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THE EFFECTS OF INSTITUTIONS ON EMPLOYMENT ADJUSTMENT: CROSS-COUNTRY EVIDENCE

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1. Introduction

We investigate the relative impact of country-level labor laws and corporate governance laws on the speed of employment adjustment to economic shocks. For labor laws, we consider employment laws (e.g., cost of firing workers and dismissal procedures), collective relations laws (e.g., collective bargaining and industrial action laws) and social security laws (e.g., health benefits and unemployment benefits). The data on labor regulation are collected from Botero et al. (2003).[1] For corporate governance, we consider investor protection laws, ownership structures and legal origin of a country's commercial code (La Porta et al. (1998, 2006), Djankov et al. (2005)).

The paper's main contributions are as follows:

- Using firm-level data, we provide comprehensive evidence on the speed of employment adjustment across countries. Our firm-level unbalanced yearly panel dataset spans 1991 to 2004 and comprises 138,923 firm-years of data from 40 countries. For the developed markets, our dataset covers virtually all large publicly listed corporations. Our firm-level results complement the results from studies that use industry/sector level data (e.g., the UN data used by Caballero et al. (2004)). And although many of those studies have found strong effects of job security laws, we find that of the various labor laws, only the collective/industrial relations laws have consistently significant effects on employment adjustment.
- Because Worldscope data are standardized across countries, our paper provides comparable estimates of the speed of employment adjustment for a large number of countries (have not estimated the models for each country yet).
- We provide comprehensive evidence on the relative importance of labor regulation and corporate governance on the speed of employment adjustment across countries. In a recent paper similar to ours, Atanassov and Kim (2008) also use the Worldscope database to investigate the effects of institutions corporate restructuring decisions. However, their

[1] We plan on using alternative sources of labor law data, such as Boylaud (2000), Pagano and Volpin (2000, 2005a, 2005b) and Forteza and Rama (2001), in the future.

paper studies these effects in only economically distressed firms, which constitute only 10% of the available Worldscope sample. By using the full Worldscope sample, we provide more general evidence on the effects of institutions. Additionally, while they a use dichotomous variables to measure economic shocks and employment restructuring, we use continuous measures, which allow us to provide more comprehensive evidence on the effects of institutions on employment adjustment. Finally, our main conclusions are quite different from those reached by Atanassov and Kim: while they find corporate governance to be the most significant determinant of corporate restructuring, we find that collective relations laws are generally more important for employment adjustment than corporate governance.

2. Hypotheses and empirical strategy

Our main hypothesis is that institutional factors affect employment adjustment. While many distinct strands of research, both theoretical and empirical, are relevant to our investigation, the research most relevant for us comes from into two broad areas: labor economics and the corporate finance. An emerging literature straddles these two areas and we aim to contribute to this emerging research initiative.

A.1. Labor economics

Within the labor economics literature, works on dynamic labor demand suggest that adjustment costs may slow down the speed of employment adjustment to economic shocks (see Hamermesh (1993), Hamermesh and Pfann (1996), Khan and Thomas (2006)). The costs associated with adjusting labor force may be due both to production technology and, more relevant to our research, to institutional arrangements that regulate employment relations.

Bertola (1990) develops a simple model with linear asymmetric adjustment costs that illustrates how job security provisions can affect employment adjustment at firms. Job security provisions mandated by the government increase the cost of firing workers relative to the case where companies are not subject to such provisions. Thus when a firm receives a negative economic shock, it might reduce employment only partway to the optimal[2] employment level. This suggests that employment adjustment to negative shocks will be dampened in the presence of job security provisions. Interestingly, the Bertola's model shows that the regulation-induced costs associated with firing workers affect employment adjustment not only to negative shocks, but to positive shocks as well. This latter effect is driven by anticipated future firing costs: when subject to a positive shock, the firm increases its employment by less than the optimal amount to reduce the expected costs associated with firing the new recruits in the future. Overall, the rate of employment adjustment to economic shocks is lower in the presence of job security provisions.

[2] Optimal in the absence of the adjustment costs induced by the job security provisions.

Caballero et al. (2004) provide empirical evidence consistent with the model of Bertola (1990). Using a sectoral panel of 60 countries, they provide evidence of significant impact of job security provisions on employment adjustment: moving from 20th to the 80th percentile in job security reduces the annual speed of employment adjustment to shocks by a third in countries with strong rule of law.[3]

At the macroeconomic level, Heckman and Pages (2000) and Botero et al. (2004) find that more stringent job security rules are associated with higher unemployment, especially among the youth. Using the natural experiment of the changes in labor regulation in several Latin American countries in the 1990s, a group of papers document that lower levels of job security generally leads to shorter tenure, and higher exit rates out of both employment and unemployment (Kugler (2000), Saavaedra and Torero (2000), Paes de Barros and Corseuil (2000) and Hopenhayn (2000)). While these macroeconomic results do not directly address employment adjustment to shocks, they are consistent with the industry-level evidence provided by Caballero et al. (2004) and they support the view that the creative-destruction of jobs in the economy is impeded by too restrictive job security provisions.

One can argue that the effects of other forms of labor regulation are generally similar to the effects of job security regulation and that regulation generally impedes the efficient reallocation of labor. Consistent with this view, Botero et al. (2004) find that the effects of industrial relations laws and social security laws on employment at the macroeconomic level are similar to those of job security laws (which they call employment laws).

Thus the existing empirical labor economics literature suggests that labor regulation protecting workers will negatively affect efficient labor reallocation and will reduce the sensitivity of employment changes to economic shocks. We should note that, while the effects labor regulation have been traditionally examined at the sector and macro level, it is particularly important to understand these effects at the firm (or plant) level, as our study

[3] However, they find only negligible effects of job security provisions in weak rule of law countries. Thus their results suggest that when considering data from countries from diverse levels of legal enforcement and economic development, it is the effective labor regulation, rather than the employment laws themselves, that matter.

attempts to do, for two reasons: First, understanding the effects of regulation at the micro level will provide a deeper understanding of the documented macro effects. Second, Caballero and Hammour (2000) show that reallocation of labor within industries is more common than reallocation across industries. Thus a firm-level study of the effects of regulation on employment will capture important effects that are missed by sector and macro studies.

A.2. Corporate Finance

In the corporate finance literature, studies on corporate restructuring and on comparative corporate governance are the most relevant precedents to our research. Research on corporate restructuring looks at the way corporations respond to large declines in operating performance. For example, John et al. (1992), Ofek (1993), Denis and Kruse (2000) provide evidence, using samples of listed U.S. firms, that such declines are followed by top-management changes, significant operating restructuring, such as large scale employee layoffs and asset sales, and subsequent improvements in operating performance. Thus the evidence is consistent with the view that the U.S. corporate sector reallocates factors of production (capital and labor) to achieve greater efficiency following large negative economic shocks.

While empirical evidence shows that many efficient restructurings do occur in the U.S., there may still be many cases where efficient restructurings are not undertaken by corporate managers. The agency literature in corporate finance suggests that there is an inherent conflict of interest between corporate managers and investors, and this conflict is likely to be magnified following negative economic shocks. Restructuring activities require increased effort from the managers and engaging in restructuring might signal that they made mistakes in the past .Thus managers might be unwilling to engage in some restructurings unless pressured by investors.

