Employee Rights and Dividend Policy around the World

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Abstract

This paper explores the relationship between employee rights and dividend policy across countries. Using labor right index as a proxy for agency costs of employees, we test the association between labor rights and dividend policies across countries. The empirical results reveal that labor rights are negatively related to firms' decision to pay dividends and dividend payment amounts. This relationship is reinforced to be more salient in civil countries where shareholder rights are weak. The empirical results are robust by controlling for test model specification, and a series of country-level control variables.

Keywords: Dividends, International, Agency Costs, Corporate Governance, Labor Right

EFM Classification Code: 110, 150, 170, 170, 750.

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Introduction

Under the agency costs hypothesis, dividends, along with corporate governance mechanisms, are used to reduce agency costs and thus improve firm value. The extensive research investigates how dividends can be used as a tool to mitigate agency costs of managers which result from the interest conflict between shareholders and managers. While the interest conflict between shareholders and managers is the major focus of corporate governance pattern in Anglo-Saxon countries, different corporate governance mechanisms exist in many other countries. Therefore, the agent-principal conflicts might be different in other countries as well. In additional to agency problems of managers, agency problems of employees are quite salient in some countries. This paper examines the relationship between agency costs of employees and dividend policy across countries, using labor right as a proxy for agency costs of employees.

Essentially, the dividend is a vehicle through which companies distribute wealth and investors realize investment return. Firms also pay dividends for corporate governance purpose such as to reduce agency costs and to provide a signal to outsiders. Companies operate in various business environments under different societal institutions. In each society, to maximize their own benefits, various stakeholders such as shareholders, managers, workers, and creditors will utilize their influence to take part in wealth distribution. With regard to dividends, those influences will be applied on either supply or demand side of dividends. Dividend policy is a consequence of the interaction between supply and demand of dividends. When this interaction reaches its equilibrium point, dividend policy is determined. When this equilibrium point is reached, the powers of various interest groups are also balanced. Therefore, for across country analysis, to study dividend policy is to explore the interaction among various interest groups and to examine how that interaction affects supply and demand of dividends.

In different institutional environments, interest groups of firms have different influence in corporation decision makings. For example, through a survey, Allen (2009) finds that ninety-seven percent of Japanese managers, fifty-nine percent of German managers, and sixty percent French managers believe employees' job security is more important than dividends while only eleven percent of American managers and ten percent of British managers have this belief. To shed light on the essentials of corporate finance decision makings around the world, we need to explore each stakeholder's role in corporate finance. While the impacts of managers and creditors on dividend policy are well studied, the role of employees in dividend policy across countries remains unrevealed.

When employees in Germany and Japan can influence corporate decision making directly through their seats in corporation boards, not every country in the world has such a codetermination corporate governance mechanism. Consequently, employees in countries without codetermination corporate governance devices will seek alternatives inside and outside companies to protect their interests. Within a firm, employees can protect themselves through organizing unions, negotiate individually for better terms, or strike. Outside a company, employees can seek legislation, appeal to the media, or file lawsuits to pursue protection. The above procedures provide protection for employees directly. However, the availability of those procedures differs country by country, constrained by a country's political and legal systems. Especially, a country's labor law and regulatory regime grant employees such rights as union formation, striking, and bargaining power. Botero et al. (2004) recognize that when a country's labor law and regulatory system provides labor rights for employees, it also provides protection for employees by applying some restrictions to shareholders. For example, labor law or regulation can protect employees by making it harder and more costly to fire employees. From shareholders' standpoint, strong labor laws widen the gap between shareholders and employees and cause agency costs of employees to be raised.

Since employee rights granted by law and regulatory regime are exogenous, shareholders will seek a reduction of agency costs of employees within a corporation. Basically, when a corporation's free cash flows are reduced, employees are less likely to obtain explicit or implicit benefits. As a result, the agency costs of employees will be mitigated in such a way. Agency costs theory suggests that cash dividends remove corporations' free cash flows and thus reduce agency costs.

This paper explores the role of employees in dividend policy under different legal and political regimes across countries, by addressing the following research questions:

1. What is the relationship between employee rights and corporations' decision to pay dividends across countries?
2. How do employee rights affect amounts of dividend payout across countries?
3. Taking all stakeholders into account, how does interaction among shareholders, creditors, and employees affect dividend policy across countries?
4. What is the impact of country-level employee protection level on corporations' dividend policies in different country groups?

This paper contributes to the broader corporate governance literature on the strategic interaction between shareholders and employees. It considers all stakeholders when studying agency problems. It tests the impact of agency costs of labor on dividend policy and provides a new perspective to interpreting international variation in dividend policy in the world. The results obtained from this paper help us to understand dividend policy in different countries with various corporate governance mechanisms and fill significant gaps in the literature on agency problems.

The remaining of the paper is organized as follows. Following the introduction, a review of existing studies and a conceptual framework are discussed in section I. Section II describes data

and research methodologies. Empirical results are discussed in section III. The conclusion is in section IV.

I. Conceptual Framework

Dividend policy is affected both by firm level factors and by country level factors (see Allen and Michaely (2003) for comprehensive reviews). At the firm level, firm size, leverage, investment growth opportunities, tax, firm age, corporate governance characteristics such as ownership structure, board structure, distribution of voting rights, and distribution of cash flow rights all influence firm dividend policy (Bhattacharya (1979), Rozeff (1982), Easterbrook (1984), Miller and Rock (1985), Jensen (1986), Fama and French (2001), DeAngelo, DeAngelo, and Stulz (2005), among others). At the country level, to our knowledge, legal factors such as legal origin, protection for minority shareholders, and enforcement of law are relevant to dividend payout (LLSV 2000a). This complexity of dividend determinants means that none of the various dividend policy theories developed to explain dividend payout behavior and its variations in dividend behavior across countries are perfect.

International studies on dividend policy extend dividend theories to an international context. Usually research in this area analyzes dividends either in specific non-US countries (Goergen, Renneboog, and Silva (2004), Chen, Cheung, Stouraitis, and Wong (2005), among others) or in certain country groups such as emerging countries or European countries (Faccio, Lang, and Young, 2001; Aivazian et al., 2003a, 2003b).

Research on international dividend policy has focused primarily on testing validation of various dividend theories in international context using foreign countries' firm samples. Few studies examine the impact of agency costs of stakeholders on corporate finance based on differing natures of legal and political systems across countries.

Legal and political systems affect finance through various channels. In particular, they provide heterogeneous protection for different interest groups in a corporate context, cause power and benefit imbalanced among stakeholders, and shape characteristics of agency problems of stakeholders.

Tirole (2001, 2006) asserts that corporations select optimal investment and financing decisions within the constraints of legal and political environments to which they belong. While agency problems have great impacts on dividends, what shape characteristics of agency problems cause lots of interests.

There are essentially two explanations for international differences in agency problems of stakeholders. The "law and finance" theory (LLSV (1997, 1998, 1999), Beck, Demirguc-Kunt, and Levine (2001, 2003)) suggests that legal origin rooted in historical accident determines investor protection and then financial market development. Investor protection and financial market development level generate corporate governance mechanisms in which stakeholders interact with each other. Political economics school studies benefits and protection of employees, and more importantly, the interaction between employees, managers, and shareholders under various political environments. In the "political economics" framework (Pagano and Volpin (2005, 2006), Rajan and Zingales (2003), Roe (2003, 2004)), researchers argue that it is the interaction between different political interest groups that shapes legal rules and investor protection, with the latter influences financial market development and derives corporate governance mechanisms.

