy for French legal origin, we include dummies for English, German, and Scandinavian legal origin to allow for systematic differences between the three legal origins. The Scandinavian legal origin dummy has been dropped for brevity as it is insignificant.

¹⁹We can reject the null hypothesis that Neutral and $\text{Cooperative Labor Origin}_i$ are jointly insignificant in the first-stage regression (F -statistic of 3.88). However, we cannot reject the hypothesis that the instruments are weak (at the 5% level) based on the critical values in Table 5.2 of Stock and Yogo (2005). This is not entirely surprising, as it is generally difficult to obtain strong instruments in a regression with only few degrees of freedom.

²⁰This is also true in an unconditional sense, i.e., when we drop all variables except Legal Origin_i from the first-stage regression. In that case, the coefficients on English and German legal origin are 0.96 (t -statistic of 0.99) and 0.95 (t -statistic of 1.15), respectively.

Let us conclude with a brief discussion of the relation between Labor Origin and a country’s main religion. A quick look at Crouch’s categories shows that the four countries classified as ‘political inhibitors’ are all Catholic countries. Indeed, Crouch does not fail to remark that the Catholic Church’s opposition to modernization caused the liberal states in Catholic countries to be especially jealous of political space.²¹ In unreported regressions, we use—instead of Labor Origin—either the fractions of Catholics or Protestants in 1900 as our instrument. While the results are significant, they are weaker than when we use Labor Origin as our instrument.²² That the results are weaker should not surprise. First, there is no underlying theory—and Crouch does not argue along these lines—stating that the quality of labor relations should directly depend on religion. Religion plays, if anything, an indirect role in Crouch’s argument in that the liberal states in Catholic countries had more reason to be jealous of political space. But even this relation only holds for a subset of Catholic countries, which implies that, at best, religion is a (noisy) proxy for Labor Origin. For example, a look at Crouch’s categories shows that Ireland, Belgium, and Austria—three of the most Catholic countries in Europe—are (only) classified as ‘political neutrals’ or ‘political facilitators’. Likewise, the four Scandinavian countries—which each had less than one percent Catholics in 1900—are classified as ‘political neutrals’, while Germany, the Netherlands, and Switzerland—which all had a much higher fraction of Catholics in 1900—are classified as ‘political facilitators’.²³

6 Family Ownership Across Industries and Countries

Another way to address causality is to use the methodology suggested by Rajan and Zingales (1998). Adapted to our specific context, the hypothesis is that—controlling for country and

²¹ “The Catholic Church [...] became the central rallying point for all forces alienated from modernization” (p. 301). In contrast, in “Protestant states [...] the churches (Lutheran and Anglican) made their peace with the state long before the birth of modernizing forces and created few if any challenges to its authority” (p. 310).

²²The R^2 of the second-stage regression drops by 23 percentage points, while Cooperative Labor Relations—is only significant at the 5% level, compared to the 1% level when we use Labor Origin as our instrument. The year 1900 is the earliest year for which we have the religion data available.

²³In Ireland, Belgium, and Austria, the percentage of Catholics in 1900 ranges from 88.7% to 97.4%, while in Germany, the Netherlands, and Switzerland, it ranges from 35.1% to 39.9%.

industry fixed effects—industries that are more labor dependent should have relatively more family ownership in countries with worse labor relations. As Rajan and Zingales note, “such a finding could be the “smoking gun” in the debate about causality”. In particular, the ability to correct for country fixed effects alleviates possible concerns about an omitted variable bias.

When constructing our measure of industries’ labor dependence, we encounter the same conceptual issue as Rajan and Zingales do. Precisely, the labor share in an industry must reflect the demand for labor *solely* based on technological considerations. In particular, it must not be ‘contaminated’ by considerations affecting labor demand that are related to the quality of labor relations. For this reason, it is problematic to use data on actual labor shares in each country. Like Rajan and Zingales do in their study, we use the United States as our benchmark to compute labor shares for the various industries.²⁴ Following standard practice, we compute the labor share of industry j as $vl_j/(vl_j + vk_j)$, where vl_j and vk_j denote the values of labor inputs and capital services, respectively, for industry j in 1995. Column (i) of Table 10 reports the labor shares for each industry.

Our ownership data are based on Faccio and Lang’s (2002) sample of 5,232 Western European firms.²⁵ For 853 firms we lack the industry classification, leaving us with a final sample of 4,379

²⁴The use of U.S. data as a proxy for industries’ dependence (here: on labor) in other countries rests on the assumption that there are technological reasons for why some industries are more labor dependent than others, and these technological differences are comparable across countries. We believe this is a reasonable assumption in our case, for the countries in our regression are all Western European countries, whose industries are likely to have a similar level of technological development as their U.S. counterparts. Moreover, to the extent that our U.S.-based measure is a noisy proxy of industries’ labor dependence in other countries, it will only create a bias against finding any significant results.

²⁵We are grateful to Mara Faccio for providing us with the industry classifications. The data are primarily from Stock Exchange ownership files and in some cases also from Worldscope. Table 1 in Faccio and Lang (2002) gives a detailed account of the respective data sources for each country. Note that the firms in Faccio and Lang’s sample are all publicly listed firms. Hence the same concern as before also applies here, namely, that the firms in the sample could be positively selected. Similar to what we have done in Section 4.1, we can correlate the fraction of firms controlled by families per country from Faccio and Lang’s sample with the fraction of family firms per country from Bloom and van Reenen’s sample, which is based on medium-sized firms, most of them private. The overlapping countries are France, Germany, Italy, Portugal, Sweden, and the United Kingdom. For these countries, we find a correlation of 55%, suggesting that the fraction of family firms in Faccio and Lang’s sample might also be representative of a broader population of firms.

firms from 13 Western European countries. Columns (ii) and (iii) of Table 10 show the number of firms and the mean fraction of firms controlled by families (20% cutoff), respectively, for each industry based on all 4,379 observations. For any given industry j and country k , we can also compute the mean fraction of firms controlled by families in a given industry and country. Since we have 19 industries and 13 countries, this implies a total of 247 potential observations. In 17 cases there are no firms in a given industry and country, implying that our final sample consists of 230 observations. Column (iv) of Table 10 shows the averages of the country means separately for each industry.

The first equation that we estimate includes both industry- and country-level controls but no fixed effects. We estimate:

$$\text{Fam}_{jk} = \alpha + \beta' \text{Controls}_{j,k} + \gamma \text{Labor Share}_j \times \text{Cooperative Labor Relations}_k + \varepsilon_{jk}, \quad (4)$$

where Fam_{jk} is the mean fraction of firms controlled by families in industry j and country k , and where $\text{Controls}_{j,k}$ includes—besides Labor Share_j and $\text{Cooperative Labor Relations}_k$ —the log of the total population in 1995. Standard errors are clustered at the country level. (The results are similar if we cluster standard errors at the industry level.) As column (i) of Table 11 shows, the interaction term between Labor Share_j and $\text{Cooperative Labor Relations}_k$ is negative and significant at the 1% level, implying that industries that are more labor dependent have more family ownership in countries with worse labor relations. Also noteworthy is that the coefficient associated with Labor Share_j is positive and significant, implying that industries that are more labor dependent have more family ownership.