There is some evidence supporting this view. For example, John et al. (1992) find that both operating and financial restructurings are more likely in the presence of higher leverage.

Similarly, Bertrand and Mullainathan (2003) find that managers are less likely to undertake value-enhancing employment reductions when they are protected from the threat of takeovers by strong state anti-takeover laws.

Recent research on comparative corporate governance has documented that the levels of investor protection, and hence the power investors have over corporate managers and insiders, varies widely across countries (La Porta et al. (1998, 2006). One of the main findings of this research is that the corporate laws of common law (e.g., U.S. and U.K.) countries give investors (both shareholders and creditors) a stronger voice in the governance of the corporations than do the laws of civil law countries (e.g., France, Germany and Japan). Given this disparity in investor power across countries, it may be that the U.S. evidence of corporate restructuring is an isolated case, and may be because U.S. corporate governance system enables investors to force managers to effect changes. In other countries, especially in those with weak investor protection, we might see slower restructuring response to negative shocks. In a recent paper, Atanassov and Kim (2008) find that this is indeed the case. They show that countries with stronger investor protection regimes exhibit more frequent restructuring responses to negative economic shocks.

While the existing corporate finance literature provide evidence on the effect of corporate governance on employment for large negative economic shocks, it can be reasonably argued that even for small negative shocks, employment adjustment will be slow when shareholders have less power, other things being equal. For positive shocks in general, it is more difficult to make a similar argument. If managers like a "quiet life," and generally avoid activities requiring effort (Bertrand and Mullainathan (2003)), they may adjust employment slowly in response to positive shocks as well. On the other hand, since managers stand to gain from increased investment and increased firm size, they may increase employment optimally in response to positive economic shocks. Thus for negative shocks, we should expect

employment adjustment to be slower in low investor protection countries. For positive shocks, while similar slow adjustment is still possible, it is probably less likely.[4]

Finally, the corporate finance literature generally focuses on shareholder and creditors rights in characterizing corporate governance. A broad view of corporate governance should also include the governance rights of workers, especially since workers are provided with strong rights to participate in the major operating decisions of companies in many countries. In countries with such rights we should expect slower employment adjustment to negative economic shocks.

B. Empirical specifications

In order estimate the effect institutions have on the response of employment levels to shocks, we use the following simple regression specification using firm-level data:

$$\ln(Emp_{ict} / Emp_{ict-1}) = \alpha + \beta \ln(Sales_{ict} / Sales_{ict-1}) + \gamma \ln(Sales_{ict} / Sales_{ict-1}) * Inst_c + \delta Inst_c + Control\ Variables_{ict-1} + \varepsilon_t \quad (1)$$

where Emp is number the number of employees, Sales is net sales in 2004 real US dollar terms, Inst is a proxy for an institutional factor, and *i,t* and *c* are firm, year and country indices, respectively. The coefficient β is an elasticity and it estimates the extent to which firms increase employment in response to positive sales shocks.[5] In using this specification, we are implicitly assuming that it is optimal to increase employment in "growing" companies and to reduce employment in "declining" companies.[6] The coefficient γ indicates how

[4] It may be argued that in some cases, when subject to economic shocks, shareholders and debtholders may not want the firm to take the same action. This may especially be the case following large negative shocks, since the prospect of financial distress creates a wedge between the interests of shareholders and debtholders. While theoretically plausible, the existing evidence on restructuring activities in the U.S. does not support such a view (e.g., John (1992)). Additionally, the conflicts between debtholders and shareholders, especially in the case of employment adjustment, are likely to be small when we consider economic shocks in general.

[5] This specification is similar in spirit to the specification used, at the industry level, in Wurgler (2000) to estimate the responsiveness of investment to growth in value-added.

[6] For reference, assuming a CES two factor production function, we can derive labor demand as: $\ln(L) = \alpha - \sigma \ln(w) + \ln(Y)$, where L is labor demand, w is the wage rate, Y is output, σ is the elasticity of

institutions affect the employment-sales elasticity and it is the variable of interest for us.[7] We generally expect this coefficient to be negative for regulations protecting workers, and to be positive for legal rules protecting investors. While we use changes in a company's net sales to proxy for economic shocks above, we also plan on using other proxies for shocks such as changes in profit before taxes (EBITDA), and changes in market value of equity as alternative proxies for shocks[8] and investigate their effects on employment to verify the robustness of our findings. The control variables we use include proxies for firm size (measured as Sales or Assets), profitability (ROA) and financial leverage (Leverage). These are standard control variables from the corporate finance/corporate restructuring literature and they have been shown to affect a variety of corporate financial and operating decisions.

To obtain an alternative measure of the effects of institutions of employment adjustment, we also use a partial adjustment labour demand specification. A brief derivation of this specification follows.

Let's assume:

Optimal (target) labor/output ratio is τ.

Employment (Emp) = L

Target Employment = TL

Output = Y

$$TL(t) = \tau * Y(t) \qquad (2)$$

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substitution, and α is a constant. This static labor demand function would predict an elasticity of labor demand to output of one. However, due to adjustment costs, we should expect the actual elasticity to be much less than one. We should further note that since we do not have data on wages and we have data on dollar value of sales, and not units of output, out specification is not strictly a CES specification.

[7] The direct effect of institutions on employment growth, measured by δ, does not have a clear interpretation in the context of our hypothesis. We allow for a direct effect to control for any direct effect of institutions on employment growth that is not captured by our other control variables. Not allowing for a possible direct effect, when such an effect exists, might bias our estimate of γ.

[8] One can interpret these shocks as shocks to investment opportunities which should result in increased capital investment and also in increased labor demand (assuming unchanged wages?).

Because of adjustment costs, the firm closes only part of the gap between last period's employment and this period's target employment. Let's assume this fraction is ψ, speed of adjustment to the target:

$$L(t) - L(t-1) = \psi*[TL(t) - L(t-1)] \quad (3)$$

Substituting from (1):

$$L(t) - L(t-1) = \psi*[\tau *Y(t) - L(t-1)]$$

$$L(t) - L(t-1) = \psi *\tau*Y(t) - \psi*L(t-1)] \quad (4)$$

Now, let $a_1 = \psi *\tau$, and $a_2 = - \psi$. Then:

$$L(t) - L(t-1) = a_1Y(t) + a_2L(t-1) \quad (5)$$

In estimating equation (5), we use net sales (Sales) as a proxy for output, and number of employees (Emp) as a proxy for employment. To reduce outliers, we scale the variables by taking log of the variables. We get:

$$\ln(Emp_{ict}) - \ln(Emp_{ict-1}) = \alpha_0 + \alpha_1 \ln(Sales_{ict}) + \alpha_2 \ln(Emp_{ict-1}) + \alpha_3 \text{ Control Variables} + \varepsilon_t \quad (6)$$

In this specification, our estimate of the speed of adjustment, ψ, is given by $-\alpha_2$. Equation (6) is a generic partial adjustment specification that has been used in a wide variety of research to model slow adjustment.[9] For example, a similar model is used in the dividend smoothing

[9] This model assumes a fixed rate of adjustment per period. If adjustment costs are lumpy or if there is a large fixed-cost part to the adjustment costs, then the actual dynamics of employment adjustment might be different from those assumed here, since employment adjustment is also likely to be lumpy in that case.

literature to model slow adjustment of dividends to target dividend payout ratios by companies (Lintner (1956, Fama and French (2002)). The exact nature of the costs is not modelled here. Rather, the specification is aimed at estimating the magnitude of such costs from the data.