Blair (1999) views the corporation as a mechanism for governing the relationship among all stakeholders, not the just relationship between shareholders and managers. Those stakeholders include employees who contribute their human capital, shareholders who invest capital, and managers who input their management expertise. She points out that investments in knowledge, skills, relationships, and other forms of human capital can create contracting difficulties that neither

arm's-length market transactions nor formal contracts can readily resolve. She suggests that institutions with the ability to foster sustainable development should encourage continuity in the relationship between employees and the firms. This institutional environment might include unions, severance pay, social norms of lifetime employment, internal job ladders, career paths, seniority rules, and direct and formal control rights.

Bebchuk and Roe (2004) argue that although the shareholders-oriented model is emerging around the world, it is not so powerfully encompassing: Other corporate governance styles still exist in some nations. Bebchuk and Roe's argument reminds a realistic fact that diverse corporate governance mechanisms will generate heterogeneous agency problems. The root of this agency problem heterogeneity relies fundamentally on the differences in institutional environments of countries in the world.

Most corporate governance analyses ignore employees. However, agency costs of employees affect firm decisions in many aspects. A tension always exists between shareholders and employees. Shareholders want to keep flexibilities in restructuring the business, downsizing firms, and lay-offing employees so as to maximize firm value. Shareholders don't mind if those changes or restructures put employees at risk. Employees, however, may resist change if the change lets work become disruptive, difficult, and risky. The contradictory preferences and pursuits between shareholders and employees induce employees to seek for protection for their interests and job security through any available channels.

The ways employees use to protect their benefits include labor contracting, direct involvement in corporate governance mechanism through assigning employee representation on the firm's board of directors, and the use of their political voting right to put pressure on legislation so as to get protection from government, depending on a country's legal and political institutions. Hansmann and Kraakman (2004) argue that protecting for employees through labor law and labor

regulatory mechanism is more efficient and strong and can prevent employees from exploitation at the hand of shareholders. When employees obtain more benefits from stronger employee protection provided by a country's labor law and regulation, those benefits are at expenses of shareholders' increased agency costs of employees.

It is a country's legal and regulatory regime that provides valid protection for employees. Botero et al. (2004) investigate labor right across countries and find that countries with different legal and political regimes have different labor regulation structures in such terms as the difficulty of firing employees, costs of firing employees, and easiness of union formation. If a country's legal regime is in favor of employees, shareholders in such a country will seek tools that could control agency costs within a corporation to maximize firm value and protect themselves. Cash dividends remove free cash flows and thus mitigate agency costs of managers (Easterbrook (1984)). Less free cash flows also lower employees expectation to obtain extra benefits from the firm even the labor law and regulatory regime provide high employee right in that country. Therefore, dividends can also be used to reduce agency costs of employees.

Given a country's labor regulatory regime, employees prefer low dividends because more free cash flows remained in a firm allow employees to have stronger bargaining to pursue high wages and job security. On the one hand, paying cash dividends can reduce free cash flows and hence mitigate agency costs. On the other hand, from the perspective of corporate finance, dividends payment is a distribution of wealth to investors. Comprehensively, corporations will apply different dividend policies in the reduction of agency costs of employees, depending on employee rights at country-level. We test the relationship between county-level employee rights and dividend policy across countries through the following hypothesis. Using country-level labor right as a proxy for employee protection (Botero et al (2004)) and creditor right as a proxy for creditor protection (LLSV (2006)), we hypothesize:

The stronger the labor right, the fewer cash dividends the company will pay.

When labor right is strong, more employees' benefits are granted by labor law and regulation. Consequently, high employee benefits will take up cash and reduce cash flows distributed to shareholders via cash dividends. Especially in countries where protection for investors is weak, the dominance of strong labor right will cause corporations not to pay or pay fewer cash dividends. This is the case of civil law countries whose protection for investors is weaker than common law countries. Therefore, we assume the negative relationship between labor right and dividends will be more obvious in civil law countries.

II. Data and Methodology

2.1 Data sources and sample selection

We collect firm data from Compustat Global Vantage. All firm-level financial accounting variable data is obtained from Global Industrial file. Market price data is collected from Compustat Global Issue file. Country currency exchange rate data is from Compustat Global Currency File. Country-level variables are obtained from previous research in each aspect, respectively. We obtained shareholder rights, creditor rights, and labor rights data from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008), Dajankov, Mcliesh, and Shleifer (2007), and Botero, Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2004), respectively. Table 1 lists data and variable information.

< Insert Table 1 here>

The sample period is 1990-2007. We begin sample construction by matching the Compustat Global Industrial with Global Issue and Global Currency files.

Differences in accounting practices across countries might cause a discrepancy in financial reporting. To avoid this bias, we select firms with fully consolidated accounting statements only (consol = F in Global Industrial file). Following the literature on dividends (Aivazian et al. (2003),

and LLSV (2000a), we exclude financial firms (6999>SIC code>6000), and utility firms (4999>SIC code>4900). We also dropped firms with negative equity, negative sales revenue, missing value of total assets, negative dividends, and negative cash flows, and firms with dividends larger than sales revenue.

We match firm-level data from Global Vantage with our country-level data from various resources and require our main three country-level explanatory variables, shareholder rights index (SR), creditor rights index (CR), and labor rights index (LR), be available to each country included in our sample. To comply with the requirements of time-series cross-sectional regression, we drop the following countries with less than 30 firm-year observations, Ghana, Croatia, Jordan, Kenya, and Romania. Following literature on international dividends (LLSV 2000a; and Ferris et al. 2009), we dropped countries with mandatory dividend payment, namely Brazil, Chile, Colombia, Greece, and Venezuela. After applying these filters, our sample includes 164,419 firm-year observations from 19,147 unique firms from 46 countries during the period of 1990-2007. Table 2 describes sample information.

< Insert Table 2 here>

We use country-level variable, labor rights index (LR) as the proxy for the agency costs of employees. The shareholder rights index (SR) and creditor rights index (CR) are used as control variables.

LLSV (1998) develop a shareholder rights index. This shareholder rights index is widely used in literature (LLSV 2000a; 2000b; Pinlowitz et al. 2006; and Faccio 2001). Djankov et al. (2008) update LLSV(1998) shareholder rights index to make it more accurate. We use the updated anti-self-dealing index from Djankov et al. (2008) as our proxy for shareholder rights (SR).

Similar to shareholder rights index, Djankov et al. (2007) use creditor rights index to measure for country-level protection for creditors. Research using creditor rights index focuses on the

relationship between creditor rights and debt contract terms (Roberts and Sufi (2009)). Brockman et al. (2009) test the impact of creditor rights on dividend policy across countries and assert that dividend policy can be used by creditors as a substitute for weak creditor protection from country level. This approach implies that from the perspective of shareholders, there is an association between creditor rights and agency costs of creditors. Our independent variable CR is the creditor rights index from Djankove et al. (2007).

Labor rights index is used as a proxy for agency costs of employees. Roe (2004) asserts that a marginal increase in benefits of employees would be a marginal decrease in shareholders' value and that strong labor right provided by legal and political systems in fact cause agency costs to increase. Therefore, we use measures for labor rights as proxies for agency costs of employees.