The possibility that there might be omitted variables—either at the country or industry level—that could drive both our dependent and our main independent variable (i.e., the interaction term) is major concern here. Including industry and country fixed effects can alleviate this concern. The next regression we run therefore includes—instead of specific industry- and country-level controls—industry and country fixed effects, implying that the only effects that are identified are those with respect to variables that vary both across industries and countries. The equation we estimate is:

$$\text{Fam}_{jk} = \alpha + \beta \text{Labor Share}_j \times \text{Cooperative Labor Relations}_k + \eta_j + \xi_k + \varepsilon_{jk}, \quad (5)$$

where η_j and ξ_k are industry and country dummies, respectively. As column (ii) of Table 10 shows, the interaction term between Labor Share $_j$ and Cooperative Labor Relations $_k$ is again negative and significant at the 1% level, confirming that our previous results are robust to including industry and country fixed effects. Note also that the coefficient associated with the interaction term is similar to that in column (i), while the R^2 is naturally higher given that the regression includes fixed effects. Overall, we believe these results are—in conjunction with those from our previous IV estimation—supportive of the hypothesis that the quality of labor relations has a causal effect on the extent of family ownership.

One might be worried that Cooperative Labor Relations is merely a noisy proxy for some other country-level characteristic. To address this concern, we run—similar to what we have done in Sections 4.2 to 4.5—a horse race between Cooperative Labor Relations and other country-level variables. In each case, we include an additional interaction term Labor Share $_j \times Z_k$, where Z_k is the country-level variable in question. (Note that Z_k as a stand-alone control variable is not identified due to the inclusion of country fixed effects.) As candidates for Z_k , we use the ‘Anti-director Rights Index’ from Section 4.3, the ‘Collective Bargaining Index’ and a measure of the bargaining power of workers as perceived by executives (both from Section 4.4), and ‘General Trust’ from Section 4.1. We have also run horse races using other variables from Tables 5 to 7, which we do not show here for brevity. The results were always similar. The results of the horse race regressions are displayed in columns (iii) to (vi) of Table 11. Two things are worth noting. First, the interaction term between Labor Share and Cooperative Labor Relations is always significant at the 1% level (except in column (iv), where it is significant at the 5% level). Second, the coefficient is stable in all regressions and, moreover, it is similar to the estimates in columns (i) and (ii).

7 Strike Activity

7.1 Quebec versus the Rest of Canada

Our measure of the quality of labor relations is a survey-based measure. In this final part of our study, we want to explore if the observed relationship between family ownership and the quality of labor relations also extends to non-survey-based measures, such as strike activity. We

begin by looking at different regions within Canada. Canada is particularly interesting for our purposes, because Quebec has a French tradition, while the rest of Canada has an Anglo-Saxon tradition. Moreover, according to Crouch's (1993) classification, France is a 'political inhibitor', while the United Kingdom is a 'political neutral' (see Section 5). Hence, we would expect to find more labor hostility in Quebec than in the rest of Canada. And if our cross-country results extend to different regions within a country, then we would also expect to find that Quebec has more family ownership than the rest of Canada.

We have strike data from 1953 until 2002, both for Quebec separately and for Canada as a whole, where strike activity is defined as the number of person-days lost due to strikes and lockouts (normalized by the number of salaried workers). A look at the data confirms that the average strike activity in Quebec is significantly higher than in the rest of Canada. As far as family ownership goes, Attig and Gadhoun (2003) report ultimate ownership measures for 1996 both for Quebec separately and for Canada as a whole. Their sample includes 1,112 publicly held companies, 155 of which are headquartered in Quebec. Consistent with our main hypothesis, they find that family ownership is more pervasive in Quebec than in the rest of Canada. While 57% of all firms in Quebec are controlled by families (20% cutoff), only 38% of all firms in the rest of Canada are controlled by families. The difference is significant at the 1% level. While this is encouraging, it should be noted that these observations are merely based based on raw data, i.e., they do not condition on factors that might account for differences between Quebec and the rest of Canada, such as industry structure or the legal environment. (For example, Quebec, like France, has a Civil Law code, while the remaining Canadian provinces have a Common Law code.)²⁶

²⁶On the other hand, the relevant corporation law is the same for firms in Quebec and in the rest of Canada, which makes it less likely that the observed differences in family ownership are due to differences in minority shareholder protection. As Attig and Gadhoun (2003) note, "traded firms in Quebec and in the rest of Canada are created under the same law: *Canada Business Corporations Act*. In addition, stock market regulations in the different provinces of Canada are not remarkably different."

7.2 Strike Activity in the 1960s

We finally return to our cross-country study, except that we use actual strike data instead of survey-based measures of the quality of labor relations. The problem with using strike data is that strike activity commonly depends on many factors, notably unemployment. Given that we have a limited number of countries, controlling for all these factors would leave us with few degrees of freedom. Fortunately, in the 1960s many of the factors that commonly affect strike activity—including unemployment and TFP growth—were relatively uniform across Western countries, which makes this period ideal for our study. Our measure of strike activity is adopted from Blanchard and Philippon (2004), who elaborate further on the advantages of using strike data from the 1960s. Greece, Portugal, and Spain have been excluded from our sample. All three countries were dictatorships in the 1960s, and strikes were illegal there.

The results of our regression, which are displayed in column (i) of Table 12, show that high strike activity in the 1960s is significantly positively related to the extent of family ownership more than thirty years later. *Prima facie*, reverse causality should not be a major concern here, as our dependent variable is from the 1990s while our independent variable is from the 1960s. And yet, given that the dependent variable may be persistent over time, we cannot rule out that the causality goes the other way. To address this concern, we instrument strike activity in the 1960s using Labor Origin (see Section 5). The results of the first-stage regression, which are displayed in column (ii) of Table 12, show that there is a significant relationship between Labor Origin and strike activity in the 1960s. Moreover, the coefficient has the predicted (negative) sign: Relative to the group of ‘political inhibitors’, which is the default category in this regression, those countries classified as either ‘political neutrals’ or ‘political facilitators’, where labor organizations had either neutral or positive experiences in the 18th and 19th centuries, had significantly less strike activity in the 1960s. Finally, and most important, the results of the second-stage regression, which are displayed in column (iii), show that countries with more strike activity in the 1960s also have more family ownership in the 1990s, which is consistent with our previous OLS results.

8 Conclusion

Why do some countries have more family ownership than others? One explanation is that family ownership is an optimal response to insufficient minority shareholder protection (La Porta, Lopez-de-Silanes, and Shleifer, 1999). Rather than focusing on the conflict between majority and minority shareholders (or that between managers and shareholders), this paper focuses on labor conflict to explain cross-country differences in the extent of family ownership. Using survey-based measures of the quality of labor relations, we find that countries with hostile labor relations have more family ownership than do countries with cooperative labor relations. This result holds for different measures of family ownership as well as for different subsamples (e.g., Asia, Europe, Western Countries). The result also holds if we control for minority shareholder protection, creditor rights, law enforcement, stock market development, income inequality, labor regulation, union bargaining power, and other potential determinants of family ownership, including measures of trust and social capital. Finally, the result holds if—instead of using survey-based measures of the quality of labor relations—we use actual strike data from the 1960s. As it turns out, differences in strike activity in the 1960s can explain differences in family ownership across countries more than thirty years later.

