

Family Firms, Paternalism, and Labor Relations*

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Abstract

Firm-level evidence suggests that family firms are more apt to honor implicit labor contracts than are widely held firms, making family firms especially successful at winning workers' loyalty—a trait that is reflected in fewer strikes and lower unionization rates. Accordingly, we might expect to see more family ownership in countries in which labor relations, for cultural or historical reasons, are tensioned. Consistent with this prediction, we find that, controlling for differences in minority shareholder protection, countries with bad labor relations have more family ownership than countries with good labor relations. This result is strikingly robust and holds for a large number of robustness checks. It also holds when we instrument our survey-based measure of labor relations using 'Labor Origin', a measure of the 'intrinsic quality' of a country's labor relations based on a classification designed by labor historians to mark the lasting effects which political struggles between the liberal states and the church in the 18th and 19th centuries had on the development of guild structures and the militancy of labor organizations. Finally, our basic result also holds when we replace our survey-based measure of labor relations with actual strike data from the 1960s, which we show can predict differences in family ownership across countries thirty years later.

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1 Introduction

In their seminal study, La Porta, Lopez-de-Silanes, and Shleifer (1999) show that the widely held firm envisioned by Berle and Means (1932) is the exception rather than the norm. In most countries, firms are owned by rich families, not by small shareholders. What is more, La Porta, Lopez-de-Silanes, and Shleifer document that family ownership is more prevalent in countries with poor minority shareholder protection. And yet, explanations for the observed variation in family ownership across countries based on differences in minority shareholder protection leave a significant part of the variance unexplained. In this paper, we argue that part of this variation can be explained by differences in the quality of labor relations.

Our main finding is that family ownership is more prevalent in countries with bad labor relations. To a labor historian, this statement might come as no surprise. In the late 19th century, a period when industrial violence and labor militancy had gripped the United States, founding families and industrial pioneers like George Pullman, Harold Patterson, and Henry John Heinz showed that corporate (or welfare) paternalism—generous welfare programs offered as part of a personal bond between the firm’s patriarch and its workers—can prove highly successful at winning workers’ loyalty and coping with tensioned labor relations. Welfare paternalism is best understood as an implicit contract, whereby the firm provided its workers with basic family needs—medical care, relief, recreation, and housing—in exchange for the workers’ loyalty. The results were remarkable: a significant muting of labor militancy, fewer strikes, lower unionization rates, and lower quit rates.

In today’s world, family firms rarely provide the kind of extensive welfare service they used to provide during the Gilded Age of welfare paternalism. And yet, some of the basic patterns found in 19th century welfare paternalism still appear to exist—albeit in a ‘softer’ form. Based on firm-level evidence from France and the United States, we document that family firms appear to be more apt to honor implicit labor contracts and provide employment insurance to their workers than are widely held firms, resulting in higher worker loyalty, fewer strikes, and lower unionization rates.¹

¹Sraer and Thesmar (2004), who show that French family firms are more apt to provide employment insurance than are widely held firms, hypothesize that—because of their longer time horizons—family firms have an

Given the positive effect family firms have on labor relations, the ‘value’ of this effect is likely to depend on how tensioned labor relations are to begin with. In countries with good labor relations, improving labor relations further is less likely to be important. By contrast, in countries in which labor relations are highly conflictual—for historical or cultural reasons—improving labor relations is likely to be valuable, possibly enough to outweigh the costs associated with family ownership, such as forgone diversification benefits. Consistent with this basic hypothesis, our empirical findings suggest that family ownership is more prevalent in countries with bad labor relations.

The main part of our empirical study uses survey-based measures of the quality of labor relations. Our main measure of family control is the principal component of two measures: the fraction of firms controlled by families (20% cutoff) and the fraction of the total market capitalization controlled by the top 5 families. As we have already noted, our basic results show that the quality of labor relations has a significant negative effect on family ownership. This relation is strikingly robust and holds when we consider only Europe, only Asia, or only Western countries. It also holds when we use different independent variables, including the ratio of stock market capitalization to GDP, which proxies for the relative share of publicly versus privately held companies in a country.

We run a battery of robustness checks, considering various potential alternative determinants of family ownership. With the exception of minority shareholder protection, none of the potential alternative determinants appear to matter. In contrast, our measure of the quality of labor relations remains significant at the 1% level in all regressions.

Some of our robustness checks deserve more in-depth discussion. For instance, Roe (2003) advocates a political theory of ownership arguing that family ownership should be more prevalent in ‘social democracies’: countries with left-wing governments, tight labor regulation, powerful labor unions, and low income inequality. As it turns out, none of these variables is significant

advantage at maintaining implicit labor contracts. Similarly, Morek and Yeung (2003) argue that—for the very same reason—family firms have a comparative advantage in a repeated-game like situation: “Professional CEO’s careers are relatively brief. In contrast, family control endures, with patriarchs grooming scions, sometimes for decades.”

in our regressions.² Hence, it is not just *some* aspect of labor relations that matters for family ownership. What matters is the *quality* of labor relations, i.e., the extent to which labor relations are hostile or cooperative. Union power and labor regulation, on the other hand, appear not to matter.³

Another robustness check that yields interesting insights concerns measures of social capital. One of the general points we wish to make here is that social capital may be context-specific. A high level of trust in, e.g., the judicial or political system, or in people more generally, does not necessarily imply a high level of cooperation in labor relations. Indeed, neither ‘General Trust’—a measure widely used in the literature—nor other (context-specific) measures of social capital are significant in our regressions.⁴ We believe this is good news for advocates of social capital theories, for it means that we can distinguish among different types of social capital that are each relevant, or productive, in different social and economic contexts.⁵

To the extent that family ownership has a positive effect on labor relations on the firm level, reverse causality is unlikely to explain the results found in this study, for it would imply that countries with more family ownership should have *better* labor relations, contrary to the evidence. And yet, it would be good if one could show directly that there is something like an ‘intrinsic quality’ of a country’s labor relations, that is exogenous with respect to family ownership, and that can be attributed to, e.g., cultural and historical developments. In an intriguing book, labor historian Colin Crouch (1993) argues that differences in the quality of labor relations among European countries can be attributed to political struggles between the

²Interestingly, but perhaps not surprisingly, Roe’s index of countries’ left-right political orientation, while unable to explain family ownership, is well suited to explain *state* ownership.

³The distinction between labor hostility and labor union power is important. In 1994, for example, Sweden’s trade union density was a staggering 91%, while in France it was only 9% (OECD (1997)). Hence, Sweden has powerful yet cooperative labor unions, while France has much less powerful yet hostile and—to a considerable degree—communist and anti-capitalist labor unions. Across all countries in our sample, there is practically no correlation between measures of labor hostility and labor union power.

⁴Perhaps most closely related to our paper, General Trust has been used by 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, affirming Fukuyama’s (1995) thesis that trust is vital for the success of large organizations.

⁵See Kumar and Matsusaka (2005) for a model along these lines.

emerging European liberal states and the church in the 19th century. In some countries, like France, this struggle dates back to the late 18th century. In an effort to affirm their authority over the church, the emerging liberal states confronted all forms of organized interests, including guild structures and labor organizations. In 1791, for example, the French republicans passed the lois Le Chapelier, a powerful law banning all guilds and trade unions. Ostracized from the beginning, the French labor movement became highly oppositional, later embracing syndicalism and then communism.

According to Crouch’s thesis, state-church struggles in the 18th and 19th centuries, and their role for the development of guild structures, had a lasting effect on countries’ labor relations. Crouch distinguishes between three broad categories: ‘political inhibitors’—countries in which state-church conflicts inhibited the development of guild structures—‘political neutrals’, and ‘political facilitators’. To examine Crouch’s thesis empirically, we introduce a new variable, ‘Labor Origin’, consisting of dummies indicating to which of the three of Crouch’s categories a given country belongs. When we instrument our survey-based measure of labor relations using Labor Origin, we find strong support for the notion that the quality of labor relations has a causal effect on family ownership, in the sense that countries with (‘intrinsically’) bad labor relations have more family ownership than countries with good labor relations.

A second part of our empirical study uses actual strike data to measure the quality of labor relations. The issue with using strike data is that strike activity commonly depends on many factors, notably unemployment. Fortunately, unemployment and many of the other factors that commonly affect strike activity were relatively uniform across Western countries in the 1960s. Consistent with our previous results using survey-based measures of the quality of labor relations, we find that strike activity in the 1960s has a significant positive effect on the extent of family control thirty years later. This result holds even when we instrument strike activity in the 1960s using Labor Origin. We also briefly discuss the case of Canada, where Quebec is French-Catholic while the rest of Canada is English-Protestant. Consistent with our cross-country results, Quebec has a higher strike activity and more family ownership than the rest of Canada. While Quebec has a Civil Law code and the rest of Canada has a Common Law code, it should be noted that the relevant corporation law is the same.