There is an extensive literature on the relationship between labor rights and law and regulation of labor (Besley and Burgess (2003), Heckman and Pages-Serra (2000), and Lazear (1990)). Those studies check the law and regulatory provisions on such aspects as the difficulty of firing employees, the costs of firing employees, and the easiness of hiring employees and explore how employees' benefits are affected due to the differences in those provisions. In alignment with the above approach, Botero et al. (2004) analyze the regulation of labor comprehensively and suggest that regulation of labor markets protects employees in the following four areas: (1) forbidding discrimination in the labor market; (2) restricting the ranges of feasible contracts and raising costs of laying off employees; (3) empowering labor unions to negotiate with employers; and (4) regulating social insurance for employees. They develop a group of indices to measure for employee protection in each aspect. With regard to employees' power to pursue maximum benefits, Botero et al. (2004) use the labor union power index as a proxy for labor rights.

2.2 Methodology and research design

The major focus is to examine the impact of agency costs of employees on dividends. To measure the association between country-specific characteristics and agency costs of stakeholders, we use labor union power (LR) to measure for labor rights, a proxy for agency costs of employees.

To test corporations' dividend policy across countries, we use the Logit model to test the decision to pay dividends whereas Tobit model is used to test a number of dividends paid. The Logit model is specified as follows (firm subscription suppressed):

$$Prob(Payer_t = 1) = F(\alpha_1 + \alpha_2 RE_t + \alpha_3 ROA_t + \alpha_4 Cash_t + \alpha_5 TE_t + \alpha_6 Size_t + \alpha_7 G_t + \alpha_8 SR + \alpha_9 CR + \alpha_{10} LR) \quad (1)$$

Payer--- the dividend-payer dummy variable, equals to one if total dividends paid are positive, and zero otherwise;

RE--- the retained earnings divided by total equity for firm i at year t;

ROA--- the net income divided by total assets for firm i at year t;

Cash--- the cash balance scaled by total assets for firm i at year t;

TE--- the shareholders' equity scaled by total assets for firm i at year t;

Size--- the log of total assets in US dollars for firm i at year t;

G --- the sales growth rate, G= log ($sales_t$/$sales_{t-1}$) for each firm;

SR---the shareholder rights index at country level

CR--- the creditor rights index at country level

LR--- the labor rights index at the country level.

Since payout ratios are censored variables larger than zero, a Tobit model is used to test country and firm determinants of a number of dividends paid. The Tobit model is specified as follows (firm subscriptions suppressed):

$$Div\_S_t = \alpha_1 + \alpha_2 RE_t + \alpha_3 ROA_t + \alpha_4 Cash_t + \alpha_5 TE_t + \alpha_6 Size_t + \alpha_7 G_t + \alpha_8 SR + \alpha_9 CR + \alpha_{10} LR + \varepsilon_t \quad (2)$$

$Div\_S_t = Div\_S_t^*$ if $Div\_S_t^* > 0$, zero otherwise.

Consistent with LLSV (2000a), we use dividends to sales ratio as our payout ratio for each firm i at year t, Div_S, defined by cash dividend paid to common and preferred stockholders divided by net sales. Durnev and Kim (2005) argue that the differences in accounting practices across countries make the direct comparison of firm-level data biased. However, the inclusion of legal variables, in particular, anti-self dealing index, will partially take the accounting standards differences across countries into account, and therefore, control for these differences (Djankov et al. (2008)). Another bias may arise from the possibility that firms in different countries may have a different degree of incentive to manipulate accounting earnings through accounting tricks. Using dividend to sales ratio will mitigate this bias because the sales depend less on accounting conventions and are less likely to manipulate, as argued by LLSV (2000a). Using dividends to sales ratio also allows us to keep a larger sample size than using dividends to earnings ratio, because using dividends to earnings ratios results in eliminating firms with negative earnings.

For any missing values of total dividends items in Global Industrial file, we use the total amount of dividends paid from Global Issue file as a supplement. The total amount of dividends paid is an accumulated amount of dividends paid during a fiscal year in Global Issue file adjusted by currency exchange rate. The currency exchange rate information is from Global Currency file. Table 3 provides summary statistics for the dividend payout.

< Insert Table 3 here>

Selection of independent variables in the Logit and Tobit models is based on dividend theories, following prior research on dividends. Dividend theories include the agency costs theory, the signaling theory, the catering theory, the pecking order theory, and the life-cycle theory. Different dividend theories predict firm-level factors play different roles in the determination of dividend policy.

Consistent with the dividend theories, we use the following variables to control for firm-level factors: RE is the retained earnings divided by total equity. RE is widely used to test the life-cycle theory (DeAngelo et al (2006), Fama and French (2002)). Cash is the cash balance scaled by total assets. TE is the shareholders' equity scaled by total assets. G is the growth rate computed by annual log sales growth. LLSV (2000a) provide an argument for why sales growth is a good proxy for investment opportunities in across countries analysis. They assert that sales are less likely to be manipulated in financial statements considering the different accounting principles and conventions across countries. Thus sales growth rate is a more reliable measure for growth opportunities than other growth rates. Firm size is measured by nature log of total assets in US dollars, as used by Brockman et al (2009) and Faccio et al. (2001). Prior empirical studies show that dividend payment is highly related to profitability. Return on assets (ROA) is widely used as a profitability measure in literature (Bhattacharya 1979; Grullon, Michaely, and Swaminathan 2002). ROA is computed using the net income divided by total assets. Table 4 lists descriptive statistics for firm-level independent variables.

Following the prior literature, we also include other country-level variables to control country-specific economic factors. Table 5 lists all country-level variables.

< Insert Table 4 and 5 here>

III. Empirical results

3.1 Summary statistics

Summary statistics is presented in Table 3. Following the literature, we divide dividends sample into two sub-groups based on a country's legal origin (LLSV (1998)): common law countries and civil law countries. Table 3 panel A shows summary statistics for common law countries. In the common law country group, the median of payer ratio is 69.37% and the mean and median of payout ratio are 1.99% and 2.01%, respectively. In the civil law country group, the

median of payer ratio, the mean, and median of payout ratio are 58.98%, 1.5%, and 1.44%, respectively. Consistent with the literature (LLSV(2000a), Brockman et al. (2009)), common law countries have higher dividend payout ratio and are more likely to pay cash dividends than civil law countries do. Checking the distribution graph country by country reveals that large variations exist in dividend policy across countries, although at the firm level, factors that influence dividend policy are homogeneous. This cross-country variation in dividend policy leads us to explore the impact of country-level factors on dividend policy across countries[1].

<Insert Table 3 here>

3.2 Firm-level determinants of dividend policy

We start our analysis by running a regression using firm-level variables only. To address the outliers issue, we winsorize all firm-level variables at 5% level.[2]

We test firm determinants of a dividend policy by implementing the Logit model and the Tobit model with firm-level independent variables only. The regression results are presented in Tables 6 and 7. To control for industry effect, we run the Logit and Tobit models both using industry segment sample separately and using pooled sample. To get an unbiased estimation, we use robust clustering estimator of variance, controlling for the interdependence across observations.

< Insert Table 6 and 7 here>

The results of the Logit and Tobit models are pretty consistent across different industry segments. The coefficients of Logit and Tobit models are statistically significant, most at 1% except for coefficients of cash in Logit model. As predicted by the agency costs theory, and the life-cycle theory, and consistent with the prior research (Easterbrook (1984), DeAngelo et al. (2005), Li and Zhao (2008), and Brockman et al. (2009), our results show that corporations with higher profit and

[1] The country by country payout ratio graphs can be provided at request.
[2] We also used 1% winsorized sample and original sample to run all tests. The tests results don't change qualitatively.

more retained earnings and larger corporations are more likely to pay dividends and pay more amount of dividends if they are dividends payers. Corporations with more investment opportunities pay less or no dividends. Cash balance has a mixed effect on dividend policy with negatively significant coefficients in Tobit model and mixed coefficient signs in Logit model.