We address the issue of causality in different ways. First, we look into the historical causes for the observed differences in the quality of labor relations across countries. Based on differences in the way the emerging European liberal states in the 18th and 19th centuries confronted guilds and labor organizations, we obtain an instrument for our survey-based measure of the quality of labor relations. The instrumental variables regression confirms our OLS results. Second, we address causality by making use of within-country variation at the industry level. We find that—controlling for industry and country fixed effects—industries that are more labor dependent have more family ownership in countries with worse labor relations, which again supports our previous OLS results.

9 References

- Anderson, R.C., and D. Reeb, 2003, Founding Family Ownership and Firm Performance: Evidence from the S&P 500, *Journal of Finance* 58, 1301-1327.
- Anderson, R.C., S.A. Mansib, and D. Reeb, 2003, Founding Family Ownership and the Agency Cost of Debt, *Journal of Financial Economics* 68, 263-285.
- Attig, N., and Y. Gadhoun, 2003, The Governance of Canadian Traded Firms—An Analysis of the Ultimate Ownership Structure, mimeo, University of Quebec.
- Bennedsen, M., K.M. Nielson, F. Perez-Gonzalez, and D. Wolfenzon, 2007, Inside the Family Firm: The Role of Families in Succession Decisions and Performance, *Quarterly Journal of Economics* 122, 647-691.
- Bertrand, M., and S. Mullainathan, 2003, Enjoying the Quiet Life? Corporate Governance and Managerial Preferences, *Journal of Political Economy* 111, 1043-1075.
- Blanchard, O., and T. Philippon, 2004, The Quality of Labor Relations and Unemployment, NBER Working Paper 10590.
- Bloom, N., and J. Van Reenen, 2007, Measuring and Explaining Management Practices Across Firms and Countries, *Quarterly Journal of Economics* 122, 1351-1407.
- Botero, J.C., S. Djankov, R. La Porta, F. Lopez de Silanes, and A. Shleifer, 2004, The Regulation of Labor, *Quarterly Journal of Economics* 119, 1339-1382.
- Brody, D., 1993, *Workers in Industrial America: Essays on the Twentieth Century Struggle*. New York: Oxford University Press.
- Burkart, M., F. Panunzi, and A. Shleifer, 2003, Family Firms, *Journal of Finance* 58, 2167-2202.
- Claessens, S., S. Djankov, and L.H.P. Lang, 2000, The Separation of Ownership and Control in East Asian Corporations, *Journal of Financial Economics* 58, 81-112.
- Crouch, C., 1993, *Industrial Relations and European State Traditions*. Oxford: Clarendon Press.

- Demirgüç-Kunt, A., and R. Levine, 1995, Stock Market Development and Financial Intermediaries, World Bank Policy Research Paper 1462.
- Demsetz, H., and K. Lehn, 1985, The Structure of Corporate Ownership: Causes and Consequences, *Journal of Political Economy* 93, 1155-1177.
- Djankov, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer, 2008a, The Law and Economics of Self-dealing, *Journal of Financial Economics* 88, 430-465.
- Djankov, S., O. Hart, C. McLiesh, and A. Shleifer, 2008b, Debt Enforcement around the World, *Journal of Political Economy* 116, 1005-1149.
- Donnelley, R.G., 1964, The Family Business, *Harvard Business Review*, 42, July/August, 93-105.
- Faccio, M., 2006, Politically Connected Firms, *American Economic Review* 96, 369-386.
- Faccio, M., and L.H.P. Lang, 2002, The Ultimate Ownership of Western European Corporations, *Journal of Financial Economics* 65, 365-395.
- Fisman, R., 2001, Estimating the Value of Political Connections, *American Economic Review* 91, 1095-1102.
- Fisman, R., and I. Love, 2004, Financial Development and Intersectoral Allocation: A New Approach, *Journal of Finance* 59, 2785-2807.
- Fogel, K., 2006, Oligarchic Family Control, Social Economic Outcomes, and the Quality of Government, *Journal of International Business Studies* 37, 603-622.
- Gadhoun, Y., L.H.P. Lang, and L. Young, 2005, Who Controls US? *European Financial Management* 11, 339-363.
- Inglehart, R., M. Basáñez, J. Díez-Medrano, L. Halman, and R. Luijkx, 2004, *Human Beliefs and Values*. Mexico, DF: Siglo XXI Editores.
- International Institute for Management Development (IMD), Various Years, *World Competitiveness Yearbook*. Lausanne: IMD.

- Jorgenson, D.W., and K.J. Stiroh, 2000, Raising the Speed Limit: U.S. Economic Growth in the Information Age, *Brookings Papers on Economic Activity* 2000, 125-211.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer, 1999, Corporate Ownership Around the World, *Journal of Finance* 54, 471-517.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny, 1997, Trust in Large Organizations, *American Economic Review Papers and Proceedings* 87, 333-338.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R.W. Vishny, 1998, Law and Finance, *Journal of Political Economy* 106, 1113-1155.
- Mandell, N., 2002, *The Corporation as Family*. Chapel Hill and London: University of North Carolina Press.
- Morck, R.K., and B. Yeung, 2004, Family Firms and the Rent-Seeking Society, *Entrepreneurship: Theory and Practice* 28, 391-409.
- Morck, R.K., D.A. Stangeland, and B. Yeung, 2000, Inherited Wealth, Corporate Control, and Economic Growth: The Canadian Disease, in: R. Morck (ed.), *Concentrated Corporate Ownership*. Chicago: University of Chicago Press.
- Organisation for Economic Co-Operation and Development (OECD), 1997, *Employment Outlook*. Paris: OECD.
- Pagano, M., and P.F. Volpin, 2005, The Political Economy of Corporate Governance, *American Economic Review* 95, 1005-1030.
- Pérez-González, F., 2006, Inherited Control and Firm Performance, *American Economic Review* 96, 1559-1588.
- Rajan, R.G., and L. Zingales, 1998, Financial Dependence and Growth, *American Economic Review* 88, 559-586.
- Roe, M.J., 2003, *Political Determinants of Corporate Governance*. Oxford: Oxford University Press.

- Shapiro, C., and J.E. Stiglitz, 1984, Equilibrium Unemployment as a Worker Discipline Device, *American Economic Review* 74, 433-444.
- Shleifer, A, and L.H. Summers, 1988, Breach of Trust in Hostile Takeovers. In: Alan J. Auerbach, editor, *Corporate Takeovers: Causes and Consequences*. Chicago: University of Chicago Press.
- Sraer, D., and D. Thesmar, 2007, Performance and Behavior of Family Firms: Evidence from the French Stock Market, *Journal of the European Economic Association* 5, 709-751
- Stock, J.H., and M. Yogo, 2005, Testing for Weak Instruments in Linear IV Regression, in D.W.K. Andrews and J.H. Stock, eds., *Identification and Inference for Econometric Models: Essays in Honor of Thomas Rothenberg*, Cambridge: Cambridge University Press, pp. 80–108.
- Villalonga, B., and R. Amit, 2006, How Do Family Ownership, Control and Management Affect Firm Value? *Journal of Financial Economics* 80, 385-417.
- World Economic Forum, Various Years, *The Global Competitiveness Report*. New York: Palgrave MacMillan.
- Zahavi, G., 1983, Negotiated Loyalty: Welfare Capitalism and the Shoeworkers of Endicott Johnson, *Journal of American History* 70, 602-620.
- Zahavi, G., 1988, *Workers, Managers, and Welfare Capitalism: The Shoeworkers and Tanners of Endicott Johnson*. Urbana and Chicago: University of Illinois Press.

