

# Employment Protection and Payout Policy

Muhammad Farooq Ahmad,  
Christof Beuselinck, Helen Bollaert<sup>1</sup>

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## ABSTRACT

This paper examines the relationship between employment protection legislation (EPL) and corporate payouts. Employees are corporate claimants who compete with shareholders to extract economic rents generated by the firm, so management is influenced by workforce power via the EPL framework in setting its corporate payout policy. For a large international sample of 21 OECD countries for the period 1985-2013, we find that a one standard deviation increase in labor protection leads to a 5.07% (12.17%) lower dividend (total) payout. Consistent with the flexibility hypothesis, we find that EPL has a greater impact on payout in firms that are more resource-constrained such as labor-intensive firms, firms that face financial constraints and firms with higher operating leverage. The effects of tightening and loosening EPL are not symmetrical. Firms increase dividend payouts after employment protection is softened but are reluctant to cut dividends when employment protection is tightened. Our results provide important insights in the dynamics between labor law regulations and corporate financing decisions.

**KEYWORDS:** Labor protection laws; dividends; payout policy.

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## 1. Introduction

Financial economists have identified multiple economic determinants of payout policies. These are often related to agency problems, as well as signaling and tax clientele considerations (DeAngelo, DeAngelo and Skinner, 2009; Farre-Mensa, Michaely and Schmalz, 2014). A specific research stream has studied the way the interests of key non-financial stakeholders, such as employees, are protected in the corporate payout policy decision. In most

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1. The first author is from IÉSEG School of Management (France). The second author is from IÉSEG School of Management and LEM (France). The third author is from SKEMA Business School – Université Côte d'Azur (France). We thank the editor, Pascal François, and an anonymous referee for helpful suggestions. We also thank Marc DeLoof, Thomas Lambert, Paolo Mazza and conference participants at 2017 French Finance Association (AFF) conference in Valence (France), the 2017 FMA Annual Conference (Boston) and the 2017 Financial Engineering and Banking Society (FEBS) in Glasgow (United Kingdom) for their helpful comments.

studies, the proxy for employee protection is unionization and they show either mixed results (DeAngelo and DeAngelo, 1991; Matsa, 2010; Chen, Chen and Wang, 2015) or results that only survive for a subset of observations (Chino, 2016; He, Tian and Yang, 2015). In the current paper, we add more evidence for the effect of institutions by studying the relationship between employment protection laws (EPL) and corporate payout policies in an international setting.

The core debate around the stringency of employment protection and corporate payout policies is economically meaningful and policy relevant. Prior research in labor economics (e.g., Lazear, 1990; Bentolila and Bertola, 1990; Mortensen and Pissarides, 1999; Heckman, Pagés-Sierra, Cox Edwards and Guidotti, 2000; Botero, Djankov, La Porta, Lopez-de-Silanes and Shleifer, 2004) documents that EPL determines the structure of firing costs and that it has important effects on various macro-economic outcomes such as unemployment rates and long term productivity growth. Apart from these macro-economic effects, it is expected that EPL also affects corporate financing decisions. This rationale is rooted in the idea that employees are corporate claimants who compete with shareholders in extracting economic rents generated by the firm (Bronars and Deere, 1991; La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2000). The way management conducts its payout policy is therefore likely influenced by the workforce's power through the EPL framework. The predicted relationship between EPL and corporate payouts is, however, unclear. In line with the rent extraction argument, management may decide to set a *high* payout ratio as this leaves less corporate resources on the table for workforce claims. Alternatively, the flexibility argument suggests that management may set a *low* payout ratio because high EPL imposes additional constraints and fixed costs on firms, causing them to keep the cash internally for precautionary reasons. Building on the argument in He et al. (2015) we might also surmise that a low payout ratio is helpful in keeping a powerful workforce happy because it signals that shareholders are not extracting firm resources but rather keeping them to finance investments.

In our empirical analyses, we assess which of these alternative explanations dominates. We analyze dividend and total payout ratios for a large international sample of firms in 21 OECD countries over the 1985-2013 period to disentangle the causal effects that changes in EPL may have on corporate payout decisions. To mitigate the concern that our setting

potentially suffers from endogeneity in the case that EPL is correlated with country-year factors that also impact payout decisions, we run firm fixed effects models, which remove time-invariant unobservable heterogeneity. We also include variables that control for country-year-level macroeconomic conditions that may simultaneously affect EPL policy as well as corporate payout decisions, and include country-year fixed effects in certain specifications. To further reduce the concern of a potentially endogenous association between EPL and payout behavior, we introduce EPL shock analyses based on an indicator that captures long-run effects of changes in employment regulation similar to the interpretation in Simintzi, Vig and Volpin (2015). While we cannot conclusively rule out correlated omitted variable concerns, we believe that our design mitigates concerns about the most important factors.

Our main results show that EPL is negatively related to corporate payouts. We find that a one standard deviation increase in labor protection leads to a 12.17% reduction in total payout and a 5.07% reduction in dividend payout. Consistent with the flexibility argument, we find that the impact of EPL is greater in firms with higher resource constraints, such as in labor intensive firms; in firms with higher operating leverage; and in financially constrained firms. These additional findings underpin the idea that the introduction of heterogeneous treatment effects is consistent with economic intuition. Our results are robust to a battery of robustness checks, such as: (1) the exclusion of countries with little or no change in employment protection over the study period; (2) alternative definitions for dividend and total payout; (3) in horse-race regressions with unionization and collective bargaining variables; and (4) in dynamic panel estimations showing that EPL is not a by-product of changes in a country's macroeconomic or institutional environment. In EPL shock tests similar to Simintzi et al. (2015), we further find that firms react to softened employment protection by increasing dividend payouts but are reluctant to cut dividends when employment protection is tightened. However, total payouts do increase in case of negative employment protection shocks and decrease in case of positive shocks and this with quasi-similar magnitudes, suggesting that firms adjust total payouts to EPL inputs via their share buyback programs. The result is consistent with Brav, Graham, Harvey and Michaely (2005), who document that managers are loath to cut dividends but use share repurchases more flexibly.

Our findings add to the literature in several ways. First, the totality of our evidence points to a nuanced relation between EPL and payout decisions, offering policy-relevant insights on labor regulation and economic activity. While prior work mainly finds that increased labor adjustment costs from employment protection laws negatively impact economic growth and development at the macro-economic level (Autor, Kerr and Kugler, 2007; Besley and Burgess, 2004; Botero et al., 2004; Heckman et al., 2000), results at the corporate level have only recently become the center of investigation. Recent studies like Alimov (2015) and Dessaint, Golubov and Volpin (2017) examine the impact of changes in employment protection regulation on cross-border merger and acquisition (M&A) activity and firm-level deal outcomes but conclusions are somewhat ambiguous. While Alimov (2015) documents that countries with tightened employment regulation attract more foreign acquirers and greater post-deal synergies, Dessaint et al. (2017) show that major increases in employment protection reduce total takeover activity as well as combined firm gains. Our results are among the first to suggest that pro-labor regulation negatively affects corporate payout decisions and that the effects of labor protection shocks are not symmetrical and support the important signaling component of dividends.

Second, our paper adds to the literature arguing that shocks resulting from labor law reforms affect firms' valuation and fundamentals, thereby shaping corporate financial decisions. There is evidence that the increased operating risk stemming from employment protection reforms crowds out financial leverage capacity (e.g., Serfling (2016) for the U.S. and Simintzi et al. (2015) for an international sample). Supporting the idea that pro-labor laws increase the fixed component of corporate cost structures, Beuselinck, Markarian and Verriest (2018) show that the staggered adoption of employment at-will laws in the U.S. results into increased cash holdings and that investors value such increases positively, especially when firms are in need of precautionary savings. Contrary to impact studies of nation-wide labor protection, the impact of unionization on corporate resources and decision-making has been studied since the 1990s (e.g., Bronars and Deere, 1991; DeAngelo and DeAngelo, 1991; Matsa, 2010; Chyz, Leung, Li and Meng Rui, 2013; He et al., 2015; Chino, 2016) but has found mixed results. However, unionization is distinct from EPL. Stringent EPL laws affect a country as a whole, while levels of unionization differ among firms in the same country or even in the same industry. Higher levels of unionization potentially enable employees to negotiate with management at the

firm level thereby exerting rent extraction pressure. As far as we are aware, we are among the first to show that changes in nation-wide employment regulation impact corporate payout policy and that the effect is greatest for the most resource-constrained firms.

Third, our study is one of the first to provide international confirmation that the perceived constraints and costs of pro-labor laws on a firm's operating performance and cost of capital are a potentially important determinant of corporate payout policies. These results are also consistent with U.S. CEO survey findings in Brav et al. (2005) who conclude that agency, signaling and clientele effects are no longer necessarily seen as core drivers of corporate payout policies and that payouts are more likely explained by the perceived stability of future earnings.

Finally, our study documents a non-symmetrical effect of EPL shocks on payout. When EPL is loosened, firms increase their dividend payout. However, when EPL is tightened, firms do not reduce their dividend payout. In contrast, total payout including share repurchases decreases in response to higher EPL and increases in response to lower EPL to a similar degree. These findings are consistent with Brav et al. (2005), who report that managers believe dividends to be inflexible, and particularly difficult to revise downwards, while share repurchases provide the flexibility to adjust in either direction.

The remainder of the paper is structured as follows. In Section 2 we provide an overview of the related literature and formulate our hypotheses. Section 3 presents the sample, models and variables. Section 4 presents the results of our empirical analyses. Section 5 concludes.