To allow the speed of adjustment, ψ, to vary across institutional settings we interact L(t-1) with variables proxying for institutional factors in equation (5) and derive the following regression model:

$$\ln(L_{ict}) - \ln(L_{ict-1}) = \alpha_0 + \alpha_1 Y_{ict} + \alpha_2 \ln(L_{ict-1}) + \alpha_3 \ln(L_{ict-1})*Inst_c + \alpha_4 Inst_c + \alpha_5 \text{Control Variables} + \varepsilon_t \quad (7)$$

The negative of α_3 gives us an estimate of the increase in the speed of adjustment, ψ, due to the institutional factor. As in equation (1), the direct effect of institutions on employment growth, estimated by α_4, does not have a clear interpretation within the partial adjustment framework, and we expect the direct effects to capture omitted country-level factors affecting employment growth.

Finally, we note that in equation (7), we are forcing the same target labor/revenue ratio (τ) on all firms, and allowing the speed of adjustment (ψ) to vary only due to institutional factors. To allow, τ and ψ to vary across firms, e.g., based on firm characteristics, we would have to interact both Y(t) and L(t-1) with a range of variables that are possible determinants of firm-level τ and ψ.

In these specifications, and in our preliminary empirical work, we do not allow for asymmetric response to positive and negative shocks. But this can be easily accommodated either by estimating the models separately for positive and negative shocks or by augmenting the models to allow for asymmetric response for positive and negative shocks. Similarly, interaction among the effects of the institutions can be accommodated in these specifications and we plan on pursuing these possibilities in future work.

3. Data, sample and summary statistics

A. Data items and sources

We use a variety of sources to collect firm-level financial data and institutional data for firms from a large cross section of countries.

Financial data

We source firm-level financial data from the Worldscope database. The database provides annual financial data for listed companies. We collect the following data from this source: total assets, net sales, operating profit (EBIT), depreciation, short and long term debt, common equity, total number of employees, total wages.[10] These variables are defined in Table 1. We also collect industry affiliation data from Worldscope, which allows us to categorize the sample firms into 40 FTSE industries.

Institutional data

Our primary source for data on country-level institutions are Botero et al. (2004) and La Porta et al. (1998, 2006). In a few cases we use some other sources to collect the relevant institutional data. The definitions of the institutional data we use, and their sources are detailed in Table 2. Selected institutional variables are listed in Table 3. One limitation of these datasets is that they focus more on the *de jure* differences in institutions across countries, rather than *de facto* differences. It might be worthwhile to collect additional data that capture the *de facto* differences. For example, for employee participation in corporate governance, Botero et al. (2004) looks at the workers' legal right to participate in governance in a country's corporate law. If employees have large ownership stakes, then they might be able to participate in management even without any legal mandate. Thus employee ownership across countries might be an alternative, *de facto*, proxy for worker participation in management. In future work, we plan on collecting additional institutional data, such as data on the extent of employee ownership across countries, to investigate the effects of *de facto*

[10] The wage data are missing for many firms, and therefore we do not use them in the current analysis. However, we may use them in the future.

differences in institutions. We also plan on supplementing our current work with country-level studies for countries with specific institutional characteristics. For example, the life-time employment system in Japan, and the co-determination system in Germany (Roe (1993)) are institutional impediments to employment adjustment that are not captured by the institutional variables we use in the current paper. Thus a more in-depth study of employment adjustment in Japanese and German companies would be useful complements to our cross-country study.

B. Sample construction

The Worldscope database covers publicly listed companies from 60 countries/economies.[11] Of these, we exclude Bermuda, Cayman Islands, Iceland, Luxembourg and British Virgin Islands because these are very small economic entities, and they have very few listed firms. Of the remaining countries, we exclude the former socialist/communist countries for two reasons: first, institutions in these countries may not be directly comparable to similar institutions in other countries, given their history; second, many of the required institutional variables are not available for these countries. We exclude firm-years with missing total sales, total assets, EBIT, employee data. This leaves us with an initial sample of 189,951 firm years of observations from 40 countries. On this initial sample, we impose four additional restrictions, as detailed in Table 4, to arrive at the final sample used in our empirical work.

First, we exclude financials (Banks, Insurance and real estate, and equity investment instruments) and utilities (electricity, gas, water and multiutilities). We exclude the financial firms because the traditional accounting analysis for non-financial firms may not be directly applicable to financial firms. For example, sales growth and leverage in the financial sector is not directly comparable to these figures from non-financial sector. We exclude the utilities because firms in the utility industries are highly regulated, and data from this industry may not be comparable to those from other industries. For example, profitability rates for utility

[11] We sources the data from Worldscope in 2006/2007 and the coverage at that time was 60 countries. The coverage has increased to 70 countries by 2008.

firms are often highly dependent on regulation and regulatory approval may be necessary to make new investments in the utility industries.

Second, to ensure that we do not have financially distressed and very small firms, we impose the following restrictions for year t-1: we require the firm to have total asset of at least 0.5 million USD, to have common equity of 0.25 million USD, and total employees of 20.

Third, in some cases, Worldscope database lists the same company twice to reflect multiple listed securities. In such cases, we exclude the repeat observation from the sample. This step eliminates 0.63% of the sample.

Finally, Hallock (1998) notes that Compustat database has stale employment data is some cases, and the database reports the same employment level for consecutive years even when the employment level has actually changed. Since Worldscope sources its US data from Compustat, this bias is probably present in the Worldscope database as well. Additionally, there might be similar bias in the employment data from other countries. To minimize the effect of this bias, we exclude observations where the firm reports the same number of employees for the current and the last year, under the assumption that these observations reflect data errors.

These data restrictions leave us with a final sample of 138,924 firms years of data. The effects of these restrictions on the sample, for each sample year, and for all 14 years, are reported in Table 4.

The distribution of the resulting final sample by country and by year is presented in Table 5. The coverage of the Worldscope database has increased over time, and this is reflected in our sample: we have 13,699 observations in 2004, the last sample year, compared with 5,506 observations in 1991, the initial sample year. Additionally, most of our observations come from a few countries: more than 50% of the observations are from the US and Japan; and the addition of the UK increases this figure to 60%. The predominance of a handful of countries means that the regression results are greatly affected by institutional differences across these countries. In future work, we plan on investigating (e.g., by weighting countries differently) the sensitivity of our results to these characteristics of our sample distribution.

C. Summary statistics

The summary statistics for the financial variables used in our analyses are presented in Table 6.