Table A: Family Ownership, Strike Activity, and Union Density at the Firm Level

<i>Panel A: Strike Activity and Union Density in French Publicly Listed Companies</i>			<i>Panel B: Union Density in Medium-sized Firms across Twelve Countries</i>			
	(i)	(ii)		(i)	(ii)	(iii)
Dependent Variable	Strike Activity	Union Density	Dependent Variable	Union Density	Union Density	Union Density
Widely Held Firm	1.05 (3.73)	4.50 (2.30)	Family Firm	-10.22 (-4.24)	-10.75 (-5.24)	-10.34 (-8.81)
Log(Employees)	0.29 (3.39)	0.40 (0.68)	Log(Employees)			3.70 (7.57)
Log(Firm_Age)	-1.06 (-0.75)	-2.05 (-1.88)	Log(Firm_Age)			3.16 (5.81)
Industry Fixed Effects	Yes	Yes	Industry Fixed Effects	No	Yes	Yes
			Country Fixed Effects	Yes	Yes	Yes
N	468	344	N	3,889	3,889	3,889
R ²		0.20	R ²	0.29	0.36	0.38

Notes: Logit (column (i)) and OLS (column (ii)) regressions with standard errors clustered at the industry level. Z- and t-statistics, respectively, are in parentheses. 'Strike Activity' is a dummy taking the value zero if the firm witnessed no strike in the three years prior to 1998, when the Enquête Réponses survey was conducted. 'Union Density' is the percentage of firm employees that are unionized. 'Widely Held Firm' is a dummy taking the value zero if the founder or a member of the founder's family holds at least 20% of the voting rights. See Sraer and Thesmar (2007) for a description of the firm data.

Notes: OLS regressions with standard errors clustered at the country level. T-statistics are in parentheses. 'Union Density' is the percentage of firm employees that are unionized. 'Family Firm' is a dummy taking the value one if a single family (combined across all family members who are the first generation and beyond) is the largest shareholder. The data are from the second (2006) survey wave conducted by Nicholas Bloom and John van Reenen. The first (2004-2005) survey wave is described in Bloom and van Reenen (2007). The twelve countries are: China, France, Germany, Great Britain, Greece, India, Italy, Japan, Poland, Portugal, Sweden, and the United States.

Table 1: Description of Variables

Variable	Description and Data Source
Fraction of Firms Controlled by Families Fraction of Total Market Capitalization Controlled by Top 5 Families	See Section 3.1 for a description. Sources: Clasesens, Djankov, and Lang (2000), Tables 6 and 9; Faccio and Lang (2002), Tables 3 and 10; Gadhoun, Lang, and Young (2005), Table 1.
Fraction of Medium-Sized Firms Controlled by Families Fraction of Value of Top 20 Firms Controlled by Families Fraction of Top 20 Firms Controlled by Families	
Fraction of Top 10 Business Groups Controlled by Families	See Section 3.1 for a description. Source: Fogel (2005), Table I.
State Ownership	See Section 3.1 for a description. Sources: Faccio and Lang (2002), Tables 3; Gadhoun, Lang, and Young (2005), Table 1; La Porta, Lopez-de-Silanes, and Shleifer (1999), Table III.
Stock Market Capitalization/GDP	Ratio of stock market capitalization to GDP in 1995. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .
Cooperative Labor Relations	Measures the extent to which labor relations are hostile or cooperative based on a survey of 4,256 executives in 59 countries conducted by the International Institute for Management Development (IMD). Source: item 3.2.06 in the 2003 World Competitiveness Yearbook.
Strikes are rare and always quickly resolved with minimum economic losses	Measures the frequency and severeness of strikes based on a survey of 4,000 executives in 59 countries conducted by the World Economic Forum. Source: item 7.08 in the 1999 Global Competitiveness Report.
Collective Bargaining Power of Workers is High	Measures the bargaining power of workers based on a survey of 4,000 executives in 59 countries conducted by the World Economic Forum. Source: item 7.10 in the 1999 Global Competitiveness Report.
Strike Activity in the 1960s	A combination of the number of person days lost due to strikes and the number of workers involved in strikes, normalized by employment. See Blanchard and Philippon (2004) for a description.
Log(GNP_Per_Capita)	Natural logarithm of GNP per capita in 1997. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .

Labor Share	See Section 6 for a description, and Jorgenson and Stiroh (2000) for a discussion of the data. Source: http://post.economics.harvard.edu/faculty/jorgenson/data/35klem.html .
Labor Origin	See Section 5 for a description. Source: Crouch (1993), Chapter 9.
Income Inequality	Gini coefficient from early 1990s. See La Porta et al. (1998) for a description. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .
Efficiency of Debt Enforcement Creditor Rights Index	} See Djankov et al. (2008b) for a description. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .
Vote by Mail Shares Not Deposited Cumulative Voting Preemptive Rights Anti-director Rights Index Anti-self-dealing Index	} See Djankov et al. (2008a) for a description. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .
Rule of Law Efficiency of Judicial System Repudiation of Contracts by Government Risk of Expropriation	} See La Porta et al. (1998) for a description. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .
Collective Bargaining Index Employment Protection Index	} See Botero et al. (2004) for a description. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .
Left-Right Political Index	Source: Table 6.5 in Roe (2003).
Proportionality of Voting System	Measures the extent to which voting systems are proportional or majoritarian. Source: Table 2 in Pagano and Volpin (2005).
General Trust	Measures the extent to which people believe that most people can be trusted. Source: item A165 in the 2000 World Values Survey (Inglehart et al., 2004).
Importance of Family	Measures the extent to which people believe that family is important. Source: item A001 in the 2000 World Values Survey (Inglehart et al., 2004).
Confidence in Major Companies	Measures the extent to which people have confidence in major companies. Source: item E081 in the 2000 World Values Survey (Inglehart et al., 2004).

Trust in Judiciary	Measures the independence of the judiciary based on a survey of 4,000 executives in 59 countries conducted by the World Economic Forum. Source: item 8.05 in the 1999 Global Competitiveness Report.
Trust in Politicians	Measures the financial honesty of politicians based on a survey of 4,000 executives in 59 countries conducted by the World Economic Forum. Source: item 8.19 in the 1999 Global Competitiveness Report.
Trust in Management	Measures credibility of managers based on a survey of 4,256 executives in 59 countries conducted by the International Institute for Management Development (IMD). Source: item 3.4.03 in the 2003 World Competitiveness Yearbook.
Legal Origin	See La Porta et al. (1999) for a description. Source: http://www.economics.harvard.edu/faculty/shleifer/dataset .