As discussed previously, we use country-level labor rights index as a proxy for agency costs of employees. Our analysis is implemented by running the pooled sample ordinary least square (OLS) regression with year and industry fixed-effects. Robust clustering standard errors are estimated to control for interdependence across firms.

3.3 Labor rights and dividend policy

We test the likelihood to pay dividends and amount of dividend payments under different labor rights using the Logit and Tobit model, respectively. LLSV (2000a) find the positive relationship between shareholder rights and dividend amounts and suggest that high dividends are the outcome of strong investor protection. Brockman et al. (2009) document the positive relationship between creditor rights and dividend payment decision and dividend amounts and argue that lower dividend payment is used as a substitute for weak creditor rights because creditors are likely to restrict dividend payment if creditors are not well protected.

With the same logic, we examine the relationship between employee rights and dividend policy across countries. Controlling for firm-level factors, we run year- and industry-fixed-effect Logit model with firm clustering standard error estimation using pooled sample. We also implement the same regression using sub-samples: common law country group, and civil law country group. To test the impacts of labor rights on dividend amounts, we implement both Tobit and OLS regression using pooled samples for three groups: common law country group, civil law country group, and the whole country group. To test the interaction and compounded effect of all stakeholders, we add creditor rights and shareholder rights indices to our regressions as control

variables. The Logit model results are presented in Table 8 and the Tobit model results are reported in Table 9.[3]

In Logit model, the coefficients of the labor rights index are significantly negative in full sample and in the civil law country sample. In common law country sample, the coefficient of labor rights index is significantly positive. When we test the SR, CR, and LR together, we document significantly negative coefficients of SR in full sample and civil law sample.

In Tobit model, coefficients of LR are insignificantly negative. The subsample regressions generate significant results, positive for common law countries and negative for civil countries. The coefficient of CR in civil law country sample becomes significantly negative. We use VIF to check the multicollinearity and the VIF does not show serious multicollinearity problem.

< Insert Table 8 and 9 here>

In both Logit and Tobit models, the civil law country samples generate consistent results for LR coefficients. The negative coefficient of LR reveals the negative relationship between labor rights and dividends, The results support our hypothesis, in which we assume the negative relationship between employee rights and corporations' dividends. Unlike debt repayment, dividend distribution is not a firm's obligation. The major source of dividends is corporations' profits, after all expense and costs including labor costs are deducted. As a result, shareholders are harder to remove free cash flows through paying dividends when they face stronger labor rights from labor law and regulations. This inability to mitigate agency costs of employees is exacerbated when shareholder rights are weak. That's why our tests results show the negative coefficients are more salient in civil law countries whose shareholder rights are weaker than common law countries.

[3] We run the OLS regression of dividend payout ratio but only report Tobit model results here. The OLS regression results are not qualitatively different from Tobit model results with regard to our research targets.

Our full sample and common law country sample generate results inconsistent with the prior research (LLSV (2000a), and Brockman et al. (2009), but the results will remain inconclusive without robustness check.

3.4 Robustness tests

This paper is to explore the impacts of country-level employee rights on dividend policy across countries, using firm-level variables as control variables. Our pooled sample regressions have two limitations. First, running pooled sample regression can not totally remove the disturbance of firm-level variables. Second, including all countries in our sample results in unequal weights in our sample. Some countries such as the US, Britain, and Japan have a much larger number of observations than other countries do. As a result, our results cannot exclude the excess impact of those big countries. To overcome such limitations, we use a two-stage regression model to remove the firm-level factors and to exclude the dominance of countries that have a large number of observations. We run the two-stage residual regressions for Tobit model[4].

In the first stage, following Chui et al. (2002), we construct an adjusted dependent variable by the following method. We generate the residual from Tobit regression and get the adjusted dividend ratio using the same procedure in the first stage. Then in the second stage, we run the following cross-national regression model:

$$MeanAdjDiv\_S_t = \beta X + \varepsilon \quad (3)$$

The two-stage regression results are presented in Table 11. After removing firm-level factors totally and controlling for imbalance sample issue through two-stage regression, our tests results stay statistically significant.

To address the omitting variable issue, we run the robust tests by adding additional country-level controlling variables and re-run the two-stage regression. Following the prior research, we

[4] We also run OLS and Tobit regressions using samples without the US, or Britain, or Japan, or all three. The significance of results stays the same essentially.

add both country-level corporate governance quality variables such as government quality index and ownership concentration index. The regression results are included in Table 11.

< Insert Table 11 here>

The above robust tests results show that the coefficients of our major target variable: labor rights index (LR), stays statistically significant. These significant results suggest that labor rights are negatively related to dividend payout, and this negative relation becomes stronger when shareholder rights are weak.

IV. Conclusion

This paper explores the relationship between employee rights and dividend policy across countries. The results of the study reveal the impacts of agency costs of employees on dividend policies are given a country's legal and political framework.

Based on the agency problem theory in finance, agency costs arise when the interests of agents are not aligned with those of principals. Current corporate governance theory focuses primarily on agency costs of managers and existing literature studies extensively on this aspect. This paper examines an interest group that is ignored by corporate governance studies. This interest group is employees of firms. With a different utility function from shareholders, employees seek various ways such as labor contracting, unionization, and the use of their voting rights on Politian to maximize their benefits and interests within firms. The increase in employee right is at expense of shareholders and agency costs of employees arise due to this reason. Constrained by a country's labor regulatory regime, shareholders will use firm behaviors to mitigate employees bargaining power so as to reduce the agency costs of employees. Paying cash dividends is one of such behaviors. Using labor right index as a proxy for agency costs of employees, we test the association between labor rights and dividend policies across countries.

Our empirical results reveal that labor rights are negatively related to firms' decision to pay dividends and dividend payment amounts. This relationship is reinforced to be more salient in civil countries where shareholder rights are weak.

The empirical results are robust by controlling for test model specification, and a series of country-level control variables. This is the first study that examines agency costs of employees in dividend policy explicitly.

This paper makes contributions to the literature on agency problems. It sheds light on the interaction relationship among shareholders, creditors, and employees. By testing the impact of agency costs of equity, agency costs of debt, and agency costs of labors on dividend policy, it suggests a new standpoint to study the agency costs of stakeholder. The empirical results of this study provide a new perspective to interpret international variation in dividend policies across countries.

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Table 1: Data Definitions, Measurements and Sources

Panel A: Firm level variables

Abbr	Variable	Measurement	Source
Debt	Debt ratio	Long-term debt/total assets	Global Industrial file
MTB	Market-to-book ratio	(BV of total assets-BV of equity +MV of equity)/total assets	Global Industrial and Global Issue
Profit	Profitability	EBITDA/total assets	Global Industrial file
Size	Size	Log of total assets in US dollars	Global Industrial file
Tang	Tangibility	Tangible assets/total assets	Global Industrial file
Div_S	Dividend payout ratio	Total cash dividends/sales	Global Industrial and Global Issue
RE	Retained earnings	Retained earnings/total equity	Global Industrial file
ROA	Return on assets	Net income/total assets	Global Industrial file
Cash	Cash	Cash balance/total assets	Global Industrial file
TE	Equity ratio	Shareholders' equity/total assets	Global Industrial file
G	Growth rate	Log of annual sales growth rate	Global Industrial file