Panel B of Table 6 reports the summary statistics for selected institutional variables, while Panel A, details the pairwise correlations among these variables. The shaded correlations are significant at the 5% level. The table shows several patterns: (1) common law legal origin is positively correlated with investor protection/corporate governance variables, and negatively correlated with labor laws. (2) French civil law legal origin is negatively correlated with investor protection laws, but positively correlated with labor protection laws. (3) Judicial efficiency and rule of law are positively correlated with Scandinavian legal origin and negatively correlated with French civil law origin. (4) Labor laws and investor protection laws are negatively correlated. These patters of correlation among the institutional variables are well-documented in the literature, and there are competing explanations for these correlations. The strong correlation among the institutional variables suggests that we should exercise caution in inferring causation from any correlation between institutions and employment adjustment. In this paper, we are primarily interested in estimating the immediate and independent effects of labor laws and corporate governance laws on employment adjustment. It is quite possible that both of these variables are endogenous and they are ultimately, and in the long run, determined by either the legal origin of a country (La Porta et al. (1998, 2006), Boter et al. (2004)) or the political orientation of a country's government (Pagano and Volpin (2000, 2005a, 2005b), Roe (2003)). We explore such possibilities only briefly at present by looking at the effect of legal origin on employment adjustment. We plan on exploring the endogeneity issue in more detail in the future.

4. Results

Table 8 reports the estimates of Equation (1) for the labor laws. Panel shows that the interaction term between sales growth and various employment laws have insignificant coefficients, suggesting that employment laws such as laws related to part-time employment, overt-time, severance payments are not significant determinants of the response of employment to revenue shocks.

Panel B of Table 8 presents the results for the Collective relations laws. For one standard deviation (0.22) increase in UNION_PWR (the variable proxying for the power of the union in collective bargaining), the sensitivity of employment to sales drops by 0.325*0.22 = 0.07. For the average firm, the sensitivity of employment (%change) to sales (%change) is 0.345, and the standard deviation of our employment change dependent variable is 0.20. Thus, the effect of Union_Pwr is economically quite substantial. The effect of Coll_disp (the variable measuring worker rights during collective disputes) is economically somewhat smaller than that of Union_pwr, but it is still quite large. Howevr, this effect is not significant at conventional levels. For Coll_rln, which combines Union_pwr and Coll_disp, the efect is both economically very strong and statistically highly significant.

For the Social security laws, the results in Panel C of Table 8 suggest that generous unemployment benefit provision, and generous social security system, in a country lead to faster employment adjustment in companies subject to economic shocks. This evidence suggests that more generous social security systems make companies more responsive to economic incentives (from sales) in terms of their hiring and firing decisions.

Table 9 reports the results of estimating the same model as in Table 8 for the corporate governance variables. We consider six corporate governance variables: Ant_dir, R_ant_dir, Self_deal, Own_conc, Creditors, and Wrk_part. Of these variables, only the interactions of Ant_dir and Own_conc with sales growth are significant at the 10% level. A one std. dev. increase in these variables is associated with changes in employment sensitivity to sales of about 0.20. This is highly economically significant, and is much higher than the comparable

figure of 0.07 (from above) for the variable proxying for union power (Union_pwr). However, these effects are *statistically* much less significant than the effects of the collective relations variables (such as Union_pwr). Thus an important question is, whether the effects of corporate governance survive, once the effects of collective relations laws are controlled for. We address this issue in Table 13.

A large body of literature has by now has documented that legal origins of countries are highly correlated with corporate financial decisions and capital market outcomes. For example, La Porta et al. (1998, 2000) document that dividend payout ratio is smaller in civil law countries than in common law countries, and external equity and debt capital markets are relatively smaller in civil law countries. In Table 10, we investigate whether significant correlations exist between legal origin and employment adjustment. The results show that there indeed are some significant associations. Specification (1) in the table shows that compared with common law countries, the sensitivity of employment to sales shocks are smaller in civil law countries, and this is especially so in the German civil law countries. The negative effect of French civil law legal origin is significant at 10% level, and the effect of Scandinavian legal origin is not significant. Specification (2) in Table 10 however, shows that once the effects of level of economic development (log(GNP)) is controlled for, the effect of Scandinavian legal origin becomes significant, whereas the effect of French legal origin diminishes by 10% and becomes insignificant.

Table 10 reports the results from estimating the partial labor adjustment model from section (2). The negative of the coefficient on lagged lab(Emp) gives us the speed of adjustment, and for our sample this hovers around 0,02 or 2%. This implies that employment adjusts very slowly to the target employment/sales ratio: only 2% of the gap between the desired employment and actual employment is covered in a given year. The reason for this small estimate may that we are estimating the model using pooled data whereas we should have estimated the model using time series of individual firms. Another reason may be that we do not allow for the target employment to sales ratio to be different for different firms

(e.g., based on firm characteristics). If we allow for this possibility, our estimates of the speed to adjustment may increase.

If we take the slow adjustment in the typical firm as given, then the coefficient on the interaction between the lagged employment and institutions tell us the effect of institution on the speed of employment adjustment. The results here are similar to those from Table 8. Similarly, results in Table 12, which estimates the partial adjustment model for the corporate governance variables, are similar to those obtained in Table 9.

Finally, in Table 13, we run a horse race between the empirically important labor law and corporate governance variables, using sales sensitivity regressions. Given the high levels of correlation among the various institutional variables, it is important to estimate the individual effects of the variables, once the effects of others are controlled for. Table 13 shows that when both types of variables, the collective relations laws and the corporate governance laws, are included in the same regression, the collective relations variables survive.[12] While the effects of two corporate governance variables are significant, they have the wrong sign, suggesting that better corporate governance slows down employment adjustment to economic shocks. In unreported regressions, we also check how the effects of these variables are affected when we allow for the effects of legal origin variables. We find that, in the presence of the legal origin variables, the effects of the corporate governance variables disappear, but the effects of the collective relations laws survive. While the effects of the legal origin variables, and the interpretation of these effects, need further investigation, these results suggest that corporate governance variables are *less* important than collective relations laws in determining the speed of employment adjustment to shocks for our sample.

[12] For two most significant collective relations variables from Table 8 (Union_pwr and Coll_rln), we allow for the effects of all six of the corporate governance variables from Table 9. Table 13 reports only the cases where the corporate governance variables show statistically significant effects.

7. Conclusion

Using firm-level financial and employment data from 40 countries, and cross-country data on institutions, we investigate the effects of labor regulation and corporate governance institutions on employment adjustment to economic shocks. Our main hypothesis is that better corporate governance should lead to faster employment adjustment to shocks, and more labor regulation should lead to slower adjustment. We find some empirical support for these hypotheses, but our results suggests that labor regulation variables (more specifically, collective relations laws) are more important than corporate governance variables in determining the speed of employment adjustment to shocks. Our conclusions differ from similar work by Atannasov and Kim (2008), who find that corporate governance plays central role in determining a firm's restructuring decision to shocks. Reconciling the differences between their findings and ours will lead to a deeper understanding of how institutional settings affect firms' employment and restructuring responses to shocks. This remains the work for future research.

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Table 1
Firm-level Variables

Definitions of firm-level variables. All firm-level data are from the Worldscope database.