Table 2a: Ownership Data

Variable	Code	Sample Used	Number of Firms	Fraction of Total Market Capitalization Controlled by Top 5 Families	Fraction of Firms Controlled by Families	Fraction of Medium-Sized Firms Controlled by Families	Fraction of Value of Top 20 Firms Controlled by Families	Fraction of Top 20 Firms Controlled by Families	Principal Component of Family Control
Data Source				FL & CDL	FL & CDL	LLS	LLS	LLS	
Australia	AUS	LLS	20	.	.	0.50	0.12	0.05	-0.03
Austria	AUT	FL	99	0.16	0.53	0.17	0.06	0.15	-0.10
Belgium	BEL	FL	130	0.20	0.52	0.40	0.41	0.50	0.20
Canada	CAN	LLS	20	.	.	0.30	0.28	0.25	-0.17
Denmark	DNK	LLS	20	.	.	0.40	0.32	0.35	0.01
Finland	FIN	FL	129	0.14	0.49	0.20	0.06	0.10	-0.40
France	FRA	FL	607	0.22	0.65	0.50	0.26	0.20	0.94
Germany	GER	FL	704	0.16	0.65	0.40	0.08	0.10	0.45
Greece	GRE	LLS	20	.	.	1.00	0.47	0.50	1.70
Hong Kong	HKG	CDL	330	0.26	0.67	0.90	0.63	0.70	1.24
Indonesia	IDN	CDL	178	0.41	0.72	.	.	.	2.52
Ireland	IRL	FL	69	0.12	0.25	0.13	0.04	0.10	-1.67
Israel	ISR	LLS	20	.	.	0.60	0.31	0.50	0.08
Italy	ITA	FL	208	0.17	0.60	0.60	0.14	0.15	0.30
Japan	JPN	CDL	1240	0.02	0.10	0.10	0.03	0.05	-2.96
Korea	KOR	CDL	345	0.30	0.48	0.50	0.22	0.20	1.65
Malaysia	MAL	CDL	238	0.17	0.67	.	.	.	0.24
Netherlands	NLD	LLS	20	.	.	0.20	0.06	0.20	-1.29
New Zealand	NZL	LLS	20	.	.	0.29	0.15	0.25	-0.78
Norway	NOR	FL	155	0.16	0.39	0.40	0.13	0.25	-0.72
Philippines	PHI	CDL	120	0.43	0.45	.	.	.	1.46
Portugal	PRT	FL	87	0.25	0.60	0.50	0.38	0.45	0.92
Singapore	SGP	CDL	221	0.20	0.55	0.40	0.15	0.30	0.16
Spain	ESP	FL	632	0.07	0.56	0.30	0.17	0.15	-0.61
Sweden	SWE	FL	245	0.09	0.47	0.60	0.35	0.45	-0.85
Switzerland	SWI	FL	214	0.24	0.48	0.50	0.29	0.30	0.34
Taiwan	TWN	CDL	141	0.15	0.48	.	.	.	0.40
Thailand	THA	CDL	167	0.32	0.62	.	.	.	1.32
United Kingdom	UK	FL	1953	0.04	0.24	0.40	0.00	0.00	-2.30
United States	USA	GLY	3607	.	0.20	0.10	0.18	0.20	-2.04

Notes: 'CDL' is Claessens, Djankov, and Lang (2000); 'FL' is Faccio and Lang (2002); 'LLS' is La Porta, Lopez-de-Silanes, and Shleifer (1999); 'GLY' is Gadhoum, Lang, and Young (2005). 'Principal Component' is the first principal component of columns 5 and 6 (the two 'FL & CDL' columns). For Australia, Canada, Denmark, Greece, Israel, Netherlands, and New Zealand, predicted values based on LLS have been used to account for the missing entries in the two 'FL & CDL' columns. See Section 3.1 for details.

Table 2b: Labor Relations Data

Variable	Labor/employer relations are generally cooperative			Strikes are rare and always quickly resolved with minimum economic losses	The collective bargaining power of workers is high	Labor relations are generally ... (hostile, productive)		
	Data Source	GCR 1993	GCR 1999	GCR 2003	GCR 1999	GCR 1999	IMD 1999	IMD 2003
Australia		4.4	4.3	4.5	4.1	4.9	5.8	7.0
Austria		6.0	6.1	5.7	7.0	5.5	7.6	7.7
Belgium		4.5	4.4	4.2	4.1	5.2	5.2	5.5
Canada		4.4	4.8	4.9	4.5	4.6	6.1	6.6
Denmark		6.1	6.0	6.0	5.6	5.0	7.7	7.4
Finland		5.5	5.4	5.5	5.0	6.0	7.1	7.6
France		3.3	3.3	3.5	3.2	4.4	4.4	4.3
Germany		5.3	5.3	4.7	5.6	5.3	7.0	5.6
Greece		4.4	3.9	4.1	3.1	4.3	4.8	5.6
Hong Kong		5.7	5.8	5.8	6.3	2.8	7.3	7.5
Indonesia		4.5	4.8	3.7	3.3	3.6	5.0	3.6
Ireland		5.2	5.2	5.0	5.3	4.8	7.1	7.6
Israel		5.0	4.7	4.3	3.7	5.0	6.5	6.1
Italy		4.3	4.2	3.8	3.6	4.6	5.0	4.8
Japan		6.0	6.1	5.4	6.2	4.2	7.7	7.6
Korea		3.9	3.9	3.6	3.3	4.6	3.6	3.6
Malaysia		5.3	5.7	5.6	6.2	4.2	7.3	7.3
Netherlands		5.9	5.9	5.8	5.9	5.2	7.7	7.4
New Zealand		5.4	5.6	4.7	5.8	3.6	7.7	6.9
Norway		5.7	5.7	4.9	4.7	5.7	7.4	7.4
Philippines		4.4	4.3	3.7	3.7	4.7	6.0	5.1
Portugal		4.8	5.0	4.4	4.9	3.8	6.3	5.3
Singapore		6.3	6.5	6.3	6.8	4.2	8.9	8.6
Spain		4.5	4.5	4.3	4.8	4.6	5.7	5.5
Sweden		5.8	5.9	5.8	5.2	5.8	7.4	7.1
Switzerland		6.1	6.4	6.1	6.7	3.4	8.0	8.2
Taiwan		5.3	5.6	5.5	5.9	3.7	6.9	7.1
Thailand		4.9	5.2	5.4	5.0	3.7	6.2	6.5
United Kingdom		5.5	5.1	5.0	5.6	3.5	6.9	6.7
United States		5.1	5.0	5.2	5.1	4.1	6.2	6.4

Notes: 'GCR' is Global Competitiveness Report; 'IMD' is World Competitiveness Yearbook. The scale for GCR is from 1 (strongly disagree) to 7 (strongly agree). The corresponding scale for IMD is from 1 to 10.

Table 3: Correlation Matrices

3a: Family Ownership in Asia. N = 9, CDL (2000)							
Fraction of Total Market Capitalization Controlled by Top 5 Families	1.00						
Fraction of Firms Controlled by Families	0.58	1.00					
3b: Family Ownership in Europe. N = 13, FL (2002)							
Fraction of Total Market Capitalization Controlled by Top 5 Families	1.00						
Fraction of Firms Controlled by Families	0.54	1.00					
3c: Family Ownership in Developed Countries. N = 25, LLS (1999)							
Fraction of Medium-Sized Firms Controlled by Families	1.00						
Fraction of Value of Top 20 Firms Controlled by Families	0.75*	1.00					
Fraction of Top 20 Firms Controlled by Families	0.67*	0.93*	1.00				
3d: Survey Measures of Labor Relations and Workers' Bargaining Power. N = 30							
Cooperative Labor Relations (GCR 1993)	1						
Cooperative Labor Relations (GCR 1999)	0.97*	1					
Cooperative Labor Relations (GCR 2003)	0.89*	0.90*	1				
Strikes Are Rare and Quickly Resolved (GCR 1999)	0.86*	0.91*	0.88*	1			
Collective Bargaining Power of Workers (GCR 1999)	0.05	-0.03	-0.01	-0.16	1		
Cooperative Labor Relations (IMD 1999)	0.94*	0.94*	0.87*	0.88*	0.02	1	
Cooperative Labor Relations (IMD 2003)	0.85*	0.83*	0.91*	0.82*	0.06	0.90*	1
3e: Survey Measures of Labor Relations and Social Capital. N = 26-30							
Cooperative Labor Relations (IMD 2003)	1						
General Trust (WVS 2000)	0.39*	1					
Importance of Family (WVS 2000)	-0.25	-0.16	1				
Confidence in Major Companies (WVS 2000)	0.07	0.18	0.33	1			
Trust in Politicians (GCR 1999)	0.68*	0.47*	-0.32	0.2	1		
Trust in Judiciary (GCR 1999)	0.64*	0.43*	-0.31	0.09	0.78*	1	
Trust in Management (IMD 2003)	0.74*	0.3	-0.26	0.2	0.6*	0.52*	1

Note: * denotes significance at the 5% level or higher.