## 2. Literature and hypotheses

### *2.1. Determinants of payout policy*

Payout policy has undergone some shifts over the last decades. Traditionally, cash is paid out to shareholders in the form of dividends. More recently, there has been a shift towards share repurchases (Jagannathan, Stephens and Weisbach, 2000). Changing trends in payout policy are not uniform. Although the propensity to pay dividends has decreased across the board (Fama and French, 2001), larger and older firms are more likely to pay dividends and younger firms are more likely to use share repurchases

(Grullon and Michaely, 2002). Further, it is found that payout ratios remain stable for the oldest listed firms and are declining for other firms, while share repurchases complement dividends among the oldest firms and substitute for dividends in other firms (Banyi and Kahle, 2014). Brav et al. (2005) document that dividends are perceived as less flexible than repurchases – managers are at pains to avoid cutting dividends. The findings of the studies above on U.S. samples are also reflected internationally. In a worldwide sample, Fatemi and Bildik (2012) find that the propensity to pay dividends and payout ratio is declining, and that larger firms are more likely to be dividend payers. Von Eije and Megginson (2008) show that in the European context, fewer firms pay dividends but the amount of dividends paid increases among payers.<sup>2</sup>

Existing research provides evidence about the determinants of payout policy, such as signaling, tax clienteles and catering. Evidence for signaling is somewhat lacking. The managers interviewed in Brav et al. (2005) do not consciously signal through payout policy although they are reluctant to cut dividends. Grullon, Michaely, Bernartzi and Thaler (2005) find no evidence that changes to dividends predict changes in firm profitability. Clientele and catering theories are supported in various studies. Becker et al. (2011) document the existence of geographical dividend clienteles in the US. Similar findings are reported in an international study (Jain and Chu, 2013). Baker and Wurgler (2004) find evidence for dividend catering, which they view as a “*disequilibrium version of the clientele equilibrium view in Black and Scholes (1974)*” (p. 274). Other papers document that firms cater for institutional investors (Desai and Jin, 2011) and catering can also be carried out through share repurchases (Jiang, Kim, Lie and Yang, 2013). International evidence on the tax preferential role between dividends and share repurchases is provided in Jacob and Jacob (2013). For a comprehensive international panel over the 1990-2008 period, these authors document that the tax penalty on dividends versus capital gains relates strongly to firms’ propensity to pay dividends and repurchase shares as well as to the amount of dividends paid and shares repurchased.

2. Research on the determinants of and international differences in capital structure and payout structures is a rich yet underexplored research area. For a study on 6 major economies, Denis and Osobov (2008) show that dividend payers are typically larger and more profitable but that outside the U.S. there is little support for a price premium for dividend payers. In comparing public and private firms, Rommens, Cuyvers and Deloof (2012) find that compared to public Belgian firms, private firms typically do not pay dividends, except if they belong to a larger business group. Aktas, Belletre and Cousin (2011) document that very small French business have a strongly negative relationship between financing deficit (including dividend payments) and external debt, suggesting that dividend payouts and investments decisions are financed by substantial levels of external debt.

## *2.2. Institutional characteristics and corporate payout policy*

An important stream of law and finance research tackles payout policy from a shareholder protection standpoint. Returning cash to shareholders through dividends or share repurchases can mitigate the risk of the manager investing in projects which provide him/her with private rents to the detriment of shareholders' interests (La Porta et al. 2000). In the agency approach, payouts are a type of bonding cost. Studies of firms whose characteristics exacerbate the agency problem provide evidence for the role of payout policy. In an international sample, La Porta et al. (2000), find support for an outcome model of dividends – firms make higher payouts to meet cash demands by minority shareholders who fear expropriation. In a study of dual class share firms, Jordan, Liu and Wu (2014) document that firms use payout policy to commit to shareholders, thereby avoiding the potential expropriation of one class of shareholders by another. Bonding motivations for payout policy are relevant to employees when they or their representatives can negotiate with the individual firm to extract rents, such as demanding investments that are beneficial to employees.

## *2.3. Employment protection laws and payout policies*

Employment protection and its organization at the institutional level has received attention from labor economists and policy makers. Employment protection is embedded in the workplace at different levels and works via (1) *collective labor* laws, (2) *individual employment* contract laws and (3) *social security* laws (Botero et al., 2004). The standard competitive economic model would see employment protection laws (EPLs) as “restrictions” that impose resource costs on contract freedom. For instance, rigid labor laws may make it difficult or overly costly to reduce wages, introduce flexible working hours, or to fire workers. Such rigidity discourages employment, and in line with these arguments, Botero et al. (2004) have found that more protective employment laws coincide with higher unemployment levels.<sup>3</sup> However, market frictions seem to suggest that in real-life examples, labor protection can also be helpful by enhancing productivity performance, eliminating massive lay-offs and provides an alternative to dismissal insurance (Addison and Teixeira, 2003).

3. An argument that may explain this rather counter-intuitive finding is that because of their inherent rigidity, labor laws do not allow for flexible lay-offs in periods of normal economic activity and hence will result in disproportionately high dismissals during economic downturns. However, it is generally accepted that stronger labor laws would increase the cost of dismissal and hence discourage lay-off decisions.

Changes in EPL impact labor adjustment costs and result in a shock in hiring and firing costs (Blanchard and Portugal, 2001). EPL impacts a firm's decision-making and flexibility. A number of studies have examined the channels through which EPL can affect operational performance with somewhat mixed findings. Some research concludes that higher levels of EPL lead to lower technical efficiency (Autor et al., 2007) and lower productivity (Bird and Knopf, 2009). On the other hand, EPL may have benefits for firms. Acharya, Baghai and Subramaniam (2013) find that more stringent dismissal laws foster innovation. Alimov (2015) shows that more protective labor laws attract foreign acquirers who are able to focus on undervalued local firms. Other prior research examines the effect of EPL on capital structure. In an international sample, Simintzi et al. (2015) document that employment protection reforms negatively impact financial leverage ratios by about 10% for firms located in countries that undergo a reform (treated firms) compared to firms domiciled in other countries (control firms). The authors interpret this to mean that employment protection increases a firm's fixed costs and hence reduces its financial leverage potential.<sup>4</sup> Karpuz et al. (2016) show for an international sample that in a response to more stringent employment protection regulation, firms increase their cash holdings and this effect is strongest for relatively small firms with high cash flow volatility and labor intensity. Beuselinck et al. (2018) document that the staggered adoption of pro-labor laws in the U.S. results in increased cash holdings and that investors value such increases positively, especially when firms are in need of precautionary savings.

There is a need for more research on whether and how corporations set payout policies in line with EPL in an international context. A related stream of literature examines the effect of unionization on payout policies in the US context. He et al. (2015) find that the dividend ratio (total payout ratio) of firms becoming unionized following an election is 8.7% (17.9%) lower the following year than in firms where the union election fails. Their results, however, are only verifiable for the observations surrounding the union election passage threshold and hence may suffer from weak external validity. Chino (2016) documents that unionization has heterogeneous effects on payouts as it is negative for low-profitability firms but positive

4. With a similar rationale but different focus, Banker, Byzalov and Chen (2013) investigate cost stickiness, i.e. the degree of asymmetry in cost response to decreases versus increases in sales (i.e. operating leverage). For a sample of 19 OECD countries, they find that firms operating in a country with more stringent EPL provisions (i.e., with a greater downward adjustment costs for labor) exhibit a greater degree of cost stickiness.

for high-profitability firms. Chen et al. (2015) find that labor power from unionization negatively impacts share repurchases but less so when repurchases can benefit the workforce, such as in the case of hostile takeover attempts or to counter the dilution effects of employee stock options.

The international perspective may provide additional insights into the way employment protection laws can shape corporate payout policies. Stronger employment protection laws may require firms to create buffers to absorb the higher operating risk associated with increased job protection. EPLs increase a firm's operating risk because under conditions of higher job security, it is more difficult for firms to fire employees when economic conditions deteriorate and this implicitly increases the fixed component of their cost structure (Banker, Byzalov and Chen, 2013; Messina and Valanti, 2007). In response to a relatively high EPL, firms may therefore accrue precautionary cash by reducing their payouts, thereby hedging against cash flow risk. The operating flexibility hypothesis suggests that more stringent EPLs *reduce* a firm's payout.

However, the logic may also be reversed if we consider rent extraction arguments such as those studied in Klasa, Maxwell, and Ortiz-Molina (2009) and Heckman et al. (2000). In that case, higher EPL may call for higher payouts. In cases where job security is high, corporations may respond by reducing cash positions to shelter accumulated reserves from employees' demands. This argument has been raised especially in the context of high union capture. Bronars and Deere (1991) model corporate strategic choices to reduce rent extraction by labor unions and conclude that in equilibrium, it is optimal to distribute all internal funds to shareholders. A similar logic is applied in the "deep pocket" argument by DeAngelo et al. (2009). High payouts are a means to self-protect against value-destroying wealth transfers to the workforce, which could result from high cash balances. The rent extraction hypothesis suggests that more stringent EPLs *increase* a firm's payout.

There are, however, two arguments casting doubt on the rent extraction hypothesis for nation-wide labor reforms. First, the EPL mechanism is not the same as that of unionization. The stringency of EPL refers to the likelihood of worker-favorable outcomes from the collective bargaining of social partners or from court rulings (OECD, 2004). Unions, by contrast, interact directly with employers on different areas of working conditions and may therefore exercise more direct rent extraction pressure. In line with this

logic, Checchi and Lucifora (2002) cite international evidence that although labor unions and union power have led to stronger employment protection in many European countries, these nation-wide initiatives, in turn, have weakened demand for union services. The aforementioned authors interpret the negative correlation between labor unions and employment protection laws as evidence that EPL in fact “crowds out” labor unions. Second, even if EPL stringency functioned in a similar way to unionization, the conjectured positive relationship between payouts and EPL may be expected only in the short run. In the long run, firms can respond by investing in research and development to develop less labor-intensive technologies (Heckman et al., 2000; Acharya et al., 2013). In spite of the counter-arguments, the rent extraction argument is an important theoretical underpinning that may drive the corporate payout decision. Our analysis enables us to determine which of the operating flexibility and the rent extraction hypotheses is dominant on average in our sample.