Variable	Description
Sales	NET SALES OR REVENUES represent gross slaes and other operating revenue less discounts, returns and allowances. Excludes: Non-operating income, interest income, rental income, dividend income. (WS# 01001)
EBIT	EARNINGS BEFORE INTEREST AND TAXES (EBIT) represent the earnings of a company before interest expense and income taxes. It is calculated by taking the pretax income and adding back interest expense on debt and subtracting interest capitalized. (WS# 18191)
Depreciation and amortization	DEPRECIATION represents the process of allocating the cost of a depreciable asset to the accounting periods covered during its expected useful life to a business. It is a non-cash charge for use and obsolescence of an asset. DEPLETION refers to cost allocation for natural resources such as oil and mineral deposits. AMORTIZATION relates to cost allocation fror intangible assest such as patents and leasehold improvements, trademarks, bookplates, tools and film cost. If depreciation is not available from the income statement it is taken from the Changes in Financial Position. Source: Worldscope (WS# 01151)
EBITDA	EBIT + Depreciation and amortization
Total assets	TOTAL ASSETS represents the sum of total current assets, long term receivables, investment in unconsolidated sunsidiaries, other investments, net property plant and equipment and other assets. Source: Worldscope (WS# 02999)
ROA	RETURN ON ASSETS is EBITDA(t-1) / Total assets(t-1).
Short-term debt	SHORT TERM DEBT & CURRENT PORTION OF LONG TERM DEBT represents that portion of debt payable within one year including current portion of long term debt and sinking fund requirements of preferred stock or debentures. (WS# 03051)
Long-term debt	LONG TERM DEBT represents all interest bearing financial obligations, excluding amounts due within one year. It is shown net of premium of discount. Source: Worldscope (WS# 03251)
Common equity	COMMON EQUITY represents common shareholders' investment in a company. (WS# 03501)
Leverage	{Short term debt(t-1) + Long term debt(t-1)} / {Short term debt(t-1)+Long term debt(t-1) +Common equity(t-1)}
Emp	EMPLOYEES represent the number of both full and part time employees of the company. Excludes: seasonal employess. (WS# 07011)
Wage	STAFF COSTS represent wages paid to employees and offices of the company. Includes benefits e.g., health insurance and pension plan. (WS# 01084)

Table 2
Institutional (Country-level) Variables

Definitions of country-level variables proxying for institutional factors.

Panel A: Labor Law Variables

A1: Employment Laws

Variable	Description
Alt_emp	"Alternative employment contracts. Measures the existence and cost of alternatives to the standard employment contract, computed as the average of: (1) a dummy variable equal to one if part-time workers enjoy the mandatory benefits of full-time workers; (2) a dummy variable equal to one if terminating part-time workers is at least as costly as terminating full time workers; (3) a dummy variable equal to one if fixed-term contracts are only allowed for fixed-term tasks; and (4) the normalized maximum duration of fixed-term contracts." Source: Botero et al. (2004).
Over_time	"Cost of increasing hours worked. Measures the cost of increasing the number of hours worked. We start by calculating the "maximum number of hours of work in a year before overtime" per year in each country (excluding overtime, vacations, holidays, etc.). Normal hours range from 1,758 in Denmark to 2,418 in Kenya. Then we assume that firms need to increase the hours worked by their employees from 1,758 to 2,418 hours during one year. A firm first increases the number of hours worked until it reaches the country's maximum normal hours of work, and then uses overtime. If existing employees are not allowed to increase the hours worked to 2,418 hours in a year, perhaps because overtime is capped, we assume the firm doubles its workforce and each worker is paid 1,758 hours, doubling the wage bill of the firm. The cost of increasing hours worked is computed as the ratio of the final wage bill to the initial one." Source: Botero et al. (2004).
Cost_fire	"Cost of firing workers. Measures the cost of firing 20 percent of the firm's workers (10% are fired for redundancy and 10% without cause). The cost of firing a worker is calculated as the sum of the notice period, severance pay, and any mandatory penalties established by law or mandatory collective agreements for a worker with three years of tenure with the firm. If dismissal is illegal, we set the cost of firing equal to the annual wage. The new wage bill incorporates the normal wage of the remaining workers and the cost of firing workers. The cost of firing workers is computed as the ratio of the new wage bill to the old one." Source: Botero et al. (2004).
Dism_proc	"Dismissal procedures. Measures worker protection granted by law or mandatory collective agreements against dismissal. It is the average of the following seven dummy variables which equal one: (1) if the employer must notify a third party before dismissing more than one worker; (2) if the employer needs the approval of a third party prior to dismissing more than one worker; (3) if the employer must notify a third party before dismissing one redundant worker; (4) if the employer needs the approval of a third party to dismiss one redundant worker; (5) if the employer must provide relocation or retraining alternatives for redundant employees prior to dismissal; (6) if there are priority rules applying to dismissal or lay-offs; and (7) if there are priority rules applying to re-employment." Source: Botero et al. (2004).
Emp_law	"Employment law index. Measures the protection of labor and employment laws as the average of: (1) Alternative employment contracts; (2) Cost of increasing hours worked; (3) Cost of firing workers; and (4) Dismissal procedures." Source: Botero et al. (2004).

Panel A: Labor Law Variables (continued)

A2: Collective Relations Laws

Variable	Description
UNION_PWR	"Labor union power. Measures the statutory protection and power of unions as the average of the following seven dummy variables which equal one: (1) if employees have the right to unionize; (2) if employees have the right to collective bargaining; (3) if employees have the legal duty to bargain with unions; (4) if collective contracts are extended to third parties by law; (5) if the law allows closed shops; (6) if workers, or unions, or both have a right to appoint members to the Boards of Directors; and (7) if workers' councils are mandated by law." Source: Botero et al. (2004).
COLL_DISP	"Measures the protection of workers during collective disputes as the average of the following eight variables: (1) if wildcat, political and sympathy/solidarity/secondary strikes are legal (legal strikes); (2) if employer lockouts are illegal; (3) if workers have the right to industrial action; (4) if there is no mandatory waiting period or notification requirement before strikes can occur; (5) if striking is legal even if there is a collective agreement in force; (6) if laws do not mandate conciliation procedures before a strike; (7) if third-party arbitration during a labor dispute is mandated by law; and (8) if it is illegal to fire or replace striking workers." Source: Botero et al. (2004).
COLL_RLN	"Collective relations law index. "Measures the protection of collective relations laws as the average of: (1) Labor union power and (2) Collective disputes." Source: Botero et al. (2004).

A3: Social Security Laws

OLD_AGE	""Old age, disability, and death benefits. Measures the level of old age, disability and death benefits as the average of the following four normalized variables: (1) the difference between retirement age and life expectancy at birth; (2) the number of months of contributions or employment required for normal retirement by law; (3) the percentage of the worker's monthly salary deducted by law to cover old-age, disability, and death benefits; and (4) the percentage of the net pre-retirement salary covered by the net old-age cash-benefit pension." Source: Botero et a. (2004).
SICKNESS	"Sickness and health benefits. Measures the level of sickness and health benefit as the average of the following four normalized variables: (1) the number of months of contributions or employment required to qualify for sickness benefits by law; (2) the percentage of the worker's monthly salary deducted by law to cover sickness and health benefits; (3) the waiting period for sickness benefits; and (4) the percentage of the net salary covered by the net sickness cash benefit for a two-month sickness spell." Botero et al. (2004).
UNEMP_BEN	"Unemployment benefits. Measures the level of unemployment benefits as the average of the following four normalized variables: (1) the number of months of contributions or employment required to qualify for unemployment benefits by law; (2) the percentage of the worker's monthly salary deducted by law to cover unemployment benefits; (3) the waiting period for unemployment benefits; and (4) the percentage of the net salary covered by the net unemployment benefits in case of a one-year unemployment spell." Botero et al. (2004).
SOC_SEC	"Social security laws index. Measures social security benefits as the average of: (1) Old age, disability and death benefits; (2) Sickness and health benefits; and (3) Unemployment benefits." Source: Botero et al. (2004).