Table 4: Family Ownership and Labor Relations

	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Dependent Variable	Fraction of Firms Controlled by Families	Fraction of Total Market Capitalization Controlled by Top 5 Families	Principal Component of Family Control	Principal Component of Family Control	Principal Component of Family Control	Principal Component of Family Control	Principal Component of Family Control (Robust Regression)	Fraction of Top 10 Business Groups Controlled by Families
Sample	All Countries	All Countries	Asia	FL + US	West	All Countries	All Countries	All Countries
Cooperative Labor Relations	-0.09 (-4.43)	-0.05 (-3.68)	-0.68 (-4.96)	-0.91 (-4.29)	-0.86 (-4.33)	-0.71 (-5.41)	-0.70 (-4.56)	-0.13 (-3.10)
Log(Population)	-0.06 (-2.26)	-0.02 (-1.55)	-0.99 (-6.40)	-0.58 (-3.18)	-0.55 (-3.32)	-0.47 (-2.96)	-0.46 (-2.65)	-0.10 (-2.30)
Log(GNP_Per_Capita)			-0.72 (-3.55)	1.22 (1.47)	0.55 (0.75)			
Asia Dummy						12.90 (5.29)	13.13 (2.76)	1.68 (1.44)
Asia Dummy * Log(Population)						-0.53 (-2.92)	-0.55 (-1.78)	-0.03 (-0.34)
Asia Dummy * Log(GNP_Per_Capita)						-0.70 (-4.35)	-0.71 (-2.56)	-0.14 (-2.15)
N	30	30	9	14	21	30	30	30
R ²	0.38	0.30	0.90	0.57	0.48	0.70	0.66	0.42
Adj. R ²	0.33	0.24	0.84	0.45	0.38	0.64	0.59	0.29

Notes: OLS Regressions with robust standard errors. T-statistics are in parantheses. See Table 1 for a description of the variables. 'Principal Component' is the first principal component of the two measures of family control in columns (i) and (ii). 'Asia' includes the 9 countries from Claessens, Djankov, and Lang (2000). 'FL + US' includes the 13 European countries from Faccio and Lang (2002) plus the United States from Gadhoum, Lang, and Young (2005). 'West' includes the 'FL + US' sample plus 7 additional countries with predicted values using data from La Porta, Lopez-de-Silanes, and Shleifer (1999): Australia, Canada, Denmark, Greece, Israel, the Netherlands, New Zealand. 'All Countries' includes all countries from Table 2a.

Table 5: Labor-specific or General Social Capital?

Dependent Variable	(i) Principal Component of Family Control	(ii) Principal Component of Family Control	(iii) Principal Component of Family Control	(iv) Principal Component of Family Control	(v) Principal Component of Family Control	(vi) Principal Component of Family Control
Cooperative Labor Relations	-0.68 (-4.06)	-0.71 (-5.35)	-0.64 (-3.88)	-0.80 (-5.83)	-0.70 (-3.64)	-0.77 (-3.66)
Log(Population)	-0.49 (-2.83)	-0.44 (-2.96)	-0.55 (-2.49)	-0.46 (-2.89)	-0.47 (-3.05)	-0.46 (-2.99)
Asia Dummy	11.44 (4.00)	13.27 (5.49)	14.89 (2.30)	12.23 (5.16)	12.75 (3.59)	12.06 (4.22)
Asia Dummy * Log(Population)	-0.41 (-1.78)	-0.45 (-2.52)	-0.53 (-1.28)	-0.45 (-2.37)	-0.53 (-2.60)	-0.47 (-2.39)
Asia Dummy * Log(GNP_Per_Capita)	-0.70 (-3.61)	-0.83 (-4.90)	-0.95 (-3.08)	-0.70 (-4.45)	-0.69 (-3.34)	-0.67 (-3.63)
General Trust (WVS)	-0.58 (-0.51)					
Importance of Family (WVS)		-5.46 (-1.90)				
Confidence in Major Companies (WVS)			-2.45 (-1.02)			
Trust in Politicians (CGR)				0.18 (0.80)		
Trust in Judiciary (CGR)					-0.02 (-0.07)	
Trust in Management (IMD)						0.15 (0.49)
N	27	26	20	30	30	30
R ²	0.72	0.76	0.78	0.72	0.70	0.71
Adj R ²	0.63	0.68	0.67	0.64	0.63	0.63

Notes: OLS Regressions with robust standard errors. T-statistics are in parentheses. See Table 1 for a description of the variables. 'WVS' is World Values Survey; 'GCR' is Global Competitiveness Report; 'IMD' is World Competitiveness Yearbook. The samples in columns (iv) to (vi) include all countries in Table 2a. The samples in columns (i) to (iii) are matched samples of the countries in Table 2a and those in the respective 'WVS' entries.

Table 6: Legal Determinants of Family Ownership

Dependent Variable	(i)	(ii)	(iii)	(iv)	(v)
	Principal Component of Family Control	Principal Component of Family Control	Principal Component of Family Control	Principal Component of Family Control	Principal Component of Family Control
Cooperative Labor Relations	-0.64 (-4.15)	-0.67 (-5.99)	-0.67 (-5.66)	-0.69 (-6.29)	-0.61 (-3.17)
Log(Population)	-0.47 (-3.36)	-0.47 (-3.27)	-0.46 (-4.03)	-0.54 (-4.08)	-0.40 (-2.23)
Asia Dummy	16.20 (5.78)	13.44 (6.23)	15.04 (4.67)	8.58 (2.28)	8.75 (2.23)
Asia Dummy * Log(Population)	-0.62 (-2.77)	-0.57 (-3.25)	-0.69 (-3.60)	-0.46 (-2.51)	-0.50 (-2.53)
Asia Dummy * Log(GNP_Per_Capita)	-0.89 (-4.80)	-0.68 (-4.55)	-0.73 (-3.17)	-0.31 (-1.06)	-0.34 (-1.00)
Vote by Mail (DLLS)	-0.56 (-1.69)				
Shares Not Deposited (DLLS)	-0.90 (-2.23)				
Cumulative Voting (DLLS)	-0.61 (-1.68)				
Preemptive Rights (DLLS)	-0.95 (-2.40)				
Anti-director Rights Index (DLLS)		-0.42 (-2.62)			
Anti-self-dealing Index (DLLS)			-1.24 (-1.73)		
Creditor Rights Index (DHMS)				-0.03 (-0.17)	
Efficiency of Debt Enforcement (DHMS)				-0.02 (-1.83)	
Rule of Law (LLSV)					0.26 (1.25)
Efficiency of Judicial System (LLSV)					-0.15 (-1.61)
Repudiation of Contracts by Government (LLSV)					0.25 (0.49)
Risk of Expropriation (LLSV)					-0.86 (-1.75)
N	30	30	30	30	30
R ²	0.82	0.78	0.75	0.75	0.78
Adj. R ²	0.74	0.72	0.68	0.68	0.68

Notes: OLS Regressions with robust standard errors. T-statistics are in parentheses. See Table 1 for a description of the variables. 'DLLS' is Djankov et al. (2008a), 'DHMS' is Djankov et al. (2008b), 'LLSV' is La Porta et al. (1998). The sample includes all countries from Table 2a.