### 3. Data and Method

#### 3.1. *Variables of interest*

Our international sample of firms covers the period 1985 through 2013. The sample period is determined by the availability of EPL data. The EPL indicator is provided by the OECD and includes the same 21 countries as in Simintzi et al. (2015). The EPL score is a composite index that ranges from 0 to 6 and is estimated annually on the relative difficulty or ease of dismissing employees. Higher scores correspond to stricter employment protection. In our analyses, we use the Employment Protection for Regular Contracts (EPRC) score that captures the difficulty of dismissing employees relating to the following three items: (1) notification convenience, (2) notice and severance pay for no-fault individual dismissal, and (3) difficulty of dismissal.<sup>5</sup>

We then extract the universe of listed firms for the 21 EPL countries from the Worldscope database for which we have sufficient data for our multivariate analyses and robustness tests. Our dependent variables are Dividend Payout (Dividends/Earnings Before Extra-Ordinary Items) and Total Payout ([Dividends plus Share Repurchases]/Earnings Before Extra-Ordinary Items).

5. Full description of the EPRC variable can be found on: <http://www.oecd.org/els/emp/oecdindicatorsofemployment-protection.htm>

**Table 1. Sample Composition**

The table describes the composition by country. All variables are defined in Table A1.

Country	Nbr	Mean			25th Percentile			Median			75th Percentile			Standard Deviation		
		Dividend Payout Ratio	EPL	Total Payout Ratio	Dividend Payout Ratio	EPL	Total Payout Ratio	Dividend Payout Ratio	EPL	Total Payout Ratio	Dividend Payout Ratio	EPL	Total Payout Ratio	Dividend Payout Ratio	EPL	Total Payout Ratio
Australia	17,922	15.61	1.42	0.00	0.00	1.17	0.00	0.00	1.42	25.32	25.69	1.67	27.64	27.80	0.20	
Austria	1,470	27.39	2.58	0.00	0.00	2.37	25.04	28.34	2.75	44.50	52.08	2.75	27.07	32.52	0.19	
Belgium	1,776	27.65	1.81	0.00	0.00	1.76	25.17	30.33	1.81	45.64	56.82	1.81	27.08	35.74	0.06	
Canada	20,588	6.84	7.09	0.92	0.00	0.92	0.00	0.00	0.92	0.00	0.00	0.92	17.98	18.67	0.00	
Denmark	2,540	18.60	23.66	2.15	0.00	2.14	14.48	17.32	2.14	30.49	34.63	2.18	20.98	28.31	0.03	
Finland	1,224	36.69	40.86	2.18	0.00	2.17	41.10	43.48	2.17	60.00	66.67	2.17	30.74	34.92	0.04	
France	11,617	21.53	28.60	2.39	0.00	2.34	18.26	21.98	2.34	35.29	44.15	2.47	23.43	32.13	0.06	
Germany	11,238	24.28	27.28	2.75	0.00	2.68	9.44	13.63	2.68	45.00	49.08	2.87	28.72	32.50	0.11	
Greece	1,412	21.04	24.28	2.80	0.00	2.80	0.00	0.00	2.80	38.40	41.74	2.80	27.87	31.86	0.00	
Ireland	1,616	16.31	20.27	1.39	0.00	1.40	0.00	4.66	1.44	29.23	32.50	1.44	21.25	27.87	0.07	
Italy	3,676	26.36	32.83	2.76	0.00	2.76	23.77	27.69	2.76	45.41	53.15	2.76	27.46	34.91	0.00	
Japan	34,999	25.27	38.92	1.52	9.18	11.02	22.13	27.52	1.37	35.94	56.09	1.70	21.58	37.49	0.17	
Netherlands	3,687	26.87	31.12	2.90	0.00	2.84	30.19	32.72	2.89	41.15	44.91	2.89	24.01	29.57	0.08	
New Zealand	1,257	37.95	38.68	1.46	0.00	1.39	40.90	41.32	1.56	68.54	68.96	1.56	34.29	34.73	0.14	
Norway	2,920	15.42	16.49	2.33	0.00	2.33	0.00	0.00	2.33	27.78	29.41	2.33	22.83	24.58	0.00	
Portugal	836	23.64	35.49	4.47	0.00	4.42	9.81	20.07	4.58	45.56	62.73	4.58	28.43	41.38	0.26	
Spain	2,159	29.42	39.46	2.59	0.00	2.36	26.00	34.50	2.36	49.97	62.93	2.36	28.32	35.29	0.49	
Sweden	5,384	22.70	22.95	2.65	0.00	2.61	10.30	11.26	2.61	41.29	41.55	2.66	26.82	27.18	0.07	
Switzerland	3,821	25.37	40.44	1.60	0.00	1.60	25.28	32.83	1.60	38.55	61.18	1.60	23.51	37.66	0.00	
United Kingdom	29,020	25.25	26.22	1.12	0.00	1.03	24.00	24.43	1.20	42.87	43.62	1.20	25.40	27.03	0.08	
United States	101,054	8.23	24.08	0.26	0.00	0.26	0.00	0.00	0.26	0.00	29.67	0.26	18.59	42.20	0.00	

We do not use any data screens in our initial extraction but drop observations from the financials, utilities, and public administration sectors and observations with negative values for any of the following items: dividends, cash, total debt, sales, staff costs, and total assets. Our final sample consists of around 260,000 firm-year observations. We winsorize all financial ratio variables at the 1% level. A complete description of all variable definitions and calculation methods is reported in Appendix A1.

Table 1 presents an overview of the payout variables as well as EPL indices for all 21 countries studied. In line with prior international work on international payout policy (e.g., La Porta et al., 2000; von Eije and Megginson, 2012), we observe sizeable country differences for payout ratios. The mean dividend payout is highest for New Zealand (37.95%), Finland (36.69%) and Spain (29.42%) and is lowest for Canada (6.84%), the United States (8.23%) and Norway (15.42%). Average total payout is highest for Finland (40.86%), closely followed by Switzerland (40.44%) and Spain (39.46%) and is lowest for Canada (7.09%), Australia (15.71%) and Norway (16.49%). Regarding the EPL index, we observe that employment protection legislation is most strict in Portugal (4.47), the Netherlands (2.90) and Greece (2.80). By contrast, the countries that score lowest on the EPL composite index are the United States (0.26), Canada (0.92) and the United Kingdom (1.12).<sup>6</sup>

### 3.2. The Empirical Model

We estimate the effect of EPL on firm payout policy using the following specification:

$$y_{it} = \alpha_i + (\alpha_k \times \alpha_t) + \beta \cdot EPL_{jt} + \gamma \cdot X_{ijt} + \varepsilon_{it}, \quad (1)$$

where  $i$  denotes a firm and  $t$  a year. The dependent variable,  $y_{it}$ , is either payout ratio or total payout.  $\alpha_i$  and  $(\alpha_k \times \alpha_t)$  are firm and industry-year fixed effects respectively.  $EPL_{jt}$  is employment protection law index as defined above.  $X_{ijt}$  is a vector of control variables and  $\varepsilon_{it}$  the error term. The list of control variables comprises various firms characteristics that have been shown to relate to payout ratios in prior work and proxy for firm size, investment opportunities, and firm (retained) profitability

6. Note that for 5 countries, namely Canada, Italy, Norway, Switzerland and the United States, we do not observe any change in the EPL index over time. We run robustness analyses on a subset of observations where changes occur (Table 5) and additionally exploit EPL index changes in our empirical design (Table 9).

(e.g., Fama and French, 2001; DeAngelo et al., 2009; Denis and Osobov, 2008; Chino, 2016). More specifically, we control for Firm Size, Leverage, Cash Ratio, Return on Assets, Capital Expenditure, Asset Tangibility, Sales Growth, Tobin's Q, Retained Earnings and Acquisitions Expense. The general prediction is that larger firms, more profitable/cash-rich firms and firms with fewer investment opportunities pay out more dividends and/or buy back more shares. We estimate the model using ordinary least squares (OLS) regressions, correcting standard errors for heteroscedasticity and clustering at the country level.<sup>7</sup>

We also control for country-level differences in macro-economic conditions, heterogeneity in dividend tax treatments and the country-level of investor protection. More particularly, we control for GDP per capita, GDP growth, and a Recession Dummy to tease out variation in payout policies that depend on macro-economic conditions. Further, we control for dividend tax rates to capture differential tax treatments of dividends across countries (Jacob and Jacob, 2013). Finally, we control for Quality of Institutions and Investment Profile to account for time-varying country effects that proxy for differences in agency problems that are inherent to the institutional context, in the same vein as in La Porta et al. (2000).<sup>8</sup> Since time variation in corporate governance factors potentially determine firm policies as well, we add country-year fixed effects in some of our multivariate analysis and results remain unaltered. GDP and related variables are estimated using data from the World Bank website. Quality of Institutions and Investment profile are from the ICRG Country Risk Guide dataset.

In a next set of analyses, we seek to identify the channel through which EPL affects payout policy. We therefore estimate the following regression:

$$y_{ijt} = \alpha_i + (\alpha_k \times \alpha_t) + \beta_1 \cdot EPL_{jt} + \beta_2 \cdot I_{it} + \beta_3 \cdot (EPL_{jt} \times I_{it}) + \gamma \cdot X_{ijt} + \varepsilon_{it}, \quad (2)$$

In Equation (2) above, the variable  $I_{it}$ , is a measure that proxies for different firm characteristics for which we predict that the (changes in the) labor channel may impact payout decisions differently. Such additional

7. Note that clustering standard errors at the firm-level leads to similar inferences.

8. In unreported sensitivity analyses we additionally control for Government Accountability, a proxy for government's responsiveness to its people. We do so to capture a different dimension of Rule of Law that relates to political freedom. Guedhami, Kwok and Liang (2017) demonstrate that the dampened expected investment prospects in low political freedom countries is associated with higher corporate payouts, on average.

analyses provide us with more insights into the mechanisms behind the observed relationship and give us with more certainty that if an unobservable factor drives our results, then this should affect all firms uniformly. First, and consistent with the idea that labor restrictions are more important in firms that have more labor-costs at stake, we predict larger effects in labor-intensive firms. Second, we expect to observe larger effects in firms that are already constrained in their payout flexibility like when they have higher operating leverage to start from. This prediction is warranted since Simintzi et al. (2015) argue that less flexible labor markets result in an average increase in fixed labor costs, which in turn causes a crowding out of financial leverage. Similarly, it can be expected that high labor rigidity is limits the payout flexibility for financially constrained firms (i.e., firms that are identified as having little access to additional capital).