The rest of this paper is organized as follows. Section 2 takes a look inside the ‘black box’, arguing why family firms might have advantages in coping with tensioned labor relations. Section 3 describes our ownership and labor relations data. Section 4 presents our basic OLS regressions. Section 5 addresses causality and reverse causality. Section 6 explores the relationship between strike activity and family ownership, both across different countries (for the 1960s) and across different regions within a country (Canada). Section 7 concludes.

2 A Look Inside the ‘Black Box’

2.1 Family Firms and Welfare Paternalism in the Gilded Age

Why might family firms have advantages in coping with bad labor relations? This section takes a look inside the ‘black box’, arguing that family firms are especially successful at winning workers’ loyalty—a trait that is particularly valuable when labor relations are tensioned. Going back in time, we describe how in the late 19th century industrial pioneers and founding families—in response to heightened industrial violence and labor militancy—established generous welfare programs to win workers’ loyalty.

Labor conflicts turned so severe in the late 19th century 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. Employers responded with repression. When workers of the Carnegie Steel Company’s Homestead plant resisted wage cuts and layoffs in 1892, the company sent Pinkerton detectives to assume control of the plant grounds. The ensuing showdown was brutal. By day’s end, nine steel workers and seven Pinkertons had died, and more than three hundred men, mostly Pinkertons, had been wounded.

While exceptional in the acuity of its violence, the Homestead affair was symptomatic of the industrial violence that had gripped the United States during the Gilded Age.⁶ Confronted with the heightened violence and labor militancy, industrial pioneers like George Pullman, Harold Patterson, Harold McCormick, and Henry John Heinz opted for a different solution: corporate

⁶One Georgia textile manufacturer summed up the employers’ repressive approach to the labor problem as follows: “In an acute situation where I had only men to deal with I’d just as soon get a gun an mow ’em all down as not” (Mandell, 2002, p. 10).

(or welfare) paternalism.⁷ As one labor historian succinctly put it, “setting aside their guns, employers strove to crush labor through kindness” (Tone, 1997, p. 3).⁸ Proffering the carrot rather than the stick, they offered attractive, low-cost homes to their workers, established medical and relief departments that included surgical, dental, and sick relief services, promoted athletic programs, and provided countless other services, including lectures, art and dance classes, Sunday outings, and dining rooms that served low-cost lunches.

Companies did not disguise the fact that their welfare programs were designed to maintain worker docility and to retain control over the work force. It was merely asserted that welfare work was a more effective means of control than was repression. Workers were viewed as part of one big family. 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 big happy family connoted more than just a collegial corporate culture. It represented a *personal bond* between Endicott Johnson’s workers and the firm’s patriarch, George F. Johnson:

“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, italics added).

Welfare paternalism is perhaps best understood as an implicit contract between the company and its workers, whereby the firm provided its workers with basic family needs—medical care, relief, recreation, and housing—in exchange for the workers’ loyalty.⁹ The guarantor that the

⁷ “The emergence of corporate paternalism was ultimately a product of conflict, at once a result of and a response to the struggle for control of the means and fruits of industrial capitalism” (Zahavi, 1988, p. 2).

⁸ After disaffected employees of the National Cash Register Company (NCR) set the factory on fire three times in the early 1890s, its president and founder, John Patterson, decided that “more interest would have to be taken in our employees to make them better workers.” In the ensuing decade, NCR became the nation’s leading example of corporate welfare work (Tone, 1997, p. 66).

⁹ “Welfare capitalism at Endicott Johnson existed as a compact ... built on *mutual* loyalties” (Zahavi, 1983, p.

firm would keep its promises was the firm’s patriarch, or the founding family, who provided for the workers’ welfare as a personal responsibility (Mandell, 2002). There are numerous anecdotes in which Endicott Johnson’s patriarch, George F. Johnson, personally fetched injured workers to a doctor, approved questionable appeals by workers for aid, and overruled supervisors’ decisions to reinstate workers or grant them higher wages.¹⁰

To maintain the company’s welfare program in the wake of the Great Depression, George F. Johnson went even as far as cutting common stock dividends, provoking the anger of fellow stockholders.¹¹ When a stockholder complained about the use of company funds to finance relief efforts, Johnson replied: “As a stockholder, you have a perfect right to object the use of ‘company funds’, but unfortunately we cannot separate ‘stockholder’s money’ from the working men’s money” (Zahavi, 1988, p. 137).¹² On a different occasion, when confronted with the demands of minority stockholders, Johnson’s anger grew more intense: “As long as I am on earth to vote, I will never give the stockholders any more than I am willing to give the workers” (Zahavi, 1988, p. 138).

The history of welfare paternalism at Endicott Johnson, while anecdotal, illustrates the importance of family ownership for implicit labor contracts. Not only are families ‘here to stay’—meaning workers can develop loyalty to the founding family and its patriarch—but the fact that the family has a large ownership stake implies that it can shield workers’ interests—and thus the implicit labor contract—from the “greedy demands of stockholders” (Zahavi, 1988, p. 138). On several occasions, labor historians have pointed out that the success of welfare programs

605, emphasis in original). Likewise, John Patterson, founder and president of NCR, described corporate welfare work as a “give-and-take proposition of mutual benefits and mutual responsibility” (Mandell, 2002, p. 19).

¹⁰ “The employee in question was an older man with several children, and the act of letting go such a worker troubled Johnson’s conscience ... Johnson sent the following note to the supervisor who laid him off: This is not “cold-blooded business.” ... Maybe you could run two or three days a week and not have to absolutely lay off so many people” (Zahavi, 1988, p. 127).

¹¹ While the Johnson family was the primary stockholder of Endicott Johnson, there were others, including company officers, who held about 17% of the firm’s common stock. George F. Johnson estimated that the proposed dividend cut would cost him alone about \$100,000 of his personal wealth.

¹² When the company’s use of \$200,000 for relief efforts provoked one member of the board of directors to remind Johnson that directors were “trustees for the stockholders,” Johnson replied: “It will probably never occur to Mr. Bowers, that we are ‘trustees’ as well, to the interests of the working people” (Zahavi, 1988, p. 138).

hinged on the presence of the firm’s patriarch or founding family, and the personal interest they took in the firm’s workers: “Diversified ownership enabled ... thousands of individuals to own a single company. ... The uncoupling of ownership and management physically separated those who controlled firms on paper from those who ran them daily and limited possibilities for routine contact between employer and worker” (Tone, 1997, p. 56).

Originally 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 & 21). How effective was paternalism in accomplishing these goals? According to labor historian David Brody, corporate paternalism managed to “win the hearts and minds of American workers,” causing a decline in union membership and a muting of labor militancy (Brody, 1993). At Endicott Johnson, for example, quit rates between 1930 and 1946—when systematic data are available—were 40% - 60% of the industry average (Zahavi, 1988, p. 53): “Workers 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” (Zahavi, 1988, p. 119).¹³

2.2 Family Firms Today: Implicit Labor Contracts and Labor Relations

Family firms today rarely provide the kind of welfare services to workers they used to provide in the age of corporate paternalism. And yet, some of the basic elements of corporate paternalism—the personal bond between the family and the firm’s workers—still appear to exist. Like in the case of Endicott Johnson in the 1930s and 40s, when layoff rates were 24 times lower than the industry average, today’s family firms appear to provide more employment insurance to their workers.¹⁴ Using French panel data, Sraer and Thesmar (2004) document that employment in

¹³In an election to unionize Endicott Johnson in 1940, the shoe workers’ union was soundly defeated by a margin of nearly five to one, leading historian Gerald Zahavi to conclude that “*the unions were and remained outsiders*” in what most workers considered a family affair” (Zahavi, 1988, p. 169, italics added).

¹⁴In the period preceding World War II, layoffs in the shoe industry amounted on the average to 2.4% per month, while at Endicott Johnson they were only 0.1% per month (Zahavi, 1988, p.61).

family firms is less sensitive to industry shocks than it is in widely held firms, which the authors note is “consistent with the fact that, because of their different time horizons, heir-managed corporations have a comparative advantage when enforcing implicit insurance contracts with their labor force.” Mueller and Philippon (2006) find a similar result for the United States. Among the 1,000 largest publicly traded companies in the United States, those companies with a significant ultimate owner (5% or more) are less likely to reduce employment than are widely held firms.¹⁵

Similar to our historical discussion of welfare paternalism, we may ask if family firms benefit from maintaining implicit labor contracts, in the sense of mitigating labor militancy and “weakening the attraction of unions and redirecting workers’ loyalty to the company” (see above)? To examine this question, we match Sraer and Thesmar’s data on publicly listed firms with data from the ‘enquete reponse’, a survey of plant 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 particular interest for us. One asks whether there has been a strike in the three years prior to the survey; the other question asks for the percentage of workers that are unionized.