Table 7: Other Determinants of Family Ownership

Dependent Variable	(i)	(ii)	(iii)	(iv)	(v)	(vi)
	Principal Component of Family Control	Principal Component of Family Control	State Ownership	Principal Component of Family Control	State Ownership	Principal Component of Family Control
Cooperative Labor Relations	-0.70 (-4.40)	-0.75 (-4.08)	0.01 (0.07)	-0.80 (-4.18)	0.00 (0.43)	-0.65 (-5.23)
Log(Population)	-0.50 (-2.86)	-0.65 (-3.29)	-0.01 (-0.48)	-0.51 (-2.75)	-0.01 (-0.81)	-0.40 (-2.40)
Asia Dummy	11.71 (3.14)					14.24 (3.27)
Asia Dummy * Log(Population)	-0.50 (-2.35)					-0.71 (-2.37)
Asia Dummy * Log(GNP_Per_Capita)	-0.61 (-2.11)					-0.63 (-2.97)
Collective Bargaining Index (BDLLS)	-0.13 (-0.16)					
Employment Protection Index (BDLLS)	0.98 (0.84)					
Collective Bargaining Power of Workers is High (GCR)	-0.17 (-0.62)					
Left-Right Political Index (Roe)		-0.06 (-0.13)	-0.05 (-1.76)			
Proportionality of Voting System (PV)				0.10 (0.60)	0.02 (1.83)	
Income Inequality						0.05 (1.72)
Stock Market Capitalization/GDP						-0.63 (-1.35)
N	30	16	16	21	21	30
R ²	0.72	0.63	0.51	0.57	0.34	0.74
Adj R ²	0.61	0.54	0.39	0.50	0.22	0.65

Notes: OLS Regressions with robust standard errors. T-statistics are in parentheses. See Table 1 for a description of the variables. 'BDLLS' is Botero et al. (2004); 'GCR' is Global Competitiveness Report (1999); 'Roe' is Roe (2003); 'PV' is Pagano and Volpin (2005). The samples in columns (i) and (vi) include all countries in Table 2a. The samples in columns (ii) to (v) are matched samples of the countries in Table 2a and those in 'PV' and 'Roe', respectively.

Table 8: Best-of Regression

Dependent Variable	Principal Component of Family Control
Cooperative Labor Relations	-0.66 (-5.82)
Log(Population)	-0.46 (-2.81)
Asia Dummy	10.11 (2.29)
Asia Dummy * Log(Population)	-0.45 (-1.80)
Asia Dummy * Log(GNP_Per_Capita)	-0.49 (-1.39)
Anti-director Rights Index (DLLS)	-0.25 (-1.50)
Anti-self-dealing Index (DLLS)	-0.26 (-0.25)
Efficiency of Debt Enforcement (DHMS)	-0.01 (-0.41)
Risk of Expropriation (LLSV)	-0.11 (-0.36)
Income Inequality	0.02 (0.29)
Importance of Family (WVS)	-2.85 (-0.80)
N	26
R ²	0.82
Adj. R ²	0.68

Notes: OLS Regressions with robust standard errors. T-statistics are in parantheses. See Table 1 for a description of the variables. 'DLLS' is Djankov et al. (2008a), 'DHMS' is Djankov et al. (2008b), 'LLSV' is La Porta et al. (1998), and 'WVS' is World Values Survey. The sample is a matched sample of the countries in Table 2a and those in item A001 of the 2000 World Values Survey.

Table 9: Instrumenting Cooperative Labor Relations with Labor Origin

Dependent Variable	(i)	(ii)
	Cooperative Labor Relations	Principal Component of Family Control
Cooperative Labor Relations		-0.89 (-4.31)
Log(Population)	-0.66 (-3.35)	-0.66 (-3.29)
English Legal Origin	0.72 (1.30)	-0.90 (-2.56)
German Legal Origin	-0.12 (-0.21)	1.37 (4.09)
Neutral Labor Origin	0.96 (1.80)	
Cooperative Labor Origin	1.92 (2.66)	
	2SLS (First Stage)	2SLS (Second Stage)
N	15	15
R ²	0.84	0.89

Notes: T-statistics are in parantheses. See Table 1 for a description of the variables. The sample includes the 13 countries from Faccio and Lang (2002) listed in Table 2a plus 2 additional countries with predicted values using data from La Porta, Lopez-de-Silanes, and Shleifer (1999): Denmark and the Netherlands.

Table 10: Family Ownership Across Industries and Countries - Summary Statistics

Variable	(i) Labor Share	(ii) Number of Firms	(iii) Fraction of Firms Controlled by Families (All Firms)	(iv) Fraction of Firms Controlled by Families (Average of Country Means)
Mining, Oil, and Gas	0.39	126	0.41	0.53
Construction	0.89	174	0.41	0.45
Food	0.57	209	0.59	0.63
Wood, Lumber, and Paper	0.68	140	0.56	0.63
Printing and Publishing	0.76	88	0.58	0.66
Chemicals	0.55	168	0.49	0.43
Rubber, Plastics, Stone, Glass, and Concrete	0.79	182	0.60	0.67
Primary Metals	0.76	91	0.45	0.39
Fabricated Metals	0.71	107	0.43	0.43
Industrial, Commercial Machinery, and Computer Equipment	0.79	234	0.51	0.49
Electronic, Electrical, and Measuring Equipment	0.70	240	0.48	0.47
Transportation Equipment	0.81	121	0.48	0.55
Miscellaneous Manufacturing	0.65	190	0.60	0.74
Transportation Services	0.76	167	0.52	0.53
Communication and Entertainment	0.46	117	0.42	0.46
Electric, Gas, and Sanitary Services	0.35	140	0.35	0.30
Wholesale and Retail Trade	0.78	573	0.46	0.61
Finance, Insurance, and Real Estate	0.43	1023	0.32	0.38
Miscellaneous Business Services	0.72	289	0.45	0.53

Notes: 'Labor Share' is computed as $vl/(vl+vk)$, where vl and vk denote the values of labor inputs and capital services, respectively, for the United States in 1995. See Jorgenson and Stiroh (2000) for a description of the data. The sample is based on the 5,232 firms and 13 Western European countries from Faccio and Lang (2002). For 853 firms the industry classification is unavailable, reducing the final sample to 4,379 firms.