## 4. Results

### 4.1. Descriptive Statistics

Table 2 reports descriptive statistics on the dependent variables and firm-level as well as country-level control variables. The mean dividend payout ratio stands at 16.22%, consistent with 15.3% for a comparable sample in Brockman et al. (2014). The total payout ratio is somewhat higher and corresponds to a payout strategy of about one quarter of earnings redistributed to shareholders in the form of dividends and repurchases combined (25.51%). However, both dividend payout and total payout show significant variations and the median firm in our sample is not paying out any dividends.<sup>9</sup> Mean EPL for the countries in our sample is 1.14, with an interquartile range of 1.44.

Mean values for most firm-level variables are consistent with Simintzi et al., 2015, with an identical mean leverage of 0.26 in our sample and a similar mean level of tangibility (0.30 compared to 0.31 in Simintzi et al. (2015)). By contrast, our sample firms are on average less profitable over the observed sample period (-0.02 for the median firms), a finding that may be explained by the fact that we do not apply data filters related to firm size or

9. Note that the large number of observations from the U.S., the U.K. and Canada drives this observation, because these countries have relatively low payout ratios. To test for the robustness of our results for the inclusion/exclusion of these countries, we perform influential country analyses below (Table 5).

**Table 2.** Summary Statistics

The table reports the summary statistics of variables. All variables are defined in Table A1.

Variables	Nbr	Mean	25th Percentile	Median	75th Percentile	Standard Deviation
<i>Dependent Variable</i>						
Payout Ratio	260,216	16.22	0.00	0.00	29.51	23.73
Total Payout	259,928	25.51	0.00	0.00	40.82	36.57
<i>Variable of Interest</i>						
EPL Index	260,216	1.14	0.26	1.03	1.70	0.88
<i>Firm Characteristics</i>						
Firm Size	260,216	11.75	10.27	11.81	13.35	2.48
Leverage	260,216	0.26	0.03	0.18	0.35	0.42
Cash Ratio	260,216	0.19	0.04	0.11	0.25	0.22
Return on Assets	260,216	-0.09	-0.05	0.06	0.11	0.92
Capex	260,216	0.06	0.02	0.04	0.08	0.08
Tangibility	260,216	0.30	0.09	0.24	0.44	0.25
Sales Growth	151,522	0.22	-0.05	0.08	0.23	0.97
Tobin's Q	151,522	2.35	0.88	1.60	2.84	5.05
Retained Earnings	151,522	5.07	1.00	3.47	7.30	8.87
Acquisitions Expense	151,522	0.02	0.00	0.00	0.01	0.50
<i>Country Characteristics</i>						
$Ln(\text{Per Capita GDP})$	260,216	10.46	10.23	10.50	10.72	0.33
GDP Growth	260,216	2.22	1.61	2.46	3.56	1.95
Dividend Tax Rate	260,216	34.89	19.93	40.00	46.41	14.65
Recession	260,216	0.13	0.00	0.00	0.00	0.34
Quality of Institutions	151,522	13.82	13.00	14.00	14.75	1.11
Investment Profile	151,522	10.40	9.67	11.50	12.00	2.03

profitability.<sup>10</sup> In line with the idea that our sample contains more growth firms, the mean Tobin's Q value is 2.35 while it is 1.88 in Simintzi et al. (2015). The average  $Ln(\text{per capita GDP})$  is 10.46, corresponding to a dollar value of \$34,891, and GDP grows at an average rate of 2.22% annually over the sample period. On average, dividends are taxed at levels above

10. Note that our results remain qualitatively unchanged when we do apply data filters with respect to firm size and/or profitability. In order to avoid unnecessary bias in the sample selection, we decide to focus on the largest sample available.

30 percent (34.89%). 13 percent of all observations correspond to official recession periods according to OECD definitions (i.e., in country-periods where GDP growth is negative in two consecutive quarters).

#### 4.2. *Employment Protection Legislation and Corporate Payouts: Main Results*

Results for the impact of EPL on dividend payout ratio are presented in Table 3. Column 1 displays results when EPL is the sole right hand side variable. Column 2 provides results with firm-level controls, which are augmented with country-level controls in Column 3. Column 4 shows results with a full set of firm-level controls, with missing variables causing the sample size to reduce by more than 40 percent. Finally, model 5 shows results when all firm and country level control variables are included. Firm fixed effects and industry-year fixed effects are included in all specifications. Robust standard errors are clustered at the country level.

**Table 3.** Employment Protection and Dividend Payout

The table presents the results from OLS regression models. The dependent variable is the dividend payout ratio. The variable of interest is EPL Index. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

	1	2	3	4	5
<i>Variable of Interest</i>					
EPL Index	** -5.711 (2.67)	** -5.984 (2.66)	** -5.758 (2.66)	** -6.565 (2.33)	** -6.178 (2.19)
<i>Firm Characteristics</i>					
Firm Size		*** 1.204 (3.71)	*** 1.213 (3.72)	*** 1.610 (3.31)	*** 1.616 (3.31)
Leverage		-1.704 (1.59)	-1.696 (1.60)	-2.041 (1.62)	-2.043 (1.62)
Cash Ratio		*** 2.555 (3.94)	*** 2.552 (4.03)	*** 3.529 (5.26)	*** 3.535 (5.27)
Return on Assets		*** -0.337 (3.72)	*** -0.334 (3.74)	** -0.316 (2.24)	** -0.321 (2.31)
Capex		2.040 (1.08)	2.093 (1.11)	2.626 (0.98)	2.599 (0.98)

	1	2	3	4	5
Tangibility		-0.191 (0.23)	-0.265 (0.31)	1.051 (1.45)	1.032 (1.41)
Sales Growth				***-0.090 (5.12)	***-0.094 (5.28)
Tobin's Q				-0.006 (0.62)	-0.006 (0.64)
Retained Earnings				***0.072 (3.00)	***0.073 (3.00)
Acquisitions Expense				0.077 (1.67)	0.077 (1.65)
<i>Country Characteristics</i>					
Per Capita GDP			0.487 (0.26)	-1.516 (1.11)	-1.867 (1.41)
GDP Growth			-0.155 (1.26)	-0.196 (1.43)	*-0.255 (1.95)
Dividend Tax Rate			-0.035 (1.19)	-0.040 (1.39)	-0.038 (1.57)
Recession			*-0.762 (2.04)	-0.657 (1.50)	-0.697 (1.59)
Quality of Institutions					0.129 (0.36)
Investment Profile					**0.421 (2.59)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Number of Observations	260,216	260,216	260,216	151,603	151,522
Adjusted R <sup>2</sup>	0.635	0.637	0.637	0.674	0.674

The coefficient on the EPL index variable is negative and significant across the board. This is consistent with the operating flexibility hypothesis and confirms that stricter EPL reduces payout – potentially because the firm feels the need to withhold cash from shareholders to create a buffer to absorb potential shocks, which cannot be resolved through flexible labor practices. In economic terms, a one standard deviation increase in labor protection leads to a 5.07% ( $=0.88 \times 5.758$ ) decrease in dividend payout.

Consistent with the existing literature on dividend policy, larger and more cash-rich firms pay higher levels of dividends. In contrast with expectations, firms that are more profitable pay out less dividends.<sup>11</sup>

Table 4 shows results for total payout ratio. Specifications are identical to those presented in Table 3. Once again, the coefficient on EPL, the variable of interest, is negative and significant in all models, in line with the operating flexibility hypothesis. The results are economically meaningful – taking the coefficient for EPL in Model 3, we find that a one standard deviation increase in EPL decreases total payout by 12.71%. Our main findings indicate that both dividend payout ratio and total payout ratio are negatively related to employment protection strictness.

**Table 4.** Employment Protection and Total Payout

The table presents the results from OLS regression models. The dependent variable is the total payout ratio. The variable of interest is EPL Index. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

	1	2	3	4	5
<i>Variable of Interest</i>					
EPL Index	** -17.339 (2.41)	** -17.604 (2.40)	** -13.829 (2.31)	** -18.704 (2.12)	* -17.365 (2.08)
<i>Firm Characteristics</i>					
Firm Size		***1.456 (5.38)	***1.676 (5.75)	***2.406 (7.04)	***2.421 (7.18)
Leverage		***-2.819 (2.99)	***-2.639 (3.25)	***-3.281 (3.30)	***-3.297 (3.35)
Cash Ratio		***4.229 (4.85)	***4.371 (5.11)	***6.720 (7.35)	***6.712 (7.19)
Return on Assets		***-0.340 (3.86)	***-0.389 (4.59)	***-0.327 (2.99)	***-0.342 (3.17)
Capex		*3.661 (1.78)	*3.847 (1.81)	3.370 (1.06)	3.191 (1.00)
Tangibility		-0.440 (0.48)	-0.585 (0.59)	1.400 (1.65)	1.303 (1.46)

11. Note that this negative relationship disappears when we exclude small, unprofitable observations suggesting that payout structure is not homogenous across firm size differentials.