Panel B: Corporate Governance Variables

Variable	Description
Ant_dir	"Anti-director rights index. Formed by adding one when: (1) the country allows shareholders to mail their proxy vote; (2) shareholders are not required to deposit their shares prior to the General Shareholders= Meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders= Meeting is less than or equal to ten percent (the sample median); or (6) when shareholders have preemptive rights that can only be waved by a shareholders meeting. The range for the index is from zero to six." Source: La Porta et al. (1998).
R_ant_dir	"Revised anti-director rights index. The revised index is similar to that from La Porta et al. (1998), but ignores enabling provisions when coding the rights, and reflect the rights as of 2003." Djankov et al. (2006).
Self_deal	"Average of ex-ante and ex-post private control of self-dealing." Source: Djankov et al (2006).
Own_conc	"Average percentage of common shares not owned by the top three shareholders in the ten largest non-financial, privately-owned domestic firms in a given country. A firm is considered privately-owned if the State is not a known shareholder in it. Source: La Porta et al. (1999), Hartland- Peel (1996) for Kenya, Bloomberg and various annual reports for Ecuador, Jordan, and Uruguay." Source: La Porta et al. (2006).
Creditor	"Creditor rights index. The index is formed by adding 1 when: (1) the country imposes restrictions, such as creditors'consent or minimum dividends, to file for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) the debtor does not retian the administration of its property pending the resolution of the reorganization; (4) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assest of a bankrupt firm." Source: La Porta et al. (1998).
Wrk_part	"Measures the legal rights of workers to participate in the management of companies as the average of: (i) worker participation by law; and (ii) right to worker participation in management in the constitution of the country." Source: Botero et al. (2003).

Panel C: Legal Origin Variables

The origin of the company law or commercial code of a country. Source: La Porta et al. (1998, 1999).

Variable	Description
Common	Equals one if the orgin is English common law, zero otherwise.
Social	Equals one if the orgin is Socialist/Communist law, zero otherwise.
French	Equals one if the orgin is French commercial code, zero otherwise.
German	Equals one if the orgin is German commercial code, zero otherwise.
Scand	Equals one if the orgin is Scandinavian civil law, zero otherwise.

Panel D: Other Variables	
Variable	Description
Financier	A measure of investor protection, used in Atanassov and Kim (2006). It is defined as the sum of R_ANT_DIR, SELF_DEAL, CREDITOR and RULE_LAW, after each of these variables have been scaled to range from 0 to 1. Source: Atanassov and Kim (2006).
ln(gnp)	"Natural logarithm of GNP per capita in 1997, Atlas method, expressed in current US dollars." Source: Botero el al. (2004); original source: World Bank, World Development Indicators [2001].
Rule_law	"Assessment of the law and order tradition in the country. Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for less tradition for low and order." Source: La Porta et al 1997; orgininal source: International Country Risk Guide.
Rule_law2	"Rule of law measures the extent to which agents have confidence in and abide by the rules of society in year 2000. These include perceptions of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. The source for the data on rule of law is Kaufmann, Daniel, Aart Kraay and Massimo Mastruzzi. 2003. "Governance Matters III: Updated Governance Indicators for 1996-02." Working Paper Draft for comments. Washington, D.C.: World Bank."
Jud_eff	"Efficiency of judicial system. Assessment of the 'efficiency and integrity of the legal environment as it affects business, particularly foreign firms' produed by the country risk rating agency Business International Corp. It 'may be taken to represent investors' assessments of conditions in the country in question.' Average between 1980 and 1983. Scale from 0 to 10; with lower scores, lower efficiency levels." Source: la Porta et al. (1998); original source: Business International Corp.
Union_den	"Union density. Measures the percentage of the total work force affiliated to labor unions in 1997. Source: ILO, Laborsta: <http://laborsta.ilo.org>, and The World Bank [2001]." Source: Botero et al. (2004).
Labor_rln	An index of the whether the labor relations in a country are cooperative. It is from the World Economic Forum survey question: Are labor relations in your firm cooperative? Source: World Economic Forum (1999).
GDP_gr	Percentage change in per capita gross domestic product in year (t).
Gini	Gini coefficient of the country.