Table 11: Family Ownership across Industries and Countries - Empirical Evidence

Dependent Variable	(i) Fraction of Firms Controlled by Families	(ii) Fraction of Firms Controlled by Families	(iii) Fraction of Firms Controlled by Families	(iv) Fraction of Firms Controlled by Families	(v) Fraction of Firms Controlled by Families	(vi) Fraction of Firms Controlled by Families
Labor Share * Cooperative Labor Relations	-0.21 (-3.18)	-0.19 (-3.03)	-0.20 (-3.24)	-0.23 (-2.48)	-0.22 (-5.29)	-0.23 (-3.38)
Cooperative Labor Relations	0.07 (1.00)					
Labor Share	1.60 (3.77)					
Log(Population)	-0.01 (-0.18)					
Labor Share * Anti-director Rights Index (DLLS)			0.07 (0.76)			
Labor Share * Collective Bargaining Index (BDLLS)				-0.23 (-0.47)		
Labor Share * Collective Bargaining Power of Workers is High (GCR)					0.20 (2.18)	
Labor Share * General Trust (WVS)						0.44 (0.55)
Country Fixed Effects	No	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	No	Yes	Yes	Yes	Yes	Yes
N	230	230	230	230	230	230
R ²	0.12	0.42	0.42	0.42	0.42	0.42

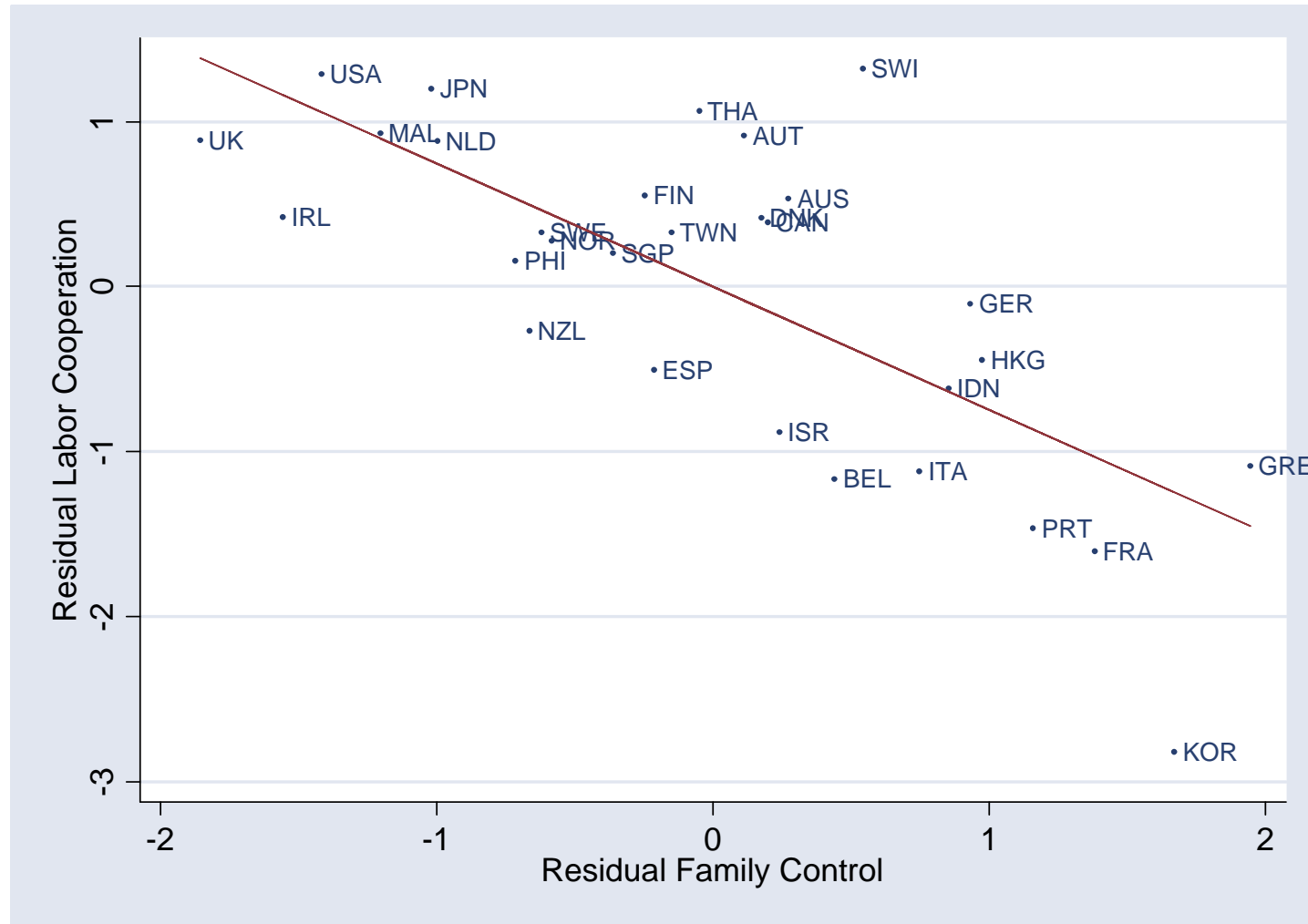
Notes: OLS regressions with standard errors clustered at the country level. T-statistics are in parentheses. See Table 1 for a description of the variables. 'DLLS' is Djankov et al. (2008a), 'BDLLS' is Botero et al. (2004), 'GCR' is Global Competitiveness Report, and 'WVS' is World Values Survey. The sample is based on the 4,379 firms, 19 industries, and 13 Western European countries from Table 8. An observation is the mean fraction of firms controlled by families in industry j and country k; hence there are 13 x 19 = 247 potential observations. There are 17 missing observations, i.e., in 17 cases there is no firm in a particular industry j and country k, reducing the final sample to 230 observations.

Table 12: Strike Activity in the 1960s and Family Ownership in the 1990s

Dependent Variable	(i)	(ii)	(iii)
	Principal Component of Family Control	Strike Activity in the 1960s	Principal Component of Family Control
Strike Activity in the 1960s	0.61 (2.82)		0.52 (2.72)
Log(Population)	-1.45 (-1.04)	-0.08 (-1.29)	-0.05 (-0.37)
English Legal Origin	-0.96 (-2.72)	0.85 (5.15)	-1.83 (-4.85)
German Legal Origin	0.94 (2.01)	0.14 (0.64)	0.85 (2.35)
Neutral Labor Origin		-2.60 (-12.26)	
Cooperative Labor Origin		-2.80 (-11.49)	
	OLS	2SLS (First Stage)	2SLS (Second Stage)
N	17	13	13
R ²	0.62	0.98	0.82

Notes: T-statistics are in parantheses. See Table 1 for a description of the variables. In column (iii) 'Strike Activity in the 1960s' is instrumented using Labor Origin. The sample in column (i) includes the 13 countries from Faccio and Lang (2002), except for Portugal and Spain, plus the United States from Gadhoum, Lang, and Young (2005), plus 5 additional countries with predicted values using data from La Porta, Lopez-de-Silanes, and Shleifer (1999): Australia, Canada, Denmark, the Netherlands, and New Zealand. The samples in columns (ii) and (iii) include the 15 countries from Table 7, except for Portugal and Spain. Portugal and Spain have been excluded because they were dictatorships in the 1960s, and strikes were illegal.

Figure 1: Residual Labor Cooperation and Residual Family Control



Notes: Plot of residuals from regression (vi) in Table 4. 'Cooperative Labor Relations' and 'Principal Component of Family Control' are regressed separately on Log(population), Log(GNP_Per_Capita), Asia Dummy, Asia Dummy * Log(Population), and Asia Dummy * Log(GNP_Per_Capita). The sample includes all countries in Table 2a.