	1	2	3	4	5
Sales Growth				** -0.162 (2.60)	*** -0.177 (2.95)
Tobin's Q				-0.019 (1.19)	-0.021 (1.29)
Retained Earnings				***0.115 (3.55)	***0.115 (3.53)
Acquisitions Expense				0.077 (0.81)	0.074 (0.76)
<i>Country Characteristics</i>					
Per Capita GDP			*** -9.532 (3.55)	** -8.346 (2.52)	** -9.592 (2.26)
GDP Growth			-0.007 (0.04)	-0.317 (1.36)	* -0.512 (1.96)
Dividend Tax Rate			** -0.093 (2.38)	*** -0.165 (4.10)	*** -0.158 (5.03)
Recession			** 1.236 (2.16)	0.399 (0.49)	0.276 (0.26)
Quality of Institutions					0.572 (0.67)
Investment Profile					*** 1.634 (3.18)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Number of Observations	259,928	259,928	259,928	151,581	151,500
Adjusted R <sup>2</sup>	0.557	0.559	0.56	0.595	0.595

One concern with these results is that they could be driven by some countries with specific characteristics, especially those whose EPL index is sticky over the sample period. Table 5 Panel A shows our results when we drop different countries from the analyses. First, we drop each country one-by-one and additionally drop all countries with constant EPL over the period of observation. The coefficient on the EPL variable remains negative and significant for dividend payout (columns 1 to 6) and total payout (columns 7 to 12) in all cases, consistent with the baseline analyses.

**Table 5. Robustness Checks**

The table reports the results of different robustness tests on dividend payouts and total payouts. Panel A presents the results of various sub-samples. Columns (1)-(6) of panel A report the results when dependent variable is dividend payout and columns (7)-(12) report the results when the dependent variable is total payout. Panel B presents the results when we use alternative definitions of dependent variables. Columns (1)-(4) of panel B report the results when the dependent variable is dividend payout and columns (5)-(8) present the results when the dependent variable is total payout. Panel C presents the results of 'Horse Race' regressions of EPL index and collective bargaining variables (*Union Density and Bargaining Coverage*). Columns (1)-(2) of panel C report the results when the dependent variable is dividend payout and columns (3)-(4) present the results when the dependent variable is total payout. The variable of interest in all panels is EPL Index. We include the same set of controls as in column (3) of Table 3 for all models in all panels. Inclusion of fixed effects (FE) is indicated at the end. All variables are defined in Table A1. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

*Panel A. Different Sub-samples:*

	Dividend Payout						Total Payout					
	1	2	3	4	5	6	7	8	9	10	11	12
<i>Variable of Interest</i>												
EPL Index	**-6.098 (2.51)	**-5.709 (2.72)	**-5.642 (2.66)	**-5.790 (2.62)	**-5.659 (2.71)	**-5.641 (2.40)	**-13.002 (2.57)	**-14.105 (2.35)	**-13.744 (2.31)	**-13.855 (2.29)	**-13.687 (2.31)	**-12.830 (2.68)
United States												
Drop	Yes						Yes					
Canada Drop		Yes						Yes				
Norway Drop			Yes						Yes			
Switzerland				Yes						Yes		
Drop					Yes						Yes	
Italy Drop						Yes						Yes
All Drop							Yes					Yes

	Dividend Payout					Total Payout						
	1	2	3	4	5	6	7	8	9	10	11	12
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	159,162	239,628	257,296	256,395	256,540	128,157	158,973	239,374	257,013	256,115	256,252	128,015
Adjusted R <sup>2</sup>	0.579	0.631	0.639	0.64	0.641	0.562	0.571	0.551	0.561	0.563	0.563	0.558

Panel B. Alternate Definitions of Dependent Variables:

Variable of Interest	Dividend/AT		Dividend/SA		Dividend/MV		ln(1+Dividend)		Total Payout/AT		Total Payout/SA		Total Payout/MV		ln(1+Total Payout)	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
EPL Index	**-(2.27)	-0.158	**-(2.55)	-0.168	**-(2.21)	-0.801	**-(2.19)	-0.809	*(1.96)	-0.535	**-(2.23)	-0.603	**-(2.32)	-5.514	***-(2.284)	(3.40)
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	231,240	219,670	198,720	259,959	231,024	219,504	204,648	259,928	231,024	219,504	204,648	259,928	231,024	219,504	204,648	259,928
Adjusted R <sup>2</sup>	0.690	0.683	0.671	0.792	0.623	0.611	0.657	0.762	0.623	0.611	0.657	0.762	0.623	0.611	0.657	0.762

Panel C. 'Horse Race' Regressions with Collective Bargaining Variables:

<i>Variables of Interest</i>	Dividend Payout			Total Payout
	1	2	3	4
EPL Index	** -6.979 (2.39)	** -8.114 (2.84)	* -12.238 (2.08)	*** -15.594 (3.33)
Union Density	-3.034 (0.26)		*46.414 (1.80)	
Bargaining Coverage		2.512 (0.52)		**15.466 (2.13)
Firm Characteristics	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes
Number of Observations	218,537	217,975	218,354	217,792
Adjusted R <sup>2</sup>	0.655	0.655	0.582	0.582

To rule out the possibility that our findings are driven by the measurement of the payout ratio variables, we report extra results in Panel B of Table 5, after we re-estimate our results based on four alternative measures of both dividend payout and total payout. First, we use alternative deflators and scale dividends paid by (1) Total Assets, (2) Sales, and (3) Market Value of Equity. Finally, to overcome the problem that scaling in general drives the results, we report results for log-transformed dividend payout (total payout), and where zero payouts are replaced by one. Across all specifications, our results remain qualitatively unchanged and continue to support the view that strictness of employment protection relates negatively to dividend and total payout.

One additional objection to our focus on EPL could be that it captures the same underlying as unionization or collective bargaining. If this were the case, our results could be caused by collective actions that we then could wrongly attribute to nation-wide EPL. However, the effect of EPL is potentially different from the two alternative labor protection concepts because it captures the national legal protection of workers and not their bargaining power at the individual firm or sector level; a conjecture that is consistent with Checchi and Lucifora (2002). When examining simple country-year level correlations between EPL and union density ( $N=432$ ; results are non-tabulated but available upon request), we observe only a marginally significant and positive Pearson correlation coefficient (0.09;  $p<0.10$ ) supporting the idea that EPL is not capturing the same underlying concept as unionization power. The Pearson correlation between EPL and bargaining coverage on the other hand is significantly positive (0.61;  $p<0.01$ ) suggesting that higher EPL goes hand in hand with better bargaining coverage on average. To further tease out the effect of EPL versus alternative pro-labor mechanisms, we therefore include union density and bargaining coverage variables in our main estimation and run horse race regressions to see whether EPL impact survives after the inclusion of union and collective bargaining information. We use Union Density and Collective Bargaining from the ICTWSS database (Visser, 2016). Union density corresponds to net union membership as a proportion of wage and salary earners in employment. It ranges from zero to one (100%) with higher values representing greater union density. Bargaining coverage is the number of employees covered by collective (wage) bargaining agreements as a proportion of all wage and salary earners in employment with the right to

bargain. It ranges from zero to one with higher values representing broader bargaining agreement coverage.

Panel C of Table 5 shows that the coefficient on EPL remains negative and significant, while the coefficients on union density and bargaining coverage are not significant for dividend payout. For total payout, we observe a significant association between bargaining coverage and total payout. The relationship, however, is positive suggesting that more bargaining coverage results in higher payouts.<sup>12</sup> Nevertheless, the negative association between EPL index and total payout remains significantly negative. These results lend further credence to the idea that the EPL variable captures something distinct from unionization or collective bargaining.<sup>13</sup>

#### *4.3. Employment Protection Legislation and Corporate Payouts: Cross-sectional Variation*

We next turn our attention to the cross-sectional heterogeneity in an attempt to further identify the economic channels through which EPL affects corporate payout policy. As described above, we identify firms for which the rigidity of the labor channel is more likely to affect the payout structure than for other firms. More particularly, we focus on labor-intensive firms (Table 6), on firms operating in sectors with above-median levels of operating leverage [i.e., in sectors with a relatively high proportion of fixed costs to total costs] (Table 7), and on firms that are characterized as being financially constrained (top quartile of observations) as defined by Whited and Wu (2006) in Table 8.

Table 6 presents results for the effect of labor intensity. We expect to find that firms with higher levels of labor intensity will be more liable to adjust their payout to EPL. Results are in models 1 and 2 for dividend

12. Note that although we do not further investigate this finding, our result is in line with the rent extraction argument suggesting that firms operating in settings where wage bargaining is better developed, corporate payouts are higher, perhaps to leave less money on the table that could be claimed by a strong employee workforce. In addition, it is worth mentioning that although EPL and bargaining coverage are highly correlated, results are very similar when we insert bargaining coverage separately and in combination with EPL. Moreover, the Variance Inflation Factors (VIFs) are always below 10, mitigating the concern of potential multicollinearity in our results.

13. Another concern that may arise is that EPL can be a by-product of changes in a country's macroeconomic or institutional environment and that our controls are potentially not sufficient to capture such dynamics. We therefore regress the EPL index on a series of lagged macroeconomic and institutional variables. We also include the lagged EPL index because the future level of EPL in a given country is dependent on the current level – countries with higher (lower) levels of EPL have less opportunity to increase (decrease) employee protection provisions. We use the Arellano and Bond (1991) method to estimate the dynamic panel regression. Results are in table A.2. The only significant predictor of the EPL index is the lagged EPL index. None of the macroeconomic or institutional variables is significant.

payout ratio and in models 3 and 4 for total payout ratio. Columns 2 and 4 include country-year fixed effects to mitigate concerns that concurrent country-level changes, such as institutional or corporate governance reforms, are affecting our results. Results suggest that the negative association between EPL index and payouts is primarily driven by labor-intensive observations. In fact, while the EPL coefficient remains negative for the least labor intensive observations, it is no longer significant for dividend payout ( $p > 0.10$ ) and only marginally significant ( $p < 0.05$ ) for total payout. However, for the interaction term on EPL  $\times$  Labor intensity, we observe a strongly significant and negative coefficient (-1.145;  $p < 0.01$  for column (1)). Results are similar for total payout observations.