A quick look at the raw data suggests that strikes are indeed less prevalent in family firms. While only 18% of all family firms witnessed strikes in the three years before the survey was conducted, the corresponding number for widely held firms is 40%. To verify that this result is not driven by family firms’ clustering in particular industries, or by the family firms’ (smaller) size, we run a logit regression in which we control for industry dummies and the number of employees. The result, which is reported in column (i) of Table A, confirms that family firms are indeed less likely to experience strikes than are widely held firms.

We obtain qualitatively similar results when we use the percentage of workers that are unionized as our dependent variable. The OLS regression, which is reported in column (ii) of Table A, shows that—after controlling for industry fixed effects and the number of employees—widely held firms appear to have a significantly higher percentage of unionized workers than

¹⁵The result is obtained after controlling for firm size, firm age, and industry fixed effects.

do family firms. That the two regressions—the one measuring strike incidence and the other measuring the percentage of unionized workers—yield qualitatively similar results is perhaps not very surprising. Given the radicalism of French labor unions, a strong union presence on the firm level is likely to imply a higher incidence of strikes.

3 Data

3.1 Ownership Data

Ownership of Publicly Held Companies

The main focus of our empirical analysis lies on the ownership of publicly held companies. Our ownership data comes 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, implying ownership is traced back to the individual and family level. Moreover, each paper contains a discussion of the data sources and how the respective ownership measures have been constructed. For the sake of brevity, we will not repeat this 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 the nine countries. The number of firms per country ranges from 120 (Philippines) to 1,240 (Japan). 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 the firms in Japan are controlled by families, the fraction of family-controlled firms in the other Asian countries ranges from 45% (Philippines) to 72% (Indonesia). A similar picture emerges with respect to the second measure of family control. While the top 5 families in Japan control only 2% of the total market capitalization, the corresponding number for the other countries ranges from 20% (Singapore) to 43% (Philippines).

FL provide ownership data for 13 Western European countries for the period 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 the 13 countries. The number of firms per country ranges from 69 (Ireland) to 1,953 (United Kingdom). FL construct the same two measures of family control as CDL. 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 the United States ranks second only after Japan as the country with the most widely dispersed (ultimate) share ownership.

LLS provide ownership data for 27 wealthy countries, primarily from 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). The value-weighted results are similar. 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). Table 3c reports the correlations among all three measures of family control.

There are 30 countries in total 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. While CDL-FL-GLY cover a large fraction of all publicly traded firms in each country, LLS cover only the 20 largest firms, and their selection criteria makes it potentially more 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 from CDL-FL-GLY, which are based on a large sample of publicly traded companies: the fraction of family-controlled firms

(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:

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

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: the fraction and value-weighted fraction, respectively, of family-controlled firms among the top 20 firms, and the fraction of family-controlled firms for a sample of 10 medium-sized firms. For the first measure—the fraction of firms controlled by families—we obtain an R^2 of 43% for the 18 countries included both in 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 robustness regressions we use state ownership as our dependent variable. Our measure of state ownership is constructed the same way as was our measure of family control: Whenever possible, we use the measure 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 equation (1).

Ownership of Publicly and Privately Held Business Groups

Fogel (2005) constructs various measures of the ultimate ownership of the 10 largest non-government business groups in each country for 1996. Unlike our main ownership variables, which are only based on publicly traded firms, Fogel’s sample includes both publicly and privately held business groups. Fogel constructs four measures of family control, which are all highly correlated. (The average correlation is around 91%.) The particular measure we use in our regression is the labor-weighted fraction of the 10 largest business groups controlled by families (20% cutoff), abbreviated by P_V in Fogel’s paper.

Ratio of Stock Market Capitalization to GDP

Our main ownership measures reflect the extent to which firms are controlled by families *conditional* on being publicly held. The hypothesis we wish to examine is broader, however. It is whether the prevalence of family ownership depends on the quality of labor relations. Accordingly, the quality of labor relations should not only matter for the ownership structure of publicly held firms, but also for the decisions of firms to go public in the first place. To investigate this hypothesis, one would ideally like to have data on the (labor-weighted) fraction of publicly held firms in each country. For lack of availability of this data, we use a value-weighted measure instead: the ratio of stock market capitalization to GDP in 1995.

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. The survey is sent to thousands of executives each year. In 2003, for example, 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. For instance, the correlation between the 1999 and 2003 rankings is 90% (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, the survey is sent to thousands of executives each year. In 1999, for example, it was sent to about 4,000 executives in 59 countries. The question that is most relevant for our empirical study asks 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 displays the survey results for the years 1993, 1999, and 2003. While we have this survey data also for other years, the country rankings are (again) highly correlated over time. As is shown in Table 3d, the correlations between the 1993, 1999, and 2003 country rankings lie all between 89% and 97%.

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

Not only are our measures of the quality of labor relations highly correlated over time, but there is also a markedly strong correlation across the two surveys. For example, the correlation between the IMD and GCR measures in 1999 (2003) is 94% (91%). On the other hand, our measures of the quality of labor relations are unrelated to 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 the sake of brevity, Table 2a only displays the result for one year, 1999, but the results for other years are similar. As is shown in Table 3d, there is virtually 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 various 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 will present in this paper are robust to using any of the six measures from Table 2b. For brevity, we choose to work with a single measure, the IMD measure from 2003. We call it ‘Cooperative Labor Relations’.

Strike Activity in the 1960s

Our survey measures of the quality of labor relations reflect the opinions of executives. In a sense, this is not bad. Given that the ownership structure of firms is chosen by shareholders, not by workers, the opinions of executives—provided they are close to those of shareholders—are relevant for our purposes. And yet, it would be useful to know if these opinions also corresponded to some observable measure of labor hostility, e.g., strike activity.

The problem with using strike data is that strike activity 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. An alternative approach is to consider a period in which factors that commonly tend to 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 as perceived by executives 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 bad labor relations 40 years later.

4 Family Ownership and Labor Relations

4.1 Basic Regressions

Table 4 presents our basic OLS regressions. 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 have been constructed, there is likely to be a systematic effect of country size. All else equal, the top 5 families in Sweden, with a population of 9 million, are likely to control a greater fraction of the national stock market capitalization than the top 5 families in the United States, with a population of 295 million. Therefore, we shall always include the log of the total population in 1995 as a control variable in our regressions. Our basic regression 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) in Table 4 show, irrespective of which of the two measures of family control we use, there is a significant negative relation between Cooperative Labor Relations and the prevalence of family control. Also, as expected, family control is negatively related to country size, albeit this relation is significant only in column (i).

We have two measures of family control for all 30 countries: the fraction of firms controlled

by families (20% cutoff) and the fraction of the total market capitalization controlled by the top 5 families. As is shown in Tables 3a and 3b, the correlation between these two measures, while positive, is far from perfect. From a theoretical perspective, it is unclear which of the two 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 negatively related to either measure. Moreover, given the large number of robustness checks we wish to perform, keeping both measures would be inconvenient. We therefore construct the first principal component of these two measures and use it as our main dependent variable in our regressions. The first principal component, displayed in the last column in Table 2a, is normalized with 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.

Using the principal component of family control as our dependent variable, we 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 countries for which we have only predicted values based on equation (1). Column (iii) in Table 4 reports the result for Asia, column (iv) reports the result for Western countries, excluding those countries for which we have only predicted values, and column (v) reports the result for all Western countries, including those countries for which we have only 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 three regressions. Moreover, the coefficient associated with Cooperative Labor Relations is quite stable. The second point to notice 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 perhaps not surprising given that these countries are relatively similar in their developments. On the other hand, the coefficient associated with GNP per capita is negative and significant in Asia, confirming the impression that family firms are more prevalent in less developed economies.

We next run a regression for 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 result is reported in column (vi). Like in our previous subsample regressions, Cooperative Labor Relations is negatively related to family control and significant at the 1% level.

Before we perform some robustness checks, let us quickly 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 variables in column (vi). Figure 1 plots the residuals of these two regressions. The correlation between the residuals is minus 72%. Most importantly, the figure suggests that our results are not driven by outliers.

One shortcoming of our measure of family control is that the samples in CDL-FL-GLY and LLS include only publicly held firms. To address this shortcoming, we run again the same regression as in column (vi), except that we now replace our measure of family control with Fogel's (2005) measure, the labor-weighted fraction of the 10 largest business groups controlled by families. Unlike our measure of family control, 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 once, and only as a robustness check. The result, displayed in column (vii), confirms the results from our previous regressions, viz., Cooperative Labor Relations is negatively related to family control and significant at the 1% level. On the other hand, some of the control variables that were previously significant are now no longer significant, which suggests that we may have to interpret this result with some caution.