Table 3
Selected Institutional Variables

	Labor Laws					Legal Origin				Corporate Governance					Other Variables				
Country	EMP_LAW	UNION_PWR	COLL_DISP	COLL_RLN	SOC_SEC	COMMON	FRENCH	GERMAN	SCAND	ANT_DIR	R_ANT_DIR	SELF_DEAL	CREDITOR	WRK_PART	LN_GNP	RULE_LAW	JUD_EFF	UN_DEN	FINANCIER
Argentina	0.34	0.57	0.58	0.58	0.72	0	1	0	0	2.00	4.00	0.34	1.00	0.33	9.01	5.35	6.00	0.300	1.74
Australia	0.35	0.29	0.46	0.37	0.78	1	0	0	0	4.00	4.00	0.76	1.00	0.00	10.01	10.00	10.00	0.260	2.71
Austria	0.50	0.43	0.29	0.36	0.71	0	0	1	0	2.50	2.00	0.21	3.00	0.50	10.25	10.00	9.50	0.520	2.38
Belgium	0.51	0.43	0.42	0.42	0.62	0	1	0	0	3.00	0.00	0.54	2.00	0.25	10.20	10.00	9.50	0.600	2.37
Brazil	0.57	0.38	0.38	0.38	0.55	0	1	0	0	5.00	3.00	0.27	1.00	0.75	8.46	6.32	5.75	0.250	2.00
Canada	0.26	0.14	0.25	0.20	0.79	1	0	0	0	4.00	5.00	0.64	1.00	0.00	9.92	10.00	9.25	0.300	2.57
Chile	0.47	0.43	0.33	0.38	0.69	0	1	0	0	4.00	5.00	0.63	2.00	0.00	8.51	7.02	7.25	0.120	2.50
Colombia	0.34	0.43	0.54	0.49	0.81	0	1	0	0	3.00	3.00	0.57	0.00	0.33	7.82	2.08	7.25	0.078	1.29
Denmark	0.57	0.71	0.13	0.42	0.87	0	0	0	1	4.00	2.00	0.46	3.00	0.50	10.44	10.00	10.00	0.800	2.89
Finland	0.74	0.43	0.21	0.32	0.79	0	0	0	1	3.50	3.00	0.46	1.00	0.25	10.15	10.00	10.00	0.840	2.29
France	0.74	0.67	0.67	0.67	0.78	0	1	0	0	3.50	3.00	0.38	0.00	0.75	10.16	8.98	8.00	0.090	1.78
Germany	0.70	0.71	0.50	0.61	0.67	0	0	1	0	3.50	1.00	0.28	3.00	0.50	10.26	9.23	9.00	0.380	2.37
Greece	0.52	0.43	0.54	0.49	0.74	0	1	0	0	2.00	2.00	0.22	1.00	0.25	9.42	6.18	7.00	0.354	1.43
Hong Kong	0.17	0.29	0.63	0.46	0.80	1	0	0	0	5.00	5.00	0.96	4.00	0.00	10.14	8.22	10.00	0.220	3.62
India	0.44	0.14	0.63	0.38	0.40	1	0	0	0	5.00	5.00	0.58	4.00	0.58	6.04	4.17	8.00	0.030	2.80
Indonesia	0.68	0.29	0.50	0.39	0.18	0	1	0	0	4.00	2.00	0.65	4.00	0.00	7.01	3.98	2.50	0.012	2.76
Ireland	0.34	0.43	0.50	0.46	0.71	1	0	0	0	5.00	4.00	0.79	1.00	0.00	9.89	7.80	8.75	0.650	2.49
Israel	0.29	0.29	0.33	0.31	0.81	1	0	0	0	4.00	3.00	0.73	4.00	0.00	9.72	4.82	10.00	0.300	2.87
Italy	0.65	0.43	0.83	0.63	0.76	0	1	0	0	2.00	1.00	0.42	2.00	0.50	9.93	8.33	6.75	0.400	2.14
Japan	0.16	0.71	0.54	0.63	0.64	0	0	1	0	4.50	4.00	0.50	2.00	0.00	10.55	8.98	10.00	0.240	2.46
Korea	0.45	0.71	0.38	0.54	0.68	0	0	1	0	4.50	2.00	0.47	3.00	0.25	9.34	5.35	6.00	0.138	2.33
Malaysia	0.19	0.00	0.38	0.19	0.20	1	0	0	0	5.00	4.00	0.95	4.00	0.00	8.43	6.78	9.00	0.100	3.46
Mexico	0.59	0.57	0.58	0.58	0.51	0	1	0	0	3.00	1.00	0.17	0.00	0.00	8.22	5.35	6.00	0.400	1.22
Netherlands	0.73	0.43	0.50	0.46	0.63	0	1	0	0	2.50	2.00	0.20	2.00	0.58	10.21	10.00	10.00	0.280	2.21
New Zealand	0.16	0.00	0.50	0.25	0.72	1	0	0	0	4.00	4.00	0.95	3.00	0.00	9.69	10.00	10.00	0.240	3.37
Norway	0.69	0.71	0.58	0.65	0.83	0	0	0	1	3.50	4.00	0.42	2.00	1.00	10.50	10.00	10.00	0.800	2.52
Pakistan	0.34	0.29	0.33	0.31	0.47	1	0	0	0	4.00	5.00	0.41	4.00	0.25	6.23	3.03	5.00	0.100	2.38
Peru	0.46	0.71	0.71	0.71	0.42	0	1	0	0	3.50	3.00	0.45	0.00	0.58	7.78	2.50	6.75	0.050	1.24
Philippines	0.48	0.57	0.46	0.51	0.49	0	1	0	0	4.00	3.00	0.22	0.00	0.50	7.11	2.73	4.75	0.120	1.01
Portugal	0.81	0.71	0.58	0.65	0.74	0	1	0	0	2.50	3.00	0.44	1.00	0.75	9.33	8.68	5.50	0.350	2.06
Singapore	0.31	0.14	0.54	0.34	0.46	1	0	0	0	5.00	4.00	1.00	4.00	0.00	10.22	8.57	10.00	0.240	3.69
South Africa	0.32	0.71	0.38	0.54	0.58	1	0	0	0	5.00	5.00	0.81	3.00	0.25	8.21	4.42	6.00	0.300	2.84
Spain	0.74	0.71	0.46	0.59	0.77	0	1	0	0	5.00	4.00	0.37	2.00	0.58	9.64	7.80	6.25	0.130	2.48
Sweden	0.74	0.62	0.46	0.54	0.84	0	0	0	1	3.50	3.00	0.33	2.00	0.25	10.23	10.00	10.00	0.900	2.42
Switzerland	0.45	0.33	0.50	0.42	0.82	0	0	1	0	3.00	2.00	0.27	1.00	0.00	10.68	10.00	10.00	0.250	2.02
Taiwan	0.45	0.38	0.25	0.32	0.75	0	0	1	0	3.00	3.00	0.56	2.00	0.42	9.25	8.52	6.75	0.350	2.41
Thailand	0.41	0.38	0.33	0.36	0.47	1	0	0	0	4.00	2.00	0.81	3.00	0.00	7.93	6.25	3.25	0.100	2.90
Turkey	0.40	0.57	0.38	0.47	0.48	0	1	0	0	3.00	2.00	0.43	2.00	0.00	8.07	5.18	4.00	0.120	1.78
United Kingdom	0.28	0.00	0.38	0.19	0.69	1	0	0	0	5.00	5.00	0.95	4.00	0.00	9.98	8.57	10.00	0.300	3.62
United States	0.22	0.14	0.38	0.26	0.65	1	0	0	0	3.00	5.00	0.65	1.00	0.00	10.31	10.00	10.00	0.139	2.40

Table 4
Sample Construction

The table details the steps in arriving at the final sample.

Restrictions	Mean	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	Total
1. Basic financial data	13804	18867	18153	17417	16297	14837	14234	13190	12825	11586	10439	9227	8579	8178	7122	180951
2. Ex. Financials and Utilities	11246	15499	14827	14191	13342	12159	11606	10683	10393	9410	8466	7406	6973	6647	5747	147349
3. Total assets(t-1) > USD 0.5m, & common equity(t-1) > USD 0.25m & Employees(t-1) > 20	10943	14892	14212	13664	12925	11783	11327	10497	10219	9269	8349	7315	6866	6549	5671	143538
5. Delete repeat observations	10873	14799	14118	13561	12833	11705	11251	10430	10145	9210	8316	7279	6829	6513	5641	142630
6. Ex. Employee(t) = Employee(t-1)	10589	14423	13699	13247	12493	11427	10952	10143	9885	8965	8115	7063	6660	6346	5506	138924