**Table 6.** Cross-Sectional Heterogeneity – Labor Intensity

The table presents the results from OLS regression models. Columns (1) and (2) report the results when dependent variable is Dividend Payout, columns (3) and (4) report the results when dependent variable is Total payout. The variables of interest are EPL Index and interaction term. We include the same set of controls as in column (3) of Table 3 for all models in all panels. All variables are defined in Table A1. Inclusion of fixed effects (FE) is indicated at the end. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

	Dividend Payout		Total Payout	
	1	2	3	4
<i>Variables of Interest</i>				
EPL Index	-3.590 (1.55)		*-4.485 (1.90)	
EPL Index x Labor Intensity	***-1.145 (3.05)	***-1.180 (2.94)	***-1.217 (2.90)	***-1.427 (3.03)
Labor Intensity	**1.146 (2.24)	*1.102 (1.98)	**1.311 (2.30)	**1.511 (2.30)
Firm Characteristics	Yes	Yes	Yes	Yes
Country Characteristics	Yes		Yes	
Firm Fixed Effects	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes
Country -Year Fixed Effects		Yes		Yes
Number of Observations	81,610	81,610	81,502	81,502
Adjusted R <sup>2</sup>	0.606	0.607	0.566	0.568

Table 7 provides findings for the potential heterogeneity arising from operating leverage in the relationship between EPL and dividend payout (models 1 through 3) and EPL and total payout (models 4 through 6). We additionally insert a three-way interaction term to assess the effect of firm size and firm maturity in addition to EPL and operating leverage. We find that higher levels of operating leverage reinforce the negative effect of EPL on dividend payout and total payout. This effect is exacerbated in larger firms and more mature firms, consistent with the findings in papers such as Grullon and Michaely (2002) showing that larger and older firms are more likely to make payouts in the first place.

**Table 7.** Employment Protection, Operating Leverage and Firms' Characteristics

The table presents the results from OLS regression models. Columns (1)-(3) report the results when dependent variable is dividend payout and columns (4)-(6) report the results when the dependent variable is total payout. The variables of interest are EPL Index and interaction terms. We include the same set of controls as in column (3) of Table 3 for all models in all panels. All variables are defined in Table A1. Inclusion of fixed effects (FE) is indicated at the end. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

	Dividend Payout			Total Payout		
	1	2	3	4	5	6
<i>Variables of Interest</i>						
EPL Index	** -6.623 (2.58)	** -6.152 (2.53)	** -4.249 (2.80)	*** -21.460 (3.46)	*** -20.677 (3.38)	* -19.981 (1.83)
EPL Index x Operating Leverage	** -0.443 (2.58)	** -0.497 (2.50)	-0.110 (0.34)	** -0.451 (2.26)	** -0.501 (2.29)	0.062 (0.19)
EPL Index x Operating Leverage x Large Firms		** -0.796 (2.64)			*** -1.800 (4.11)	
EPL Index x Operating Leverage x Old Firms				*** -1.690 (5.12)		*** -1.963 (3.22)

	Dividend Payout			Total Payout		
	1	2	3	4	5	6
Operating Leverage	*0.583 (1.77)	0.274 (1.06)	0.452 (1.24)	***1.119 (5.03)	***0.689 (4.66)	***1.143 (4.55)
Large Firms		***2.555 (4.89)			***5.499 (10.26)	
Old Firms			***1.739 (3.36)			-0.340 (0.27)
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	199,609	199,609	110,805	199,370	199,370	110,773
Adjusted R <sup>2</sup>	0.648	0.647	0.683	0.569	0.569	0.573

In table 8, we present results for the differential impact that financial constraints may have on the association between EPL and corporate payout policy. The interaction term between EPL and financial constraint is negative and significant for dividend payout (model 1) and total payout (model 2), adding further credence to the operating flexibility hypothesis. In particular, the results can be interpreted that for the top quartile of financially constrained firms, a one-standard deviation increase in EPL results in a 8.62% (18.71%) lower dividend (total) payout. Taken together, we interpret the results in Table 6 through Table 8 to mean that firms with lower levels of operating flexibility restrain their payout in higher EPL environments to cushion themselves against possible future shocks.

**Table 8.** Employment Protection and Financially Constrained Firms:

The table presents the results from OLS regression models. Column (1) reports the results when dependent variable is Dividend Payout, column (2) reports the results when dependent variable is Total Payout. The variables of interest are EPL Index and interaction term. We include the same set of controls as in column (3) of Table 3 for all models in all panels. All variables are defined in Table A1. Inclusion of fixed effects (FE) is indicated at the end. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

	Dividend Payout	Total Payout
	1	2
<i>Variables of Interest</i>		
EPL Index	** -4.999 (2.12)	** -13.965 (2.25)
EPL Index x Financial Constraints	*** -3.487 (7.01)	** -1.842 (2.30)
Financial Constraints	** -1.305 (2.28)	*** -5.456 (5.48)
Firm Characteristics	Yes	Yes
Country Characteristics	Yes	Yes
Firm Fixed Effects	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes
Number of Observations	225,476	225,435
Adjusted R <sup>2</sup>	0.639	0.562

#### 4.4. Employment Protection Legislation and Corporate Payouts: Asymmetric Trends

So far, our firm-fixed effects analyses implicitly control for changes in EPL but do not directly quantify the impact of EPL shocks on payout policies, where a shock can be either positive or negative and is identified as increasing or decreasing employment protection regulation. Similar to the approach used in Simintzi et al. (2015), we next code an indicator variable  $EPL_{k,t}$  (where  $k$  refers to the country and  $t$  is the index for time) that equals zero for all countries in the first observation year and consequently increases by 1 if employment protection is tightened in country  $k$  at time  $t$  ( $EPL_{k,t} = EPL_{k,t-1} + 1$ ) and decreases by one if employment protection is loosened ( $EPL_{k,t} = EPL_{k,t-1} - 1$ ). This difference-in-differences research design enables us to exploit intertemporal variations in labor regulation across countries

dynamically by comparing firms in countries that are subject to a change in employment protection with those that are not. The EPL shock variable captures substantial long-term changes in employment regulation over time and is not comparable across countries. As such, conditional on controls, treated and control firms are only randomly different.

Such a test may also be necessary if we relax the assumption that both negative and positive EPL shocks are expected to have a symmetrical effect on payout. The existing literature on payout policy provides evidence that dividends are sticky. Brav et al. (2005) for instance describe an “extreme reluctance on the part of management to cut dividends” (p. 499). While a negative shock to EPL could therefore produce an increase in dividend payout, managers may be reluctant to decrease dividend payout in the case of a positive EPL shock. An asymmetrical effect for share repurchases does not seem as likely - managers perceive repurchases to be more flexible (Brav et al., 2005). In Table 9, we show analyses when we substitute the EPL index for a dummy variable representing positive EPL shocks (models 2 and 5) and negative EPL shocks (models 3 and 6). Models 1 and 4 report the EPL shock analyses for dividend and total payout analyses without differentiating between positive and negative shocks.

First, we observe that results based on EPL shock tests lead to similar inferences as in the above EPL index tests. In particular, we observe that a change in EPL index results in a subsequent adverse effect on corporate payouts. More interestingly, we observe that in the case of a positive EPL shock (i.e., labor costs become more rigid), the effect on dividend payout is not significant (-1.123;  $p > 0.10$ ). This evidence is consistent with the findings in Brav et al. (2005) and the signaling hypothesis according to which managers are reluctant to cut dividends, even after facing increased fixed labor costs. In the case of a negative EPL shock, there is a positive and significant effect on dividend payout suggesting that when the fixed component of labor costs shrinks, managers utilize the increased flexibility to increase dividends. Consistent with the idea that signaling is less important for share repurchasing strategies, we observe that a positive (negative) shock induces a decrease (an increase) in total payout. The combined evidence confirms that results are robust to a difference-in-difference design and provide insightful evidence in how EPL dynamics impact dividends differently from share repurchases.

**Table 9.** Employment Protection Legislation and Corporate Payouts: Asymmetric Trends

The table presents the results from OLS regression models. Columns (1)-(3) report the results when dependent variable is Dividend Payout and column (3)-(6) report the results when dependent variable is Total Payout. The variables of interest are EPL, EPL<sup>Positive</sup> and EPL<sup>Negative</sup>. Following Simintzi et al. (2015), EPL value is set 0 for all countries as of 1985. In each of the subsequent years, the prior year value remains constant if there is no change in EPL index in that country in that year. It increases (decreases) by +1 (-1) if there is an increase (decrease) in EPL index. By construction, it treats all changes in EPL index equally. We include the same set of controls as in column (3) of Table 3 for all models in all panels. All variables are defined in Table A1. Inclusion of fixed effects (FE) is indicated at the end. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

	Dividend Payout			Total Payout		
	1	2	3	4	5	6
<i>Variables of Interest</i>						
EPL <sub>t</sub>	***-2.125 (3.91)			***-3.879 (2.86)		
EPL <sup>Positive</sup>		-1.123 (1.26)			*-3.889 (1.93)	
EPL <sup>Negative</sup>			***2.160 (2.95)			*2.949 (1.74)
Firm Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Country						
Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry-Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	260,216	260,216	260,216	259,928	259,928	259,928
Adjusted R <sup>2</sup>	0.637	0.637	0.637	0.560	0.560	0.560

## 5. Conclusion and Discussion

In the current study, we analyze the relationship between employment protection laws and corporate payouts. The economic rationale for this type of study stems from the fact that employees are corporate claimants who compete with shareholders to extract economic rents generated by the firm (Jensen, 1986; La Porta et al., 2000). The resulting theoretical prediction is that in pro-labor law settings, management may decide a lower

payout due to higher labor adjustment costs and the associated constraints (i.e., the operating flexibility argument) or will conversely pay out more to shareholders to self-protect against value-destroying wealth transfers to a powerful workforce (i.e., the rent extraction argument).