As we have argued earlier, the quality of a country's labor relations should not only be reflected in the ownership structure of publicly held firms. It should also be reflected in the decisions of firms to go public in the first place, and thus in relative shares of publicly versus privately held firms in each country. To examine this hypothesis, one would ideally like to have data on the (labor-weighted) fraction of publicly held firms. For lack of availability of this data, we use a value-weighted measure instead: the ratio of stock market capitalization to GDP. We run again the same regression as in column (vi), except that we now replace our measure of family control with the ratio of stock market capitalization to GDP. The result is shown in column (viii). Consistent with our previous results, Cooperative Labor Relations is positively

related to the ratio of stock market capitalization to GDP and significant at the 1% level.

Arguably, the ratio of stock market capitalization to GDP may depend on other factors, notably the level of minority shareholder protection. At an absolute minimum, one should include measures of minority shareholder protection as controls. We did that. For expositional reasons, we relegate a discussion of our results to the following section.

4.2 Alternative Determinants of Family Ownership

Our basic regressions suggest that the quality of labor relations is a potentially important determinant of family ownership. In this section, we consider various potential alternative determinants. In each case, we run a horse race between the quality of labor relations and the alternative determinant in question. The results are reported in Tables 5a to 5c. A quick look at these tables shows that Cooperative Labor Relations remains negatively related to family control and significant at the 1% level in all regressions. Moreover, the coefficient associated with Cooperative Labor Relations is remarkably stable.

Legal Protection of Minority Shareholders

The leading explanation for the observed variation in family ownership across countries, advanced by La Porta, Lopez-de-Silanes, and Shleifer (1999), is based on differences in minority shareholder protection. In countries with poor minority shareholder protection, the costs of being a minority shareholder are high. Indeed, La Porta, Lopez-de-Silanes, and Shleifer show that countries with poor minority shareholder protection have more family ownership than countries with good minority shareholder protection.

La Porta et al. (1998) collect data on six different rights protecting minority shareholders: a) the right to mail proxy votes, b) the interdiction to block 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, e.g., in court ('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. When we include all six measures in a single regression (not reported), only the last three are significant, which is why we focus on them. As column (i) in Table 5a shows, judicial venues to challenge the

decisions of management and a low minimum percentage of share capital to call an extraordinary shareholders meeting are particularly important determinants of family ownership. But so is Cooperative Labor Relations, which remains significant at the 1% level.

In the previous subsection, we have shown that Cooperative Labor Relations is positively related to the ratio of stock market capitalization to GDP. As the latter may depend on the level of minority shareholder protection, we have argued that—at an absolute minimum—one should include measures of minority shareholder protection as controls. We therefore run again the same regression as in column (i), except that we now use the ratio of stock market capitalization to GDP as our dependent variable. The result is shown in column (ii). While all three measures of minority shareholder protection enter with the right sign, only one of them is significant. Most importantly, however, Cooperative Labor Relations remains positively related to the ratio of stock market capitalization to GDP and significant at the 1% level.

Legal Enforcement

La Porta et al. (1998) argue that a strong system of legal enforcement may, 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 compiled by private credit risk agencies for the use of investors interested in investing in foreign countries. Two of these measures, ‘Efficiency of Judicial System’ and ‘Rule of Law’, pertain to law enforcement proper. As column (iv) in Table 5a shows, neither measure is significant in our regressions. Two other measures, ‘Repudiation of Contracts by Government’ and ‘Risk of Expropriation’, are not concerned with law enforcement proper, but rather with the government’s stance towards private contracting and property rights. Again, as is shown in column (v), neither measure is significant in our regressions.

Interestingly, while including these four measures of legal enforcement in our regression has virtually no impact on the coefficient associated with Cooperative Labor Relations, it appears to reduce the significance of GNP per capita in Asia, consistent with the notion that richer countries have better judicial and political institutions.

Income Inequality

One might worry that Cooperative Labor Relations is merely a proxy for income inequality in the sense that countries in which income inequality is high have worse labor relations. At the same time, the prevalence of family ownership might be related to income inequality in the sense that countries in which income inequality is high are countries in which a few families control a large fraction of the stock market. For some countries, this argument might be valid. Overall, however, it is not. As column (vi) in Table 5a shows, income inequality (measured by the Gini coefficient) is not significant in our regressions. If anything, the coefficient associated with Cooperative Labor Relations becomes stronger if we control for income inequality.

Labor Union Power and Labor Regulation

An important distinction we would like to make in this paper is that between the quality of labor relations—i.e., the extent to which labor relations are hostile or cooperative—and other aspects of labor relations, such as the power of labor unions and the regulation of labor. For example, Roe (2003) argues that family ownership protects shareholders from strong labor unions and tight labor regulation, both of which he associates with countries being at the left end of the political spectrum.¹⁶ According to Roe, family ownership should be thus more prevalent in countries with powerful labor unions and strong employment protection.

To examine Roe’s hypothesis, we include three additional variables in our regression: a measure of employment protection and a measure of the collective bargaining power of labor unions, both from Botero et al. (2004), and a measure of the perceived bargaining power of workers from the 1999 GCR survey. As is shown in Table 3d, the correlation between the last measure and Cooperative Labor Relations is practically zero. Column (i) in Table 5b shows that the data do not appear to support Roe’s hypothesis: none of the three measures is statistically significant, neither collectively nor individually (not reported).

Political Theories

Roe’s (2003) broader argument is that the prevalence of family ownership should depend on a country’s left-right political orientation. Countries at the left end of the political spectrum—‘social democracies’ as Roe calls them—should have more family ownership, while countries at

¹⁶However, see Table VI in Botero et al. (2004), showing that—controlling for legal origin—there is little correlation between a country’s left-wing political orientation and tight labor regulation.

the right end of the political spectrum should have more dispersed ownership. We have already shown that powerful labor unions and tight labor regulation—two features which Roe associates with social democracies—are unrelated to family ownership. So is low income inequality, another trait which Roe associates with social democracies. We now finally examine Roe’s hypothesis directly by using the same left-right political index and the same 16 Western countries as he does. The result is reported in column (ii) in Table 5b. As expected, a country’s left-right political orientation has no significant effect on the extent of family ownership.¹⁷

Pagano and Volpin (2005) develop a political theory of investor and employment protection arguing that countries with proportional voting systems should have weaker investor protection but stronger employment protection than countries with majoritarian voting systems. The authors do not assert that their theory is related to family ownership. In conjunction with Roe’s argument, however, their theory would predict that countries with proportional voting systems should have more family ownership. To test this prediction, we include Pagano and Volpin’s voting index in our regression, and we use the same 21 Western countries as they do. The result is reported in column (iv) in Table 5b. While the voting index enters with the right sign, it is not statistically significant.

While these results suggest that political theories are not suited to explain family ownership, it does not mean that politics do not matter. As columns (iii) and (v) in Table 5b show, political theories are well suited to explain *state ownership*. In either case, the respective measure—the left-right political index by Roe and the voting index by Pagano and Volpin—is significant, while our main variable, Cooperative Labor Relations, is not significant.

Social Capital: Labor-Specific or General?

One of the general points we wish to make in this paper is that social capital may be context-specific. 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: cooperation to

¹⁷To support his hypothesis, Roe (2003) runs a number of regressions for a sample of 16 Western countries. None of these regressions control for country size, however. In fact, all regressions are univariate. This matters a great deal. For instance, when we regress our measure of family control on Roe’s left-right political index, we find that, on their own, the two variables are correlated. Once we control for country size and the quality of labor relations, however, this correlation disappears.

pursue what objectives?¹⁸ Does a high level of trust in, e.g., the political or judicial system, or in people more generally, also imply a high level of cooperation in labor relations? To shed light on this issue, we include five survey-based measures in our regressions that all measure peoples' trust, either generally or with respect to specific institutions.

Among the five measures we include in our regressions, perhaps the best known is 'General Trust' in column (i) in Table 5c. This measure has been widely used in the social capital literature. It shows the percentage of respondents who answer that most people can be trusted in response to a question by the World Values Survey (WVS, Inglehart et al. (2004)). The second and third measures also come from the WVS. In column (ii), 'Importance of Family' shows the percentage of respondents who answer that family is very important. Intuitively, countries in which families are considered important might have more family firms. Of course, the effect might also go the other way: running a family business imposes a burden on family life, implying that countries in which families are considered important might have *fewer* family firms. In column (iii), 'Confidence in Major Companies' shows the percentage of respondents who have either a great deal or quite a lot of confidence in major companies. Intuitively, if people lack confidence in major companies, we might see more (small) family firms. The final two measures come from the GCR survey, meaning the respondents are executives. 'Trust in Politicians' in column (iv) measures the respondents' confidence in the honesty of politicians, while 'Trust in Judiciary' in column (v) measures the respondents' confidence in the independence of the judiciary.