Panel B: Country level variables

Abbr	Proxy for	Measurement	Source
SR	Shareholder rights	Anti-self-dealing index	Djankov et al (2008)
CR	Creditor rights	Creditor rights index	Djankov et al (2007)
LR	Labor rights	Labor union power index	Botero et al (2004)
Stock Market	Stock market development	Stock market capitalization/GDP	World Bank report
GOV_QUAL	Government quality	Government quality index	Kaufmann et al (2007)
OWNER_CON	Ownership structure	Ownership concentration index	LLSV (1998)
BDGDP	Bond market development	Private bond market capitalization/GDP	World Bank report
GDPG	Economic development	Annual GDP growth rate	World Bank report
Inflation	Inflation	Annual inflation rate	World Bank report
BKGDP	Banking development	Domestic bank deposits/GDP	IMF Statistic report
COM	Legal origin	Dummy variable equals one for common law origin countries and zero otherwise	LLSV (1998)

Table 2 Sample Description

Country	Primary	Manufacturing	Advanced manufacturing	Services	Total
	N	N	N	N	N
Argentina	5	81	65	45	196
Australia	1535	854	856	3338	6583
Austria	106	233	293	156	788
Belgium	108	319	330	361	1118
Canada	1371	828	763	2469	5431
Switzerland	46	436	954	735	2171
China	298	2389	3069	4453	10209
Czech Republic	10	13	15	30	68
Germany	186	1194	2307	2215	5902
Denmark	91	457	464	581	1593
Egypt	0	2	27	9	38
Spain	194	405	339	499	1437
Finland	45	345	528	421	1339
France	360	1448	1992	3094	6894
United Kingdom	1224	2523	2872	7491	14110
Hong Kong	55	233	302	598	1188
Hungary	6	51	46	44	147
Indonesia	118	609	358	498	1583
India	3	367	323	207	900
Ireland	52	184	98	299	633
Israel	8	113	103	116	340
Italy	110	583	857	599	2149
Japan	1995	5274	9885	14419	31573

Table 2 Sample Description (continued)

Country	Primary	Manufacturing	Advanced manufacturing	Services	Total
	N	N	N	N	N
Korea	92	469	742	362	1665
Sri Lanka	0	3	0	31	34
Mexico	83	212	170	301	766
Malaysia	740	1551	1768	1999	6058
Netherlands	113	466	497	747	1823
Norway	222	263	347	586	1418
New Zealand	20	168	61	457	706
Pakistan	10	114	63	27	214
Panama	0	15	14	18	47
Peru	51	23	35	33	142
Philippines	97	201	75	258	631
Poland	48	62	45	58	213
Portugal	65	146	84	164	459
Russian	25	40	22	57	144
Singapore	255	494	1202	1723	3674
Slovak Republic	13	17	3	0	33
Sweden	176	413	818	1069	2476
Thailand	152	694	565	794	2205
Turkey	9	87	128	71	295
Taiwan	145	823	3156	901	5025
United States	2578	8060	12753	14984	38375
South Africa	212	210	181	989	1592
Zimbabwe	4	10	1	19	34
Total	13036	33482	49576	68325	164419

Table 3 Dependent variables for dividend policy analyses

Panel A Common law countries

Div_S, is the cash dividends divided by sales. Country mean and median are reported over the sample period 1990-2007. Payer=1 if total dividends paid is positive and otherwise zero. Payer ratio is the percent of a number of payers in proportion to the number of observations over the sample period 1990-2007.

Country	Payer	Non-payer	Payer ratio	Div_S (mean)	Div_S (median)
Australia	3554	3029	53.99%	2.82%	2.77%
Canada	2495	2936	45.94%	1.46%	1.20%
United Kingdom	10847	3263	76.87%	2.04%	2.07%
Hong Kong	775	413	65.24%	4.32%	3.61%
India	780	120	86.67%	1.72%	1.66%
Ireland	436	197	68.88%	1.21%	1.24%
Israel	168	172	49.41%	1.47%	1.12%
Sri Lanka	31	3	91.18%	1.46%	1.56%
Malaysia	3988	2070	65.83%	1.82%	1.64%
New Zealand	502	204	71.10%	4.75%	4.89%
Pakistan	152	62	71.03%	3.61%	3.45%
Singapore	2567	1107	69.87%	2.28%	2.28%
Thailand	1204	1001	54.60%	3.23%	3.26%
United States	16851	21524	43.91%	0.73%	0.75%
South Africa	1178	414	73.99%	2.33%	2.48%
Zimbabwe	27	7	79.41%	1.93%	1.95%
Common law median	979	413.5	69.37%	1.99%	2.01%

Table 3 Dependent variables for dividend policy analyses

Panel B: Civil law countries

Country	Payer	Non-payer	Payer ratio	Div_S (mean)	Div_S (median)
Argentina	109	87	55.61%	3.03%	3.37%
Austria	570	218	72.34%	1.19%	1.19%
Belgium	730	388	65.30%	1.92%	1.93%
Switzerland	1620	551	74.62%	1.46%	1.44%
China	5124	5085	50.19%	2.18%	2.12%
Czech Republic	28	40	41.18%	2.12%	1.78%
Germany	3387	2515	57.39%	0.98%	0.96%
Denmark	1103	490	69.24%	1.10%	1.10%
Egypt	21	17	55.26%	10.58%	9.55%
Spain	971	466	67.57%	2.23%	2.07%
Finland	1074	265	80.21%	1.96%	2.25%
France	4006	2888	58.11%	1.30%	1.37%
Hungary	78	69	53.06%	1.18%	1.24%
Indonesia	814	769	51.42%	0.95%	0.80%
Italy	1333	816	62.03%	1.24%	1.32%
Japan	27422	4151	86.85%	0.51%	0.50%
Korea	1213	452	72.85%	0.27%	0.28%
Mexico	297	469	38.77%	0.76%	0.76%
Netherlands	1364	459	74.82%	1.48%	1.44%
Norway	812	606	57.26%	1.72%	1.64%
Panama	44	3	93.62%	3.52%	3.41%
Peru	85	57	59.86%	3.24%	3.16%
Philippines	266	365	42.16%	2.04%	1.73%
Poland	87	126	40.85%	1.26%	1.09%
Portugal	277	182	60.35%	1.50%	1.56%
Russia	100	44	69.44%	1.72%	1.69%
Slovak Republic	18	15	54.55%	2.02%	1.43%
Sweden	1533	943	61.91%	1.50%	1.42%
Turkey	159	136	53.90%	2.32%	1.99%
Taiwan	2209	2816	43.96%	1.14%	1.15%
Civil law median	771	420	58.98%	1.50%	1.44%
Sample median	796	413.5	61.97%	1.72%	1.64%

Table 4 Independent variables for dividend policy analyses

Panel A: Common law countries

RE is the retained earnings divided by total equity. ROA is the net income divided by total assets. Cash is the cash balance scaled by total assets. TE is the shareholders' equity scaled by total assets. Size is the log of total assets in US dollars. G is the growth rate computed by annual log sales growth.