Studying a large international sample of 21 OECD countries for the period 1985-2013, we find that the stringency of EPL negatively affects payouts. In economic terms, we find a one standard deviation increase in labor protection leads to a 5.07% (12.17%) lower dividend (total) payout ratio. Consistent with the operating flexibility argument, we find that EPL affects payouts more in firms with higher resource constraints, such as labor-intensive firms, firms with higher operating leverage and financially constrained firms. Finally, the effects of shocks to EPL are not symmetrical. Negative shocks induce firms to increase dividend payouts, but positive shocks do not lead to a corresponding decrease. This is consistent with the findings in Brav et al. (2005), which underline the reluctance of managers to reduce dividends. Our paper is one of the first to shed new light on the importance of employment protection laws for corporate payout policy in an international setting.

Our general findings provide support for the argument that pro-labor laws impact corporate payouts negatively. Moreover, our results on the asymmetry in responses to tightened versus softened EPL are innovative and suggest that even in the case of high and rigid labor costs, managers are reluctant to decrease dividend payouts but rather respond by adjusting corporate share buyback policy. One potential caveat is that other contemporaneous reforms, such as corporate/personal tax laws; insider trading laws; or other regulations may impact corporate payout policies. If this is the case, corporate payout policies could be incorrectly attributed to EPL. While we cannot rule out this possibility with certainty because the empirical verification of this scenario would require the inclusion of country-year fixed effects which then would absorb the EPL effect, we are reassured by the fact that results hold for a variety of robustness checks and the EPL measure does not load on alternative collective labor power factors. We encourage future research to examine the dynamics of labor economics more directly in the corporate financing area.

## References

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- Acharya, V. V., R.P. Baghai and K.R. Subramaniam, 2013. Labor Laws and Innovation. *Journal of Law and Economics* 56(4): 997-1037.
- Addison, J. and Teixeira, P., 2003. The Economics of Employment Protection. *Journal of Labor Research*, 24(1): 85-128.
- Aktas, N., Bellettre, I., and J-G. Cousin. 2011. Capital Structure Decisions of French Very Small Businesses. *Finance* 32: 43-73.
- Alimov, A. 2015. Labor Market Regulations and Cross-Border Mergers and Acquisitions. *Journal of International Business Studies* 46(8): 984-1009.
- Arellano, M. and S. Bond. 1991. Some Tests of Specification for Panel Data: Monte Carlo evidence and an Application to Employment Equations. *Review of Economic Studies* 58: 277-297
- Autor, D.H, W.R. Kerr and A.D. Kugler, 2007. Does Employment Protection Reduce Productivity? Evidence from U.S. States. *The Economic Journal*, 117(June Issue): 189-217.
- Baker, M. and Wurgler, J., 2004. Appearing and Disappearing Dividends: The Link to Catering Incentives. *Journal of Financial Economics*, 73(2): 271-288.
- Banker, R. D., D. Byzalov and L. Chen, 2013. Employment Protection Legislations, Adjustment Costs and Cross-Country Differences in Cost Behavior. *Journal of Accounting and Economics*. 55(1): 111-27.
- Banyi, M. and Kahle, K., 2014. Declining Propensity to Pay? A Re-Examination of the Lifecycle Theory. *Journal of Corporate Finance*, 27: 345-366.
- Becker, B., Ivkovic, Z. and Weisbenner, S., 2011. Local Dividend Clienteles. *The Journal of Finance*, 66(2): 655-683.
- Bentolila, S., and Bertola, G. 1990. Firing Costs and Labour Demand: How Bad is Euroclerosis? *Review of Economic Studies* 57: 381-402.
- Besley, T. and Burgess, R., 2004. Can Labor Regulation Hinder Economic Performance? Evidence from India. *The Quarterly Journal of Economics*, 119(1): 91-134.
- Beuselinck, C., Markarian, G. & Verriest, A., 2018. Employment Protection Shocks and Corporate Cash Holdings. *Working Paper*, 60 pages. Available at SSRN: <https://ssrn.com/abstract=3128276>
- Bird, R.C. and J. D. Knopf, 2009. Do Wrongful-Discharge Laws Impair Firm Performance? *The Journal of Law & Economics* 52(2): 197-222.
- Blanchard, O. and P. Portugal, 2001. What Hides Behind an Unemployment Rate: Comparing Portuguese and US Labor Markets. *American Economic Review*, 91(1):187-207.

- Botero, J.C., S. Djankov, R. La Porta, F. Lopez-de-Silanes, A. Shleifer, 2004. The Regulation of Labor. *Quarterly Journal of Economics* 119(4): 1339-82.
- Brav, A., Graham, J., Harvey, C. and Michaely, R. 2005. Payout Policy in the 21st Century. *Journal of Financial Economics*, 77(3): 483-527.
- Brockman, P., Tresl, J. and Unlu, E., 2014. The Impact of Insider Trading Laws on Dividend Payout Policy. *Journal of Corporate Finance*, 29: 263-287.
- Bronars, S. & D. Deere, 1991. The Treat of Unionization, the Use of Debt, and the Preservation of Shareholder Wealth. *Quarterly Journal of Economics* 106: 231-254
- Checchi, D., and Lucifora, C., 2002. Unions and Labour Market Institutions in Europe. *Economic Policy* 17 (2), 362–401.
- Chen, S., Chen, S. and Y. Wang, 2015. Does Labor Power Affect the Likelihood of a Share Repurchase? *Financial Management* 44:623-53.
- Chino, A. 2016. Do Labor Unions Affect Firm Payout Policy? Operating Leverage and Rent Extraction Effects. *Journal of Corporate Finance*, 41: 156-178.
- Chyz, J., Leung, W., Li, O., and O. Meng Rui, 2013. Labor Unions and Tax Aggressiveness. *Journal of Financial Economics* 108: 675-693.
- DeAngelo, H., DeAngelo, L., 1991. Union Negotiations and Corporate Policy: A Study of Labor Concessions in the Domestic Steel Industry during the 1980s. *Journal of Financial Economics* 30: 3-43.
- DeAngelo, H., DeAngelo, L. and D. Skinner, 2009. Corporate Payout Policy. *Foundations and Trends in Finance* 3: 95-287.
- Denis, D. and Osobov, I., 2008. Why Do Firms Pay Dividends? International Evidence on the Determinants of Dividend Policy. *Journal of Financial Economics*, 89: 62-82.
- Desai, M. and Jin, L., 2011. Institutional Tax Clienteles and Payout Policy. *Journal of Financial Economics*, 100(1): 68-84.
- Dessaint, A., Golubov, A., and P. Volpin. 2017. Employment Protection and Takeovers. *Journal of Financial Economics*, 125: 369-388.
- Fama, E. and French, K., 2001. Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay? *Journal of Financial Economics*, 60(1): 3-43.
- Farre-Mensa, J., Michaely, R., and M. Schmalz, 2014. Payout Policy. *Annual Review of Financial Economics* 6:75-134.
- Fatemi, A. and Bildik, R., 2012. Yes, Dividends are disappearing: Worldwide Evidence. *Journal of Banking & Finance*, 36(3): 662-677.
- Grullon, G. and Michaely, R., 2002. Dividends, Share Repurchases, and the Substitution Hypothesis. *The Journal of Finance*, 57(4): 1649-1684.

- Grullon, G., Michaely, R., Benartzi, S. and Thaler, R., 2005. Dividend Changes Do Not Signal Changes in Future Profitability. *The Journal of Business*, 78(5): 1659-1682.
- Guedhami, O., Kwok, C. and Liang, S. 2017. Political Freedom and Corporate Payouts. *Journal of Corporate Finance*, 43(3): 514-529.
- He, J., Tian, X. and Yang, H., 2015. Labor Unions and Payout Policy: A Regression Discontinuity Analysis. Available at: <https://pdfs.semanticscholar.org/36e2/74655bb3cc3a71b67ae9fc02e69487d7d9ed.pdf>
- Heckman, J., Pagés-Serra, C., Cox Edwards A. and Guidotti, P., 2000. The Cost of Job Security Regulation: Evidence from Latin American Labor Markets. *Economía* 1(1): 109-154
- Jacob, M. and Jacob, M. 2013. Taxation, Dividends, and Share Repurchases: Taking Evidence Global. *Journal of Financial and Quantitative Analysis* 48(4): 1241-1269.
- Jagannathan, M., Stephens, C., and Weisbach, M., 2000. Financial Flexibility and the Choice between Dividends and Stock Repurchases. *Journal of Financial Economics*, 57(3): 355-384.
- Jain, P. and Chu, Q., 2013. Dividend Clientele: a Global Investigation. *Review of Quantitative Finance and Accounting*, 42(3): 509-534.
- Jensen, M., 1986. Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review* 76: 323-329.
- Jiang, Z., Kim, K., Lie, E. and Yang, S., 2013. Share Repurchases, Catering, and Dividend substitution. *Journal of Corporate Finance*, 21: 36-50.
- Jordan, B., Liu, M. and Wu, Q., 2014. Corporate Payout Policy in Dual-Class Firms. *Journal of Corporate Finance*, 26: 1-19.
- Karpuz, A., K. Kim and N. Ozkan, 2016. Employment Protection Laws and Corporate Liquidity Management. Unpublished working paper, University of Bristol.
- Klasa, S. K., Maxwell, W.F. and Ortiz-Molina, H., 2009. The Strategic Use of Corporate Cash Holdings in Collective Bargaining with Labor Unions, *Journal of Financial Economics*, 92(3): 421-42.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R., 2000. Agency Problems and Dividend Policies around the World. *The Journal of Finance*, 55(1): 1-33.
- Lazear, E., 1990. Job Security Provisions and Employment. *Quarterly Journal of Economics*, CV: 699-726.
- Matsa, D. 2010. Capital Structure as a Strategic Variable: Evidence from Collective Bargaining. *The Journal of Finance*, 65(3): 1197-1232.