Table 2e reports the correlations among these five measures and our measure, Cooperative Labor Relations. Indeed, some of these measures are correlated with our measure. When we include them in our regressions, however, only one of them—Importance of Family—is (barely) significant (at the 10% level). Most importantly, Cooperative Labor Relations remains negatively related to family control and significant at the 1% level in all five regressions.

¹⁸See Putnam (1993), who refers to social capital as “features of life—networks, norms, and trust—that enable participants to act together more effectively *to pursue shared objectives*” (italics added).

5 (Reverse) Causality

The discussion of welfare paternalism and the empirical evidence presented in Section 2 is suggestive of the fact that family firms have a positive effect on labor relations—in the form of greater labor loyalty (reflected, among other things, in lower unionization rates), lower quit rates, and fewer strikes. The value of this positive effect is likely to depend on how tensioned labor relations are to begin with. In countries with good labor relations, improving labor relations further is less likely to be important. By contrast, in countries in which labor relations are conflictual—for historical or cultural reasons—improving labor relations is likely to be important, possibly enough to outweigh the costs associated with family ownership. Consistent with this hypothesis, we have shown in the previous section that family ownership is more prevalent in countries with bad labor relations.

To the extent that family ownership has a positive effect on labor relations on the firm level, reverse causality is unlikely to explain the results found in the previous section, for it would imply that countries with more family ownership should have *better* labor relations, contrary to the empirical evidence. And yet, it would be more satisfactory if one could show directly that there is something like an ‘intrinsic quality’ of a country’s labor relations, which can be attributed to, e.g., cultural and historical developments. We will now present evidence supporting the notion that such an intrinsic quality exists.

5.1 Labor Origin

In an intriguing book, labor historian Colin Crouch (1993) argues that differences in the quality of labor relations among European countries can be attributed to political struggles between the emerging European liberal states and the church in the 19th century.¹⁹ In some countries, like France, this struggle dates back to the late 18th century.

The story underlying the political struggle is that the emerging liberal states were reluctant to share political space with the church, while the church, in turn, was reluctant to cede power to the emerging liberal states:

¹⁹Unless otherwise stated, all quotes in this section are taken from Crouch (1993).

“To the extent that the liberal state had to struggle to assert its autonomy from and superiority over an established religion, it became exceptionally ‘jealous’ of political space, reluctant to share it, and thus exclusive in its claims to sovereignty” (p. 302).

In an effort to affirm their authority over the church, the liberal states confronted all forms of organized interests—including guild structures and labor organizations—to maintain their monopoly power in the political arena. Hence, while the struggle was first and foremost one between the emerging liberal states and the church, guild structures and labor organizations were affected by it, with the result that they became oppositional:²⁰

“Organized interests [...] found themselves on the ‘wrong side’ in the modernization struggle and either disappeared or became allied with anti-modernizing forces” (p. 300).

A prominent example is the *lois Le Chapelier*, passed in France in 1791. The French republicans of 1789 wanted the state to be as strong and encompassing as the church had been. Eager to silence opposition from organized groups, the French republicans passed a law banning all guild structures and trade unions. For almost a full century, until 1884, labor organizations were considered 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 subsequently communist.²¹

Based on the role which the encounter between the emerging liberal states and the church had for the development of guild organizations, Crouch distinguishes between three categories: ‘political inhibitors’—countries in which state-church conflicts inhibited the development of guild structures—‘political neutrals’, and ‘political facilitators’. The group of political inhibitors includes France, Italy, Portugal, and Spain; the group of political neutrals includes Belgium, Denmark, Finland, Ireland, Norway, Sweden, and the United Kingdom; the group of political facilitators includes Austria, Germany, the Netherlands, and Switzerland.

²⁰ “The place of guild structures in the struggle over the secular state is clearly only a small part of the general struggle over the relationship between the state and the church” (p. 302).

²¹ “The newly developing labour movement found little chance of influencing it [i.e., the French Republic] and therefore became highly oppositional, much of it embracing first syndicalism and then communism” (p. 302).

According to Crouch’s treatise, state-church struggles in the 18th and 19th centuries, and their role for the development of guild structures, had a lasting effect on the countries’ labor relations. (Recall the example of France above.) To examine Crouch’s thesis empirically, we introduce a new variable, ‘Labor Origin’, consisting of dummies indicating to which of the three of Crouch’s categories a given country belongs.

In column (i) of Table 6, we instrument our main independent variable, Cooperative Labor Relations, using Labor Origin. Using political inhibitors as our default category, Labor Origin is represented by two dummies: ‘Neutral Labor Origin’, which takes the value one if a country belongs to the category of political neutrals, and ‘Cooperative Labor Origin’, which takes the value one if a country belongs to the category 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 always include legal origin dummies as controls in our regressions. We run the following basic regression:

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

where Cooperative Labor Relations_{*i*}^{*} is instrumented using Labor Origin, and where Legal Origin_{*i*} is a vector of two dummies representing English and German legal origin.²²

The results of the first-stage regression show that Labor Origin has a significant effect on Cooperative Labor Relations. Also interesting is the fact that larger countries have systematically worse labor relations than smaller countries. On the other hand, legal origin appears to have no significant effect on Cooperative Labor Relations. According to the data, differences in the quality of labor relations between France and Sweden are well explained by differences in Labor Origin and the different sizes of the two countries. The R^2 associated with the first-stage regression is well above 80%. In the second-stage regression, Cooperative Labor Relations is

²²In 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, using French legal origin countries as our default group. The Scandinavian legal origin dummy has been dropped as it is insignificant.

negatively related to family control and significant at the 1% level, suggesting that the quality of labor relations has a significant causal effect on the prevalence of family ownership. The coefficient associated with Cooperative Labor Relations is similar to those in our previous OLS regressions. Moreover, both legal origin dummies are significant and enter with the ‘right’ sign (cf., La Porta et al. (1998)).

In column (i) of Table 6, we have excluded Labor Origin from the second-stage regression. This restriction relies on the assumption that if Labor Origin affects family ownership today, it does so only indirectly through its effect on the quality of labor relations. Indeed, while Crouch emphasizes the lasting effect which the encounters between state and church in the 18th and 19th centuries had on the quality of labor relations, there is no reference to any other legacies.

5.2 Religion

In his discussion of political struggles between the emerging liberal states and the church in the 18th and 19th centuries, Crouch draws an interesting link to religion:

“The Catholic Church [...] became the rallying point for all forces alienated from modernization” (p. 301). By contrast, “Lutheran churches have historically been obedient national institutions, accepting something approaching civil-service status within the state and asserting no superior political loyalty as did the Vatican-based Catholic Church. [...] This lack of ‘jealousy’ reduced the extent to which these [Lutheran] states confronted guilds and subsequently provoked the formation of highly oppositional labor movements” (p. 310).

On these matters, the Anglican Church behaved like a Lutheran one.

Importantly, Crouch does not argue that religion had any direct effect on the quality of labor relations, or for that matter, that his categorization of countries into political inhibitors, neutrals, and facilitators is guided by countries’ religions affiliations. It is easy to see that it is not: Ireland and Austria, for example, are strongly Catholic, yet Crouch categorizes them as political neutrals and facilitators, respectively. Likewise, Scandinavian countries have a much higher fraction of Protestants than, say, Germany, yet Crouch categorizes them as political neutrals, while Germany is categorized as a facilitator.

Bearing these important caveats in mind, we want to examine if our results also hold if we instrument Cooperative Labor Relations using religion instead of Labor Origin. They do, albeit the results become weaker, and albeit one concern that was largely absent before—regarding the validity of the exclusion restriction—becomes now more imminent. On the other hand, using religion rather than Labor Origin allows us to extend our sample beyond the countries originally categorized by Crouch, and it moreover allows us to use a continuous measure instead of dummies. We employ two measures of religion: the fraction of Protestants in 1900 (column (ii) of Table 6) and the fraction of Catholics in 1900 (column (iii)).²³

The results of the first-stage regression, displayed in columns (ii) and (iii) of Table 6, show that the fraction of Protestants in 1900 is positively, and the fraction of Catholics in 1900 is negatively, related to Cooperative Labor Relations. Both instruments are significant at the 1% level. In the second-stage regression, Cooperative Labor Relations is (again) negatively related to family control—and the sign of the coefficient is similar to when we used Labor Origin—but the result is now only significant at the 5% level. As we have expected, religion is a weaker instrument than Labor Origin, both on statistical grounds and on the grounds that its historical relation to state-church conflicts in the 18th and 19th centuries is more complex.