Country	RE	ROA	Size	Cash	TE	G
Australia	-0.5419	-0.0177	4.5367	0.0798	0.5265	0.1449
Canada	-0.0318	0.0024	5.7989	0.0627	0.4940	0.1592
United Kingdom	0.0488	0.0197	5.1589	0.0862	0.4457	0.1073
Hong Kong	0.0595	0.0282	5.9289	0.0986	0.5424	0.1130
India	0.1865	0.0639	5.5046	0.0305	0.4137	0.1429
Ireland	0.0756	0.0285	5.4909	0.1212	0.4356	0.1515
Israel	0.2399	0.0411	6.0402	0.1000	0.4073	0.1310
Sri Lanka	0.3035	0.0424	5.1371	0.0522	0.4326	0.1611
Malaysia	0.0837	0.0281	4.7272	0.0257	0.4967	0.1101
New Zealand	0.0404	0.0438	5.3366	0.0266	0.4831	0.0717
Pakistan	0.1559	0.0693	4.5557	0.0408	0.4229	0.1274
Singapore	0.1395	0.0312	4.8187	0.0657	0.5059	0.0952
Thailand	-0.1521	0.0370	4.6235	0.0370	0.4315	0.0853
United States	-0.0729	0.0101	6.0871	0.0872	0.4650	0.1205
South Africa	0.3795	0.0717	5.9196	0.0970	0.4743	0.1502
Zimbabwe	0.5465	0.2233	3.6960	0.0840	0.4741	0.1594
Common law mean	0.0913	0.0452	5.2100	0.0684	0.4657	0.1269
Common law median	0.0797	0.0341	5.2478	0.0728	0.4696	0.1292

Panel B: Civil law countries

Country	RE	ROA	Size	Cash	TE	G
Argentina	0.0635	0.0395	7.0774	0.0101	0.4890	0.1037
Austria	0.2247	0.0251	5.9047	0.0680	0.3282	-0.0608
Belgium	0.0859	0.0289	5.5705	0.0471	0.3650	-0.1577
Switzerland	0.2770	0.0382	6.2431	0.0955	0.4328	0.0420
China	0.0819	0.0486	4.7718	0.1077	0.4648	0.2233
Czech Republic	0.2237	0.0314	6.8873	0.0350	0.5758	-0.0039
Germany	0.1060	0.0120	5.8442	0.0853	0.3448	0.0435
Denmark	0.4029	0.0339	5.2921	0.0822	0.4338	0.0611
Egypt	0.1640	0.0982	6.7457	0.0668	0.2953	0.1582
Spain	0.0748	0.0377	5.4422	0.0278	0.3965	-0.1918
Finland	0.3058	0.0384	6.0320	0.0692	0.3836	-0.0293
France	0.0399	0.0287	5.7792	0.0626	0.3557	-0.0239
Hungary	0.3714	0.0504	4.5444	0.0574	0.5752	0.1013
Indonesia	-0.1178	0.0353	-0.0870	0.0435	0.4311	-0.1699
Italy	0.0915	0.0187	3.1783	0.0226	0.3407	0.0225
Japan	0.4084	0.0143	5.4882	0.1215	0.3800	0.0210
Korea	0.0838	0.0242	1.7822	0.0477	0.3697	0.1365
Netherlands	0.1017	0.0449	6.2297	0.0605	0.3665	0.0419
Norway	0.2673	0.0148	5.4755	0.1039	0.3752	0.1142
Panama	0.3376	0.0641	8.6039	0.0592	0.4382	0.1025
Peru	0.1255	0.0678	5.9179	0.0321	0.5806	0.1287
Philippines	0.1235	0.0254	5.5990	0.0654	0.4477	0.0819
Poland	0.1361	0.0438	5.6376	0.0603	0.5174	0.1531
Portugal	-0.0812	0.0193	5.5266	0.0149	0.3609	-0.1989
Russia	0.3867	0.0793	6.6182	0.0414	0.5761	0.0029
Slovak Republic	0.1924	0.0287	6.1052	0.0704	0.5744	-0.0131
Sweden	0.2130	0.0109	5.6835	0.0769	0.4021	0.0945
Turkey	0.1732	0.0701	0.2060	0.0557	0.4484	-0.5101
Taiwan	0.0709	0.0402	5.9185	0.0935	0.4944	0.1443
Civil law mean	0.1701	0.0384	5.3110	0.0615	0.4325	0.0144
Civil law median	0.1361	0.0353	5.6835	0.0605	0.4311	0.0420
Sample mean	0.1417	0.0407	5.2815	0.0640	0.4441	0.0554
Sample median	0.1255	0.0353	5.5705	0.0627	0.4356	0.1013

Table 5 Shareholder rights, creditor rights, and labor rights indices and country-level control variables

Panel A: Common law countries

All variables are defined in table 1. SR, CR, and LR are the shareholder rights, creditor rights, and labor rights indices, respectively. GOV_GUL is government quality index. ECO_GLB is the economy globalization index. GDPG is the average GDP growth rate. Inflation is the average inflation rate. Bank is domestic bank deposits/GDP. Bond is the private bond market capitalization/GDP. Stock Market is the stock market capitalization/GDP

Country	SR	CR	LR	GOV_QUL	ECO_GLB	GDPG	Inflation	Bank	Bond	Stock Market
Australia	0.76	3	0.26	1.67	4.33	2.079	3.01	0.835	0.263	0.865
Canada	0.64	1	0.3	1.53	4.69	1.702	2.24	1.037	0.210	0.853
United Kingdom	0.95	4	0.3	1.76	4.5	2.112	2.48	1.267	0.156	1.312
Hong Kong	0.96	4	0.22	1.95	6.93	4.062	-4.73	1.575	0.123	2.803
India	0.58	2	0.03	-0.15	2.71	3.167	3.67	0.413	0.009	0.383
Ireland	0.79	1	0.65	1.75	6.15	4.587	4.03	0.961	0.111	0.602
Israel	0.73	3	0.3	0.91	4.87	2.17	2.88	0.899	.	0.534
Sri Lanka	0.39	2	0.7	-0.11	4.13	3.273	7.67	0.299	.	0.151
Malaysia	0.95	3	0.1	0.67	4.15	3.725	1.85	1.205	0.399	1.651
New Zealand	0.95	4	0.24	1.68	4.91	1.291	2.17	1.075	0.000	0.411
Pakistan	0.41	1	0.1	-0.39	3.48	2.559	8.85	0.356	0.000	0.183
Singapore	1	3	0.24	1.85	5.51	4.673	-0.44	1.116	0.159	1.640
Thailand	0.81	2	0.1	0.37	3.37	4.657	0.4	1.190	0.102	0.531
United States	0.65	1	0.139	1.47	4.44	1.927	1.87	0.578	0.949	1.132
South Africa	0.81	3	0.3	0.68	3.89	-0.021	7.67	0.673	0.144	1.640
Zimbabwe	0.39	4	0.2	-2.21	2.93	-0.305	131.23	.	.	0.417
Common law mean	0.736	2.563	0.261	0.839	4.437	2.604	10.928	0.899	0.202	0.944
Median	0.775	3.000	0.240	1.190	4.385	2.365	2.680	0.961	0.144	0.728

Table 5 Shareholder rights, creditor rights, and labor rights indices and country-level control variables