- Messina, J. and G. Vallanti, 2007. Job Flow Dynamics and Firing Restrictions: the European Evidence. *The Economic Journal* 117: 279-301
- Mortensen, D. and Pissarides, C. 1999. Job Reallocation, Employment Fluctuations and Unemployment. *Handbook of Macroeconomics*, vol. 1, Part B, pp. 1171-1228.
- OECD, 2004. Employment Protection Regulation and Labour Market Performance. *OECD Employment Outlook*, Chapter 2: 61-125. ISBN 92-64-10812-2
- Rommens, A., Cuyvers, L. and Deloof, M. 2012. Dividend Policies of Privately Held Companies: Stand-Alone and Group Companies in Belgium. *European Financial Management*, 18: 816–835.
- Serfling, M. 2016. Firing Costs and Capital Structure decisions. *The Journal of Finance* 71(5): 2239-2286.
- Simintzi, E., V. Vig and Volpin, P., 2015. Labor Protection and Leverage. *Review of Financial Studies* 28(2): 561-591.
- Visser, J., ICTWSS Data base. version 5.1. Amsterdam: Amsterdam Institute for Advanced Labour Studies (AIAS), University of Amsterdam. September 2016. Open access database at: [uva-aias.net/en/ictwss](http://uva-aias.net/en/ictwss)
- von Eije, H. and Megginson, W., 2008. Dividends and Share Repurchases in the European Union. *Journal of Financial Economics*, 89(2): 347-374.
- Whited, T. and Wu, G., 2006. Financial Constraints Risk. *Review of Financial Studies* 19(2): 531–559.

## Appendix

**Table A1.** Variable Definitions and Sources

Variable Name	Definition and Source
<i>Measures of Payout Policy</i>	
Dividend Payout	Dividends divided by earnings before extra-ordinary items ( <i>Source:</i> Worldscope).
Total Payout	The sum of dividends and share repurchases divided by earnings before extra-ordinary items ( <i>Source: Worldscope</i> ).
Dividend/SA	Dividends divided by total sales ( <i>Source: Worldscope</i> ).
Dividend/AT	Dividends divided by total book value of assets ( <i>Source: Worldscope</i> ).
Dividend/MV	Dividends divided by market value of common equity ( <i>Source: Worldscope</i> ).
Total Payout/SA	The sum of dividends and share repurchases divided by total sales ( <i>Source: Worldscope</i> ).
Total Payout/AT	The sum of dividends and share repurchases divided by total book value of assets ( <i>Source: Worldscope</i> ).
Total Payout/MV	The sum of dividends and share repurchases divided by market value of common equity ( <i>Source: Worldscope</i> ).
<i>Employment Protection</i>	
EPL	Index measuring the strictness of regulations that an employer has to follow in order to dismiss a worker with a regular contract; it ranges from 0 to 6 and is time-varying ( <i>Source: OECD</i> ).
Union Density	Net union memberships divided by all wage and salary earners in employment; it ranges from 0 to 1 and is time-varying ( <i>Source: ICTWSS</i> ).
Bargaining Coverage	Total number of employees covered by collective (wage) bargaining agreements divided by all wage and salary earners in employment with the right to bargaining, adjusted for the possibility that some sectors or occupations are excluded from the right to bargain (removing such groups from the employment count before dividing the number of covered employees over the total number of dependent workers in employment); it ranges from 0 to 1 and is time-varying ( <i>Source: ICTWSS</i> ).
<i>Firm Level Characteristics</i>	
Firm Size	Natural logarithm of dollar value of total assets ( <i>Source: Worldscope</i> ).

Variable Name	Definition and Source
Leverage	Short term and long term debt divided by book value of assets ( <i>Source: Worldscope</i> ).
Cash Ratio	Cash and short-term investments divided by book value of total assets ( <i>Source: Worldscope</i> ).
Return on Assets	EBITDA divided by book value of total assets ( <i>Source: Worldscope</i> ).
Capex	Capital expenditure divided by total book value of assets ( <i>Source: Worldscope</i> ).
Tangibility	Net property, plant, and equipment divided by total book value of assets ( <i>Source: Worldscope</i> ).
Sales Growth	Change in total sales from year $t-1$ to year $t$ divided by total sales at year $t-1$ ( <i>Source: Worldscope</i> ).
Tobin's Q	Market value of common equity divided by book value of common equity ( <i>Source: Worldscope</i> ).
Retained Earnings	Retained earnings divided by income before extra-ordinary items ( <i>Source: Worldscope</i> ).
Acquisition Expense	Acquisition expense divided by book value of total assets ( <i>Source: Worldscope</i> ).
Labor Intensity	Staff costs divided by total sales ( <i>Source: Worldscope</i> ).
Operating Leverage	The industry median of the ratio of total R&D expenditures to total book assets ( <i>Source: Worldscope</i> ).
Large Firms	Indicator variable, equal to 1 if the firms' assets value is in the top quartile and 0 otherwise. ( <i>Source: Worldscope</i> ).
Old Firms	Indicator variable, equal to 1 if the firm's age is in top quartile and 0 otherwise. Firm age is the number of years since a firm's incorporation. ( <i>Source: Worldscope</i> ).
Financial Constraints	Indicator variable, equal to 1 if the firm's Whited Wu index value is in top quartile and 0 otherwise. Whited Wu Index = $-0.091 \cdot \text{Net Income} - 0.062 \cdot \text{Dividend Indicator} + 0.021 \cdot (\text{Long Term Debt} / \text{Total Assets}) - 0.004 \cdot \text{Log}(1 + \text{Total Assets}) + 0.102 \cdot \text{Industry Sales Growth (3 digit SIC)} - 0.035 \cdot \text{Firm Sales Growth}$ ( <i>Source: Worldscope</i> ).
Change in Debts	Change in total debt (short-term and long-term) divided by income before extraordinary items. The change in total debt is measured as total debt at year $t$ minus total debt at year $t-1$ ( <i>Source: Worldscope</i> ).
Change in WC	Change in working capital divided by income before extraordinary items. The change in working capital is measured as difference between current assets and current liabilities at year $t$ minus difference between current assets and current liabilities at year $t-1$ ( <i>Source: Worldscope</i> ).

Variable Name	Definition and Source
Change in CAPEX	Change in capital expenditure divided by income before extraordinary items. The change in capital expenditure is measured as capital expenditure at year $t$ minus capital expenditure at year $t-1$ ( <i>Source: Worldscope</i> ).
<i>Country-Level Characteristics</i>	
GDP	The natural logarithm of Gross Domestic Product ( <i>Source: World Bank</i> ).
GDP Per Capita	Per capita Gross Domestic Product in US dollars ( <i>Source: World Bank</i> ).
Dividend Tax Rate	Personal income tax rate on dividend income ( <i>Source: OECD</i> ).
Recession	Dummy variable equal to 1 if Gross Domestic Product growth is negative in two consecutive quarters within year for a country ( <i>Source: OECD</i> )
Investment Profile	Time-varying index measuring the government's attitude toward investment. The investment profile is determined by summing the three following components: (1) risk of expropriation or contract viability; (2) payment delays; and (3) repatriation of profits. Each component is scored on a scale from 0 (very high risk) to 4 (very low risk) ( <i>Source: ICRG</i> ).
Quality of Institutions	Time-varying index measuring institutional quality of a country, which is defined by summing the three following components: (1) corruption; (2) law and order; and (3) bureaucratic quality. High score indicates countries with higher institutional quality and vice versa ( <i>Source: ICRG</i> ).
Stock Market Capitalization	The ratio of total market capitalization of listed companies to Gross Domestic Product ( <i>Source: World Bank</i> ).
Private Credit	The ratio of private credit provided to private sector to Gross Domestic Product ( <i>Source: World Bank</i> ).
Democratic Accountability	Time-varying index measuring government's responsiveness to its people. The less responsive government will fall peacefully in democratic society and possibly violently in non-democratic society. High score indicates higher democratic accountability and vice versa ( <i>Source: ICRG</i> ).
Unemployment Rate	Total unemployment as a percentage of total labor force ( <i>Source: World Bank</i> ).

**Table A2.** Political Economy of EPL

The table presents the results from Arellano Bond estimation model. The dependent variable is EPL index. Column (1) reports the results when the dependent variable is one-period lagged and column (2) reports the results when the dependent variable is two-period lagged. All variables are defined in Table A1. Inclusion of fixed effects (FE) is indicated at the end. For all models, we correct standard errors for heteroscedasticity at country level and report t-statistics in parentheses. Significance at 10%, 5%, and 1% is indicated by \*, \*\*, and \*\*\*, respectively.

	(1)	(2)
EPL <sub>(t-1)</sub>	***0.822 (23.48)	***0.829 (22.68)
EPL <sub>(t-2)</sub>		-0.009 (0.11)
<i>Variables of Interests</i>		
Investment Profile <sub>(t-1)</sub>	0.009 (1.26)	0.009 (1.21)
Quality of Institutions <sub>(t-1)</sub>	-0.009 (1.64)	-0.009 (1.60)
Union Density <sub>(t-1)</sub>	-0.076 (0.37)	-0.075 (0.37)
Bargaining Coverage <sub>(t-1)</sub>	-0.004 (0.02)	-0.007 (0.03)
Unemployment Rate <sub>(t-1)</sub>	-0.003 (0.95)	-0.003 (0.94)
Per Capita GDP <sub>(t-1)</sub>	-0.051 (0.95)	-0.053 (0.83)
GDP Growth <sub>(t-1)</sub>	0.006 (1.39)	0.006 (1.33)
Stock Market Capitalization <sub>(t-1)</sub>	0.000 (0.44)	0.000 (0.47)
Recession <sub>(t-1)</sub>	0.001 (0.07)	0.001 (0.08)
Country Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Number of Observations	387	387
Chi <sup>2</sup>	161,370.57	1,878,000.00