Using religion as an instrument, we also need to be worried about the validity of the exclusion restriction. While it is not entirely obvious why the fraction of Protestants or Catholics in 1900 would have an (direct) effect on the prevalence of family ownership, the exclusion restriction poses a greater challenge than above.²⁴ Some of the channels through which religion might operate are addressed by Guiso, Sapienza, and Zingales (2006). Importantly, they find that

²³The choice of 1900 is unrelated to concerns about the validity of the instrument. Whether we use the fraction of Catholics (Protestants) in 1900 or today, both are exogenous with respect to family ownership. By the same token, it is irrelevant whether or not the fraction of Catholics (Protestants) is a persistent variable. We use 1900 because, if there is indeed a (noisy) link between religion and state-church conflicts in the 18th and 19th centuries, then using 1900—which is the earliest year for which we have religion data available—should give us better predictive power than, say, 1995.

²⁴Perhaps the most obvious place to look for a (direct) link between religion and family ownership is Weber’s (1905) *Protestant Ethic and the Spirit of Capitalism*. While Weber’s thesis remains controversial, it offers, more importantly, no clear guidance as to how one should think about a link between the ‘Protestant work ethic’ and family ownership. If anything, the Weberian work ethic connotes *more* family ownership in Protestant countries, contrary to the empirical evidence.

Protestants and Catholics have approximately the same level of trust in other people, similar preferences for thriftiness, and similar preferences for redistribution. But even if Protestants and Catholics differed in certain ways, it does not necessarily mean that these differences matter for family ownership, or that the predicted coefficient has the right sign (i.e., Catholicism causing more family ownership). Moreover, as we have shown previously in our robustness regressions, many of the channels through which religion might possibly operate are statistically unrelated to family ownership.

Perhaps more useful than a discussion is a simple statistical experiment. Recall that Crouch never argues that religion matters directly for the quality of labor relations; he merely draws a (noisy) link between Catholicism and state-church conflicts. However, he also points out that in some Catholic countries, the encounter between state and church had been a positive one:

“Ireland was at the time completely subsumed under British authority,” implying that “the Irish did not have an opportunity to develop a polity consistent with their religious preferences” (p. 311). In Austria, on the other hand, “secularizing forces took Germany as their model,” implying that the “state and church reached their *modus vivendi* with little need for the state to assert its rights” (p. 305 - 306).

Based on Crouch’s argument, we modify our variable “fraction of Catholics in 1900” as follows: for Ireland we replace the original value with the (much lower) value from the United Kingdom, while for Austria we replace the original value with the (much lower) one from Germany.²⁵ If Catholicism had a *direct* positive impact on the prevalence of family ownership, then replacing the fraction of Catholics in two of the most Catholic countries with much lower values should statistically weaken our results. On the other hand, if Crouch is correct—and what ultimately matters is not religion itself but the role of state-church encounters—then our results should become stronger, for our modified variable accounts for the fact that, despite being Catholic, neither Ireland nor Austria had witnessed any significant state-church conflicts. As column (iv) of Table 6 shows, our results become indeed stronger, both economically and statistically, which is difficult to reconcile with the notion that Catholicism has a direct causal effect on

²⁵In 1900, the fraction of Catholics in Ireland was 88.7%, while in the United Kingdom it was only 6.4%. Likewise, the fraction of Catholics in Austria was 91.6%, while in Germany it was only 35.7%.

family ownership. In fact, Cooperative Labor Relations is now significant at the 1% level, while previously it was only significant at the 5% level.

6 Strike Activity

6.1 Quebec versus the Rest of Canada

While our measure of the quality of labor relations can explain some of the variation in family ownership across countries, it is, after all, a survey-based measure. It would be good to see if similar results also obtained for more ‘readily observable’ measures of labor hostility, such as strike activity. We begin this final part of our empirical study by looking at Canada. Canada is particularly interesting for our purposes, because Quebec has a French-Catholic tradition, while the rest of Canada has an English-Protestant tradition. Hence, we can see if our previous cross-country results also hold for different regions within a given country. According to Crouch’s (1993) classification scheme introduced in Section 5.1, France is classified as a political inhibitor, while the United Kingdom is classified as a political neutral. Consequently, we would expect higher labor militancy in Quebec than in the rest of Canada. And if our previous cross-country results extend to different regions within a given country, then we would additionally expect that Quebec has more family ownership than the rest of Canada. As it turns out, both predictions are correct.

We have strike data from 1953 until 2002, both for Quebec and for Canada as a whole, where strike activity is defined as the number of person-days lost due to strikes and lockouts. A quick look at the data confirms that the average strike activity during this period is significantly higher in Quebec than it is in the rest of Canada.²⁶ As for differences in family ownership, Attig and Gadhoun (2003) provide ultimate ownership data both for Quebec separately and for Canada as a whole for the year 1996. The sample includes 1,112 publicly held companies, 155 of which are headquartered in Quebec. Consistent with our predictions, Attig and Gadhoun find that family ownership is more prevalent in Quebec than it is in the rest of Canada. While 57% of the firms in Quebec are controlled by families (20% cutoff), only 38% of the firms in the rest of

²⁶To account for the different numbers of workers in Quebec and in the rest of Canada, we normalize the number of person-days lost due to strikes by the number of salaried workers.

Canada are family-controlled. The difference is significant at the 1% level.

While these results are consistent with our basic hypothesis, it should be noted that Quebec, like France, has a Civil Law code, while the remaining Canadian provinces have a Common Law code. And yet, the relevant corporation law is the same for firms in Quebec and in the rest of Canada, which makes it less likely that the differences in family ownership are explained by differences in minority shareholder protection. As Attig and Gadhoun (2003) emphasize, “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.”

6.2 Strike Activity in the 1960s

We finally return to our original research question of what explains differences in family ownership across countries, except that we now use actual strike data instead of our survey-based measure of labor relations. The problem with using strike data is that strike activity commonly depends on many factors, notably unemployment. In the 1960s, however, many of the macroeconomic factors that commonly tend to affect strike activity—including unemployment—were relatively uniform across Western countries, which makes the 1960s an ideal period for our study—a ‘natural experiment’ so to speak. Our measure of strike activity in the 1960s is adopted from Blanchard and Philippon (2004), who elaborate further on the advantages of using strike data from the 1960s. The measure is a combination of the number of days lost due to strikes and the number of workers involved in strikes, normalized by employment. We use the same specification and the same sample of Western countries as in Table 6, except that we replace Cooperative Labor Relations with our measure of strike activity in the 1960s, and except that we exclude Greece, Portugal, and Spain from our sample. All three countries were dictatorships in the 1960s, and strikes were illegal.

The results are reported in Table 7. Column (i) confirms our previous results using survey-based measures of labor relations: strike activity in the 1960s is positively related to family ownership thirty years later, and the result is significant at the 5% level.²⁷ Prima facie, reverse

²⁷In fact, the result is significant at the 2% level.

causality is not a major concern, as our ownership variable is from the 1990s, while our measure of strike activity is from the 1960s. And yet, given that the dependent variable may be persistent, we cannot completely rule out reverse causality. To see whether strike activity in the 1960s has a causal effect on family ownership thirty years later, we instrument strike activity in the 1960s using Labor Origin (see Section 5.1). The first-stage regression, displayed in column (ii) of Table 7, shows that Labor Origin has a significant effect on strike activity in the 1960s. More importantly, the second-stage regression, displayed in column (iii), confirms the basic impression gained from our OLS regression that strike activity in the 1960s has a significant causal, and positive, effect on the extent of family ownership thirty years later.

7 Conclusion

Why is family ownership more prevalent in some countries than in others? One explanation, which is supported by the evidence (La Porta, Lopez-de-Silanes, and Shleifer (1999)), is that family ownership is an optimal response to insufficient minority shareholder protection. This argument is consistent with the ‘classic’ notion in corporate finance—at least since Jensen and Meckling (1976)—that the ownership structure of firms is chosen optimally to minimize agency costs arising from conflicts of interest between shareholders and management.

This paper has a different focus. It focuses on the relationship between firms and workers. The basic argument rests on two pillars. On the firm-level, family firms have a comparative advantage in maintaining implicit labor contracts, e.g., due to their longer time horizon, making them especially successful at winning workers’ loyalty. This is consistent with firm-level evidence that family firms are more apt to provide employment insurance to their workers, but also that they appear to witness fewer strikes and lower unionization rates. Given this positive effect of family ownership on labor relations on the firm level, we would expect to see more family ownership in countries in which, for cultural or historical reasons, labor relations are tensioned to begin with. This country-level relation between family ownership and labor relations constitutes the ‘second pillar’ of the argument.