Panel B: Civil law countries

Country	SR	CR	LR	GOV_QUL	ECO_GLB	GDPG	Inflation	Bank	Bond	Stock Market
Argentina	0.34	1	0.3	-0.74	3.24	-0.284	7.83	0.274	0.047	0.316
Austria	0.21	3	0.52	1.53	5.13	1.945	1.5	1.230	0.328	0.196
Belgium	0.54	2	0.6	1.32	5.5	1.945	1.58	1.172	0.449	0.570
Brazil	0.27	1	0.25	0	3.44	0.87	9.33	0.577	0.087	0.310
Switzerland	0.27	1	0.25	1.45	5.16	0.98	0.86	1.716	0.439	1.891
Chile	0.63	2	0.12	1.41	4.63	3.779	4.1	0.546	0.159	0.865
China	0.76	2	0.14	-0.19	3.16	8.156	0.37	.	0.063	0.315
Colombia	0.57	0	0.078	0.1	3.41	1.244	9.12	0.353	0.005	0.178
Czech Republic	0.33	3	0.3	0.95	4.41	0.742	2.88	0.589	0.046	0.233
Germany	0.28	3	0.38	1.39	4.35	1.698	0.82	1.346	0.461	0.385
Denmark	0.46	3	0.8	1.81	4.42	1.618	2.13	0.962	1.099	0.486
Egypt	0.2	2	0.27	-0.44	3.41	2.74	3.41	0.709	.	0.300
Spain	0.37	2	0.13	1.06	4.81	2.068	3.81	1.172	0.228	0.566
Finland	0.46	1	0.84	1.7	5.15	2.424	1.52	0.714	0.284	0.902
France	0.38	0	0.09	1.06	4.79	1.728	1.41	1.040	0.450	0.606
Greece	0.22	1	0.354	0.79	4.65	1.451	3.45	0.738	0.023	0.389
Hungary	0.18	1	0.66	1.1	4.58	1.565	8.69	0.447	0.020	0.192
Indonesia	0.65	2	0.012	-0.26	3.54	3.853	12.4	0.446	0.014	0.223
Italy	0.42	2	0.4	0.84	3.64	1.99	2.48	0.870	0.358	0.340
Japan	0.5	2	0.24	1.27	4.16	2.247	-1.73	2.070	0.439	0.787

Panel B: Civil law countries (continued)

Country	SR	CR	LR	GOV_QUL	ECO_GLB	GDPG	Inflation	Bank	Bond	Stock Market
Korea	0.47	3	0.138	0.7	3.64	5.763	1.94	0.712	0.465	0.477
Morocco	0.56	1	.	-0.15	3.14	1.4	0.87	0.528	.	0.278
Mexico	0.17	0	0.4	0.43	3.55	1.335	9.7	0.314	0.074	0.282
Netherlands	0.2	3	0.28	1.65	5.57	1.726	3.42	1.339	0.416	0.946
Norway	0.42	2	0.8	1.34	4.64	2.489	4.86	0.716	0.215	0.378
Panama	0.16	4	0.12	0.33	4.35	1.358	0.55	0.710	.	0.215
Peru	0.45	0	0.05	0.11	3.85	-0.037	2.36	0.195	0.024	0.240
Philippines	0.22	1	0.12	-0.06	3.17	0.443	5.59	0.429	0.003	0.491
Poland	0.29	1	0.13	0.64	3.67	3.18	3.8	0.322	0.000	0.145
Portugal	0.44	1	0.35	1	4.86	2.787	3.7	1.144	0.188	0.312
Russia	0.44	2	0.63	-0.45	3.07	-0.063	31.22	0.220	0.000	0.293
Slovak Republic	0.29	2	0.5	1.08	4.22	1.063	5.55	0.565	0.000	0.074
Sweden	0.33	1	0.9	1.44	5.05	1.689	1.61	0.721	0.476	0.895
Turkey	0.43	2	0.12	0.21	3.75	1.429	45.38	0.289	0.002	0.189
Taiwan	0.56	2	0.35	0.94	.	5.691	-1.11	.	0.218	1.013
Venezuela	0.09	3	0.28	-1.35	3.13	-1.5	26.31	0.144	0.004	0.091
Civil law mean	0.377	1.722	0.340	0.667	4.150	1.986	6.159	0.745	0.215	0.455
Civil law median	0.375	2.000	0.280	0.890	4.220	1.694	3.415	0.710	0.159	0.316
Sample mean	0.487	1.981	0.315	0.720	4.240	2.176	7.626	0.792	0.211	0.605
Sample median	0.440	2.000	0.270	0.925	4.330	1.936	2.945	0.714	0.150	0.400

Table 6 Firm determinants of decision to pay dividends

This table presents the regression results of the Logit model, where the dependent variable, Payer, equals one if the firm pays dividends, otherwise equals zero. RE is the retained earnings divided by total equity. ROA is the net income divided by total assets. Cash is the cash balance scaled by total assets. TE is the shareholders' equity scaled by total assets. Size is the log of total assets in US dollars. G is the growth rate computed by annual log sales growth. Industry segment is defined by SIC code as in Table 2. Standard errors are estimated by controlling for firm clustering effects.

	Dependent Variable Payer				
	Primary	Manufacture	Advanced Manufacture	Services	Pooled
RE	1.2098***	1.2689***	1.5355***	1.1573***	1.3022***
	(9.47)	(11.24)	(17.16)	(19.52)	(29.21)
ROA	6.5990***	8.2283***	6.2202***	5.8567***	6.4623***
	(10.94)	(17.25)	(18.89)	(22.81)	(35.74)
Cash	0.4398	-0.8161**	-1.0764***	0.1378	-0.435***
	(0.93)	(2.26)	(3.89)	(0.63)	(2.91)
TE	-1.516***	-0.2926	-0.9985***	-0.995***	-0.898***
	(6.41)	(1.49)	(6.85)	(9.09)	(11.79)
Size	0.1664***	0.1599***	0.1416***	0.1159***	0.1359***
	(6.12)	(10.79)	(10.32)	(9.74)	(18.15)
Growth	-1.237***	-0.4690***	-0.6419***	-0.678***	-0.714***
	(8.06)	(6.05)	(9.07)	(11.42)	(17.02)
Constant	0.2742	0.1580	-0.0687	0.2918***	0.2083***
	(1.23)	(1.09)	(0.60)	(3.06)	(3.31)
Observations	11782	30478	44971	58648	145879

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 7 Firm determinants of dividend payout ratio

This table presents the regression results of the Tobit model, where the dependent variable, Div_S, is the cash dividends scaled by sales. RE is the retained earnings divided by total equity. ROA is the net income divided by total assets. Cash is the cash balance scaled by total assets. TE is the shareholders' equity scaled by total assets. Size is the log of total assets in US dollars. G is the growth rate computed by annual log sales growth. Industry segment is defined by SIC code as in Table 2.

	Dependent Variable Div_S				
	Primary	Manufacture	Advanced Manufacture	Services	Pooled
RE	0.0058***	0.0029***	0.0057***	0.0053***	0.0049***
	(9.32)	(10.28)	(22.53)	(20.04)	(32.10)
ROA	0.1735***	0.1585***	0.1353***	0.1721***	0.1580***
	(28.28)	(55.60)	(57.32)	(62.32)	(103.34)
Cash	-0.0315***	-0.0181***	-0.0177***	-0.0323***	-0.0275***
	(7.10)	(8.34)	(10.76)	(17.72)	(26.12)
TE	0.0217***	0.0230***	0.0141***	0.0200***	0.0194***
	(11.26)	(23.98)	(17.67)	(22.66)	(38.98)
Size	0.0039***	0.0029***	0.0018***	0.0022***	0.0025***
	(19.37)	(37.94)	(26.25)	(26.04)	(54.65)
G	-0.0109***	-0.0022***	-0.0047***	-0.0054***	-0.0048***
	(10.81)	(4.85)	(11.99)	(11.66)	(19.22)
Constant	-0.0194***	-0.0214***	-0.0157***	-0.0193***	-0.0191***
	(7.92)	(20.73)	(18.13)	(19.34)	(34.18)
Observations	11531	30409	44948	58495	145383
Pseudo-R^2	0.1344	0.1131	0.0906	0.1044	0.1019

Absolute value of t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 8 Labor rights and Decision to Pay Dividends

This table presents the regression results of pooled fixed-effect Logit model as the following (with firm subscription suppressed):

$$Prob(Payer_i = 1) = F(\alpha_1 + \alpha_2 RE_i + \alpha_3 ROA_i + \alpha_4 Cash_i + \alpha_5 TE_i + \alpha_6 Size_i + \alpha_7 G_i + \alpha_8 SR + \alpha_9 CR + \alpha_{10} LR)$$

Where the dependent variable, Payer, equals 1 if the firm pays dividends, otherwise equals zero. RE is the retained earnings divided by total equity. ROA is the net income divided by total assets. Cash is the cash balance scaled by total assets. TE is the shareholders' equity scaled by total assets. Size is the log of total assets in US dollars. G is the growth rate computed by annual log sales growth. SR, and CR are shareholder rights and creditor rights from Djankov et al. (2008) and Djankov et al. (2007), respectively. LR is the labor rights from Botero et al. (2004). The sample period is 1990-2007. Standard errors are estimated by controlling for firm clustering effects.