Using survey-based measures of the quality of labor relations, we show that countries with hostile labor relations have more family ownership than countries with good labor relations.

This result holds separately for Asian, European, and Western countries, as well as for different measures of family ownership. It also holds when we include control variables associated with alternative determinants of family ownership, including minority shareholder protection, and when we replace our survey-based measure of labor relations with actual strike data from the 1960s. Finally, the result holds when we instrument our survey-based measure of labor relations—or, for that matter, when we instrument our measure of strike activity from the 1960s—with ‘Labor Origin’, a measure of the ‘intrinsic quality’ of a country’s labor relations based on a classification by labor historians to mark the lasting effects which political struggles between the emerging liberal states and the church in the 18th and 19th centuries had on the development of guild structures and the militancy of labor movements.

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Table A: Strike Activity and Union Density in Publicly Listed French Firms

	(i)	(ii)
Dependent Variable	Strike Activity	Union Density
Widely Held Firm	1.14	6.85
	4.35	2.53
Log(Employees)	0.42	0.10
	3.50	0.07
Industry Fixed Effects	YES	YES
N	408	278
R ²		0.10

Notes: Logit (column (i)) and OLS (column (ii)) regressions. Coefficients are in bold, z- and t-statistics, respectively, are listed below the coefficients. 'Strike Activity' is a dummy taking the value zero if the firm witnessed no strike in the three years prior to 1998, when the enquete reponse 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. For a description of the firm data, see Sraer and Thesmar (2004).

Table 1: Description of Variables

Variable	Description and Data Source
Fraction of Firms Controlled by Families	See Section 2.1 for a description. Sources: Claessens, 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 Total Market Capitalization Controlled by Top 5 Families	
Fraction of Medium-Sized Firms Controlled by Families	See Section 2.1 for a description. Source: La Porta, Lopez-de-Silanes, and Shleifer (1999), Tables II, III, and V.
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 2.1 for a description. Source: Fogel (2005), Table I.
State Ownership	See Section 2.1 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: 'smv_g95s' from http://post.economics.harvard.edu/faculty/shleifer/Data/gbk_allvar.xls .
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) in 2003. 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: 'ln_gnppc97' from http://post.economics.harvard.edu/faculty/shleifer/Data/labor_dataset_4_01_03.xls .
Income Inequality	Gini coefficient from early 1990s. See La Porta et al. (1998) for a description. Source: "gini" from http://post.economics.harvard.edu/faculty/shleifer/Data/trustvar.xls .
Oppressed Minorities Mechanism	
Preemptive Right to New Issues	
Percentage of Share Capital to Call Extraordinary Shareholder Meeting	
Rule of Law	See La Porta et al. (1998) for a description. Source: http://post.economics.harvard.edu/faculty/shleifer/Data/l&fweb.xls .
Efficiency of Judicial System	
Repudiation of Contracts by Government	
Risk of Expropriation	
Collective Bargaining Index	See Botero et al. (2004) for a description. Sources: 'index_col_barg1' and 'index_emp_prot1', respectively, from http://post.economics.harvard.edu/faculty/shleifer/Data/labor_dataset_4_01_03.xls .
Employment Protection Index	
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.
Importance of Family	Measures the extent to which people believe that family is important. Source: item A001 in the 2000 World Values Survey.
Confidence in Major Companies	Measures the extent to which people have confidence in major companies. Source: item E081 in the 2000 World Values Survey.
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.
Legal Origin	See La Porta et al. (1999) for a description. Source: http://post.economics.harvard.edu/faculty/shleifer/Data/qgov_web.xls .

Percentage of Protestants in 1900

Percentage of Catholics in 1900

Source: 2001 World Christian Encyclopedia.

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 fill in the missing entries in the 'FL & CDL' columns.

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

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	Fraction of Top 10 Business Groups Controlled by Families	Stock Market Capitalization/GDP
Sample	All Countries	All Countries	Asia	FL + US	West	All Countries	All Countries	All Countries
Cooperative Labor Relations	-0.09	-0.05	-0.68	-0.91	-0.86	-0.71	-0.13	0.21
	-4.00	-3.30	-3.81	-3.59	-3.49	-5.10	-2.74	3.45
Log(Population)	-0.06	-0.02	-0.99	-0.58	-0.55	-0.47	-0.1	0.164
	-2.65	-1.35	-4.41	-2.81	-2.83	-3.05	-1.88	2.38
Log(GNP_Per_Capita)			-0.72	1.22	0.55			
			-3.29	1.64	0.84			
Asia Dummy						12.90	1.68	7.22
						3.00	1.15	3.8
Asia Dummy * Log(Population)						-0.53	-0.03	-0.49
						-1.92	-0.29	-4.01
Asia Dummy * Log(GNP_Per_Capita)						-0.70	-0.14	-0.18
						-2.80	-1.62	-1.59
N	30	30	9	14	21	30	30	30
R ²	0.38	0.30	0.90	0.46	0.48	0.70	0.42	0.72
Adj. R ²	0.33	0.24	0.84	0.36	0.38	0.64	0.30	0.66

Notes: OLS Regressions. Coefficients are in bold, t-statistics are listed below the coefficients. '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 Gadhoun, 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, and New Zealand. 'All Countries' includes all countries from Table 2a.

Table 5a: Alternative Determinants of Family Ownership (I)

Dependent Variable	(i)	(ii)	(iii)	(iv)	(v)
	Principal Component of Family Control	Stock Market Capitalization/GDP	Principal Component of Family Control	Principal Component of Family Control	Principal Component of Family Control
Cooperative Labor Relations	-0.65	0.20	-0.62	-0.63	-0.76
	-5.79	3.24	-3.16	-4.17	-5.22
Log(Population)	-0.36	0.14	-0.48	-0.37	-0.49
	-2.86	2.06	-2.87	-2.25	-3.17
Asia Dummy	18.14	6.23	11.87	11.29	10.73
	4.59	2.91	2.54	2.32	2.28
Asia Dummy * Log(Population)	-0.95	-0.36	-0.56	-0.54	-0.45
	-3.79	-2.66	-2.00	-1.99	-1.56
Asia Dummy * Log(GNP_Per_Capita)	-0.77	-0.22	-0.57	-0.57	-0.58
	-3.19	-1.66	-1.81	-1.77	-2.12
Oppressed Minorities Mechanism (LLSV)	-1.19	0.31			
	-3.99	1.94			
Preemptive Right to New Issues (LLSV)	-0.42	0.24			
	-1.54	1.64			
Percentage of Share Capital to Call Extraordinary Shareholder Meeting (LLSV)	-6.28	1.54			
	-2.21	1.00			
Rule of Law (LLSV)			0.06		
			0.46		
Efficiency of Judicial System (LLSV)			-0.16		
			-1.26		
Repudiation of Contracts by Government (LLSV)				0.48	
				1.20	
Risk of Expropriation (LLSV)				-0.77	
				-1.66	
Income Inequality					0.03
					1.10
N	29	29	30	30	30
R ²	0.84	0.78	0.73	0.74	0.72
Adj. R ²	0.77	0.69	0.64	0.66	0.64

Notes: OLS Regressions. Coefficients are in bold, t-statistics are listed below the coefficients. 'LLSV' is La Porta et al. (1998). The samples in columns (i) to (vi) include all countries from Table 2a, except for columns (i)-(ii) (Philippines missing).

Table 5b: Alternative Determinants of Family Ownership (II)

Dependent Variable	(i)	(ii)	(iii)	(iv)	(v)
	Principal Component of Family Control	Principal Component of Family Control	State Ownership	Principal Component of Family Control	State Ownership
Cooperative Labor Relations	-0.70	-0.75	0.01	-0.80	0.00
	-4.15	-3.50	0.62	-4.08	0.36
Log(Population)	-0.50	-0.65	-0.01	-0.51	-0.01
	-2.98	-2.69	-0.42	-2.48	-0.68
Asia Dummy	11.71				
	2.19				
Asia Dummy * Log(Population)	-0.50				
	-1.62				
Asia Dummy * Log(GNP_Per_Capita)	-0.61				
	-1.78				
Collective Bargaining Index (BDLLS)	-0.13				
	-0.17				
Employment Protection Index (BDLLS)	0.98				
	0.75				
Collective Bargaining Power of Workers is High (GCR)	-0.17				
	-0.75				
Left-Right Political Index (Roe)		-0.06	-0.05		
		-0.13	-2.07		
Proportionality of Voting System (PV)				0.10	0.02
				0.53	1.75
N	30	16	16	21	21
R ²	0.72	0.63	0.51	0.57	0.34
Adj R ²	0.61	0.54	0.39	0.50	0.22