	Payer			
	Full sample	Full sample	Common law countries	Civil law countries
RE	1.3208***	1.2435***	0.8386***	3.4291***
	(28.73)	(27.02)	(19.02)	(36.71)
ROA	7.1445***	7.4904***	6.7300***	10.3439***
	(37.34)	(37.29)	(27.11)	(30.15)
Cash	-0.7523***	-0.6156***	-2.9419***	0.1837
	(5.04)	(3.93)	(12.25)	(0.78)
TE	-0.6202***	-0.7307***	-0.8857***	-0.0380
	(7.89)	(8.86)	(7.11)	(0.32)
Size	0.2124***	0.2016***	0.3755***	0.1643***
	(26.07)	(24.59)	(22.26)	(17.34)
G	-0.7057***	-0.6472***	-1.1441***	-0.3326***
	(18.61)	(17.28)	(20.00)	(9.72)
SR	-1.4585***	-1.2890***	0.0874	-0.6381***
	(13.71)	(12.00)	(0.27)	(4.05)
CR	0.7338***	0.7266***	0.8690***	0.2293***
	(33.75)	(33.00)	(19.18)	(8.56)
LR	-0.2547***	-0.1647*	1.7862***	-0.9253***
	(2.67)	(1.70)	(6.19)	(8.82)
Constant	-0.5990***	-0.8393***	-3.0674***	-0.2240
	(7.06)	(8.21)	(12.22)	(1.46)
Observations	145879	135349	68243	67106
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	No	Yes	Yes	Yes
Pseudo-R squared	0.2289	0.2311	0.3213	0.2517

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 9 Labor rights and Dividend Ratio

This table presents the regression results of pooled fixed-effect Tobit model as the following (with firm subscription suppressed):

$$Div\_S_t = \alpha_1 + \alpha_2 RE_t + \alpha_3 ROA_t + \alpha_4 Cash_t + \alpha_5 TE_t + \alpha_6 Size_t + \alpha_7 G_t + \alpha_8 SR + \alpha_9 CR + \alpha_{10} LR + \varepsilon_t$$

Where the dependent variable, Div_S, is the cash dividends divided by sales. RE is the retained earnings divided by total equity. ROA is the net income divided by total assets. Cash is the cash balance scaled by total assets. TE is the shareholders' equity scaled by total assets. Size is the log of total assets in US dollars. G is the growth rate computed by annual log sales growth. SR, and CR are shareholder rights and creditor rights from Djankov et al. (2008) and Djamkov et al. (2007), respectively. LR is the labor rights from Botero et al. (2004). The sample period is 1990-2007.

	Div_S			
	Common law countries	Civil law countries	Full sample	Full sample
RE	0.0058***	0.0040***	0.0042***	0.0045***
	(29.62)	(12.92)	(27.85)	(29.61)
ROA	0.1239***	0.2109***	0.1595***	0.1548***
	(60.21)	(89.23)	(105.06)	(101.45)
Cash	-0.0498***	-0.0067***	-0.0343***	-0.0315***
	(28.90)	(4.90)	(32.35)	(29.04)
TE	0.0169***	0.0267***	0.0241***	0.0236***
	(20.84)	(41.63)	(47.82)	(46.38)
Size	0.0047***	0.0022***	0.0034***	0.0032***
	(54.51)	(44.39)	(73.89)	(70.05)
G	-0.0135***	-0.0015***	-0.0046***	-0.0048***
	(22.19)	(6.16)	(18.62)	(19.27)
CR	0.0110***	-0.0006***	0.0073***	0.0073***
	(84.12)	(4.95)	(87.54)	(87.84)
LR	0.0141***	-0.0012**	-0.0009	-0.0008
	(8.11)	(2.29)	(1.58)	(1.54)
SR			-0.0057***	-0.0058***
			(30.87)	(30.48)
Constant	-0.0492***	-0.0182***	-0.0363***	-0.0316***
	(45.70)	(20.39)	(62.09)	(46.76)
Observations	67882	67057	145383	134939
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	No	Yes
Pseudo R squared	0.2162	0.1697	0.1661	0.1708

Absolute value of t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 10 Variance Inflation factors (VIF) of Tobit model

Variable	VIF	Tolerance	R-squared
SR	1.59	0.6306	0.3694
CR	1.53	0.6515	0.3485
LR	1.28	0.7826	0.2174
Mean VIF	1.47		

Table 11 Country Level Factors and Dividends

This table presents the regression results of the following model:

$MeanAdjDiv\_S_t = \beta X + \varepsilon$ Where X is a vector of country level variables. STKGDP, the stock market capitalization to GDP, is from World Bank. GOV_QUAL is the regulation quality of government, obtained from Kaufmann et al (2007). OWNER_CON is the ownership concentration index from LLSV (1998). The dependent variable, MeanAdjDiv_S, is the country mean of residuals of the following model (with firm subscription suppressed):

$Div\_S_t = \alpha_1 + \alpha_2 RE_t + \alpha_3 ROA_t + \alpha_4 Cash_t + \alpha_5 TE_t + \alpha_6 Size_t + \alpha_7 G_t + \alpha_8 SR + \alpha_9 CR + \alpha_{10} LR + \varepsilon_t$

where Div_S is cash dividends divided by total sales. RE is the retained earnings scaled by total assets. ROA is the net income divided by total assets. Cash is the cash balance scaled by total assets. TE is the shareholders' equity scaled by total assets. Size is the log of total assets in US dollars. G is the growth rate computed by annual log sales growth. SR, and CR are shareholder rights and creditor rights from Djankov et al. (2008) and Djankov et al. (2007), respectively. LR is the labor rights from Botero et al. (2004). The sample period is 1990-2007.

	MeanAdjDiv_S			
	Common law countries	Civil law countries	Full sample	Full sample
SR	0.0167**	-0.0090	0.0054	0.0072*
	(2.40)	(1.34)	(1.63)	(1.91)
CR	0.0033***	0.0001	0.0018***	0.0013**
	(3.13)	(0.25)	(3.59)	(2.01)
LR	-0.0094**	-0.0074***	-0.0080***	-0.0056***
	(2.51)	(3.88)	(4.58)	(2.64)
STKGDP				0.0000
				(0.25)
GOV_QUAL				0.0004
				(0.39)
OWNER_CON				0.0285***
				(6.52)
Constant	-0.0107**	0.0096***	0.0013	-0.0121***
	(2.01)	(2.70)	(0.59)	(5.23)
Observations	247	461	708	621
R-squared	0.2416	0.0414	0.0626	0.0901

Robust t statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%