Notes: OLS Regressions. Coefficients are in bold, t-statistics are listed below the coefficients. 'BDLLS' is Botero et al. (2004); 'GCR' is Global Competitiveness Report (1999); 'Roe' is Roe (2003); 'PV' is Pagano and Volpin (2005). The sample in column (i) includes 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 5c: Alternative Determinants of Family Ownership (III)

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	-0.68	-0.71	-0.64	-0.80	-0.70
	-4.05	-4.78	-3.54	-4.84	-3.53
Log(Population)	-0.49	-0.44	-0.55	-0.46	-0.47
	-2.97	-2.71	-2.84	-2.96	-2.94
Asia Dummy	11.44	13.27	14.89	12.23	12.75
	2.24	2.82	1.89	2.80	2.73
Asia Dummy * Log(Population)	-0.41	-0.45	-0.53	-0.45	-0.53
	-1.20	-1.52	-0.98	-1.54	-1.86
Asia Dummy * Log(GNP_Per_Capita)	-0.70	-0.83	-0.95	-0.70	-0.69
	-2.45	-2.95	-2.60	-2.81	-2.54
General Trust (WVS)	-0.58				
	-0.48				
Importance of Family (WVS)		-5.46			
		-1.84			
Confidence in Major Companies (WVS)			-2.45		
			-1.18		
Trust in Politicians (CGR)				0.18	
				0.96	
Trust in Judiciary (CGR)					-0.02
					-0.09
N	27	26	20	30	30
R ²	0.72	0.76	0.78	0.72	0.70
Adj R ²	0.63	0.68	0.67	0.64	0.63

Notes: OLS regressions. Coefficients are in bold, t-statistics are listed below the coefficients. 'GCR' is Global Competitiveness Report; 'WVS' is World Values Survey. The samples in columns (iv) and (v) 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: Instrumenting Cooperative Labor Relations

	(i)	(ii)	(iii)	(iv)
Second Stage: Dependent variable is Principal Component of Family Control				
Cooperative Labor Relations	-0.89	-0.81	-0.71	-0.94
	-4.31	-2.48	-2.27	-3.44
Log(Population)	-0.66	-0.51	-0.46	-0.59
	-3.29	-2.18	-1.98	-2.8
English Legal Origin	-0.9	-0.38	-0.48	-0.26
	-2.56	-0.8	-1.02	-0.58
German Legal Origin	1.37	1.12	1.01	1.26
	4.09	1.92	1.75	2.31
N	15	20	20	20
R ²	0.89	0.66	0.66	0.66
First Stage: Dependent variable is Cooperative Labor Relations				
Log(Population)	-0.66	-0.49	-0.52	-0.36
	-3.35	-3.81	-4.29	-3.21
English Legal Origin	0.72	0.78	0.64	0.18
	1.3	2.3	1.92	0.56
German Legal Origin	-0.12	1.15	1.13	0.74
	-0.21	2.75	2.81	2.12
Neutral Labor Origin	0.96			
	1.8			
Cooperative Labor Origin	1.92			
	2.66			
Percentage of Protestants in 1900		0.01		
		3.25		
Percentage of Catholics in 1900			-0.01	
			-3.55	
Percentage of Catholics in 1900 (Ireland and Austria Modified)				-0.02
				-4.88
N	15	20	20	20
R ²	0.84	0.74	0.76	0.83

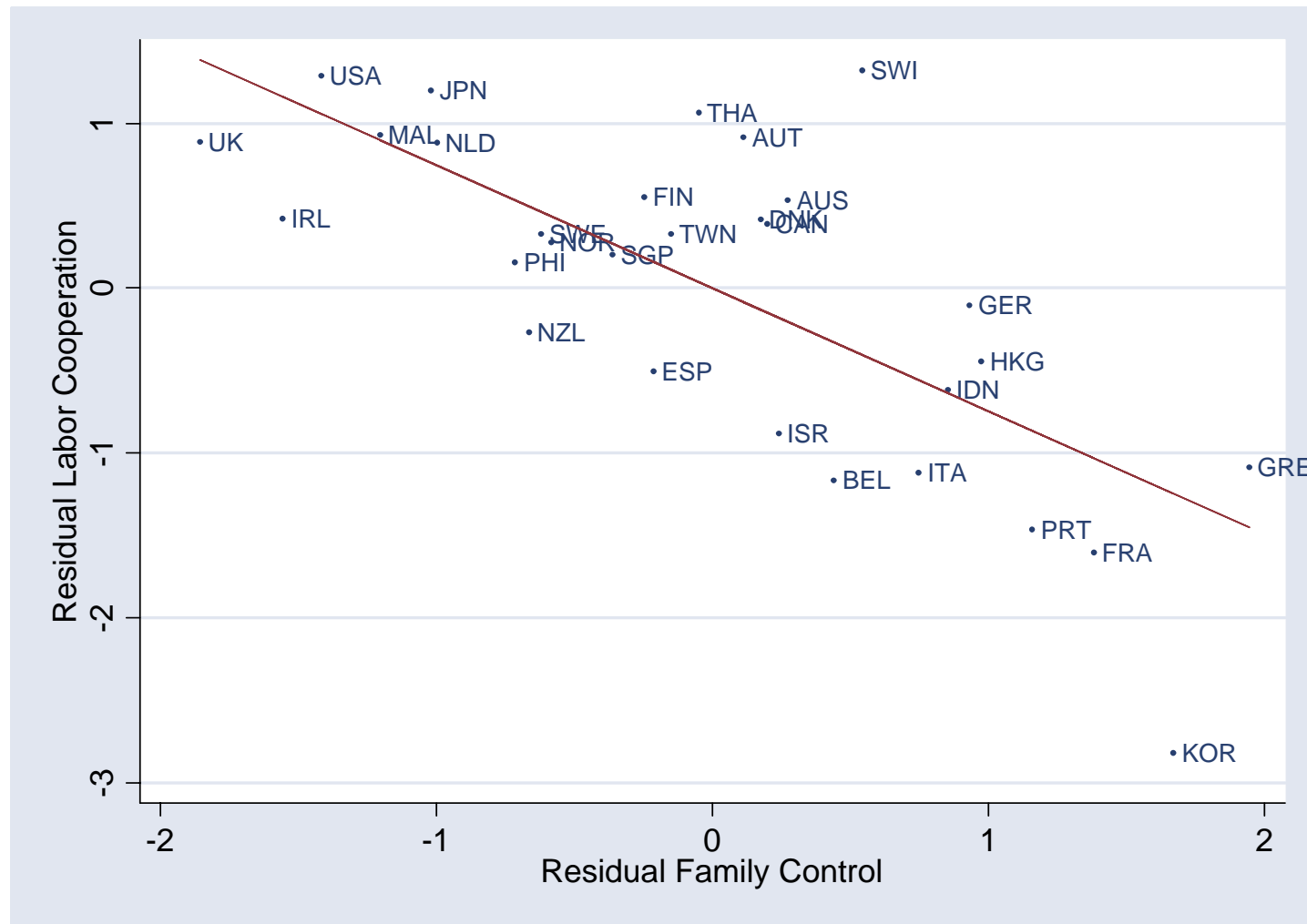
Notes: 2SLS Regressions. Coefficients are in bold, t-statistics are listed below the coefficients. The sample in column (i) includes the 13 countries in Faccio and Lang (2002) plus 2 additional countries with predicted values using data from La Porta Lopez-de-Silanes, and Shleifer (1999); Denmark and the Netherlands. The samples in columns (ii) to (iv) include the 15 countries from column (i) plus the United States from Gadhoun, Lang, and Young (2005) plus 4 additional countries with predicted values using data from La Porta, Lopez-de-Silanes, and Shleifer (1999): Australia, Canada, Greece, and New Zealand.

Table 7: 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		0.52
	2.82		2.72
Log(Population)	-1.45	-0.08	-0.05
	-1.04	-1.29	-0.37
English Legal Origin	-0.96	0.85	-1.83
	-2.72	5.15	-4.85
German Legal Origin	0.94	0.14	0.85
	2.01	0.64	2.35
Neutral Labor Origin	0.96	-2.6	
	1.8	-12.26	
Cooperative Labor Origin	1.92	-2.8	
	2.66	-11.49	
	OLS	2SLS (First Stage)	2SLS (Second Stage)
N	17	13	13
R ²	0.62	0.98	0.82

Notes: Coefficients are in bold, t-statistics are listed below the coefficients. In column (iii) 'Strike Activity in the 1960s' is instrumented using Labor Origin. The sample in column (i) is the same as in columns (ii) to (iv) of Table 6, except that Greece, Portugal, and Spain have been excluded. All three countries were dictatorships in the 1960s, and strikes were illegal. The sample in columns (ii) and (iii) is the same as in column (i) of Table 6, except that Portugal and Spain have been excluded.

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.