Table 5
Sample Coverage

		Years													
Country	Total	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Argentina	110	1	1	3	10	9	9	15	17	14	6	5	6	7	7
Australia	2360	64	65	64	70	92	90	86	80	75	86	133	470	488	497
Austria	695	34	37	42	42	43	46	61	61	55	57	58	60	51	48
Belgium	861	40	44	48	53	53	57	54	65	74	77	80	76	71	69
Brazil	641	0	0	8	36	41	66	50	40	45	60	74	74	70	77
Canada	2428	132	132	135	151	140	141	144	160	151	151	181	200	299	311
Chile	563	14	25	27	34	42	46	48	59	53	74	83	50	6	2
Colombia	141	0	0	11	14	11	12	12	13	10	12	10	11	12	13
Denmark	1486	74	89	96	98	100	103	127	124	129	120	116	109	106	95
Finland	1050	30	33	33	34	54	61	77	87	90	105	117	116	109	104
France	6076	312	309	325	311	328	350	427	470	532	554	579	563	530	486
Germany	5425	257	262	278	304	310	323	348	369	402	495	574	544	501	458
Greece	994	12	19	22	30	57	63	73	68	77	112	162	112	91	96
Hong Kong	2307	12	11	14	20	38	80	114	119	115	115	216	397	503	553
India	613	0	1	3	3	5	29	39	42	44	50	57	79	118	143
Indonesia	950	3	15	23	25	21	38	32	33	45	88	123	156	171	177
Ireland	629	35	36	34	36	38	40	44	47	48	53	56	55	54	53
Israel	257	0	0	4	8	11	15	14	10	16	13	29	36	41	60
Italy	1833	120	120	104	102	109	112	116	122	123	132	167	175	167	164
Japan	30278	1102	1707	1756	1825	1970	2043	2102	2151	2606	2554	2454	2419	2595	2994
Korea	3846	64	64	76	137	178	198	213	200	180	389	471	555	557	564
Malaysia	2251	16	17	22	22	17	22	28	31	34	59	325	499	545	614
Mexico	469	6	0	0	19	24	27	37	37	46	38	45	62	75	53
Netherlands	1907	117	118	112	120	131	148	151	160	164	148	141	136	134	127
New Zealand	220	10	8	8	8	12	14	16	17	17	20	19	23	28	20
Norway	1243	49	47	55	61	65	73	97	121	116	103	114	120	109	113
Pakistan	260	0	2	8	8	7	7	5	5	10	22	39	45	52	50
Peru	281	0	0	10	10	6	5	17	15	19	22	41	46	47	43
Philippines	460	2	9	12	10	10	14	18	27	35	37	58	73	78	77
Portugal	548	30	30	33	31	37	43	45	46	40	41	45	42	46	39
Singapore	1554	10	18	20	21	25	31	34	29	29	47	211	331	351	397
South Africa	1677	78	84	85	92	104	108	108	106	136	138	154	158	167	159
Spain	1060	57	59	64	64	68	69	76	78	83	88	92	92	86	84
Sweden	2249	91	94	94	100	119	123	142	190	190	204	238	231	218	215
Switzerland	1699	83	84	91	98	101	98	113	124	134	142	153	161	159	158
Taiwan	2092	1	10	13	11	25	59	100	110	113	140	144	180	422	764
Thailand	1163	6	21	22	23	25	27	20	24	30	86	179	220	236	244
Turkey	741	7	10	11	14	17	20	26	36	51	68	102	114	130	135
United Kingdom	14893	998	981	958	982	1055	1059	1191	1191	1125	1054	1133	1110	1053	1003
United States	40613	1639	1784	1936	2026	2617	3096	3465	3458	3696	3667	3515	3341	3216	3157
Total	138923	5506	6346	6660	7063	8115	8965	9885	10142	10952	11427	12493	13247	13699	14423

Table 6
Correlations and Summary Statistics for Institutional Variables

Panel A reports pairwise correlations and Panel B reports summary statistics for selected institutional variables.

	Labor Laws					Legal Origin				Corporate Governance					Other Variables				
	EMP_LAW	UNION_PWR	COLL_DISP	COLL_RLN	SOC_SEC	COMMON	FRENCH	GERMAN	SCAND	ANT_DIR	R_ANT_DIR	SELF_DEAL	CREDITOR	WRK_PART	LN_GNP	RULE_LAW	JUD_EFF	UN_DEN	FINANCIER
Panel A: Correlation Matrix																			
EMP_LAW	1.00																		
UN_PWR	0.56	1.00																	
COLL_DISP	0.15	0.16	1.00																
COLL_RLN	0.51	0.86	0.63	1.00															
SOC_SEC	0.14	0.25	-0.08	0.16	1.00														
COMMON	-0.69	-0.68	-0.15	-0.61	-0.18	1.00													
FRENCH	0.45	0.33	0.41	0.47	-0.16	-0.60	1.00												
GERMAN	-0.03	0.22	-0.14	0.10	0.15	-0.31	-0.34	1.00											
SCAND	0.40	0.28	-0.27	0.09	0.37	-0.24	-0.27	-0.14	1.00										
ANT_DIR	-0.37	-0.24	-0.21	-0.29	-0.28	0.55	-0.43	-0.11	-0.04	1.00									
R_ANT_DIR	-0.52	-0.36	-0.09	-0.33	0.01	0.62	0.38	-0.27	0.04	0.54	1.00								
SELF_DEAL	-0.65	-0.60	-0.12	-0.52	-0.17	0.79	-0.47	-0.27	-0.16	0.59	0.52	1.00							
CREDITOR	-0.28	-0.40	-0.23	-0.43	-0.29	0.48	-0.51	0.08	-0.02	0.46	0.19	0.52	1.00						
WRK_PART	0.66	0.53	0.25	0.54	0.18	-0.51	0.33	0.01	0.27	-0.23	-0.18	-0.56	-0.26	1.00					
LN_GNP	0.08	0.09	-0.05	0.04	0.69	-0.11	-0.29	0.28	0.30	-0.17	-0.14	0.02	-0.08	-0.02	1.00				
RULE_LAW	0.16	-0.09	-0.17	-0.16	0.53	-0.01	-0.36	0.22	0.35	-0.13	-0.06	0.04	0.01	0.01	0.86	1.00			
JUD_EFF	-0.21	-0.26	-0.08	-0.25	0.51	0.23	-0.52	0.13	0.33	0.08	0.19	0.21	0.10	-0.10	0.74	0.69	1.00		
UN_DEN	0.35	0.26	-0.23	0.09	0.53	-0.22	-0.27	0.02	0.78	-0.20	-0.24	-0.20	-0.08	0.19	0.57	0.56	0.47	1.00	
FINANCIER	-0.40	-0.54	-0.26	-0.56	-0.06	0.66	-0.66	-0.04	0.07	0.59	0.42	0.79	0.81	-0.38	0.35	0.38	0.41	0.06	1.00
Panel B: Summary Statistics																			
Mean	0.46	0.43	0.46	0.45	0.65	0.35	0.40	0.15	0.10	3.74	3.18	0.53	2.08	0.27	9.23	7.38	7.84	0.30	2.40
Std. Dev.	0.19	0.22	0.14	0.14	0.17	0.48	0.50	0.36	0.30	0.93	1.34	0.24	1.33	0.28	1.23	2.53	2.20	0.23	0.65
Minimum	0.161	0	0.125	0.188	0.177	0	0	0	0	2	0	0.17	0	0	6.04	2.08	2.5	0.012	1.01
Maximum	0.809	0.714	0.833	0.711	0.873	1	1	1	1	5	5	1	4	1	10.678	10	10	0.9	3.69
Observations	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40

Table 7
Summary Statistics

Summary statistics for the firm-specific variables.

Variable	Observations	Mean	Standard Deviation	Minimun	Maximum
$\ln(Emp_t/Emp_{t-1})$	138,924	0.041	0.204	-0.434	0.693
$\ln(Sales_t/Sales_{t-1})$	138,924	0.062	0.221	-0.461	0.678
Sales	138,924	1199.855	2682.900	4.605	13677.210
ln(Sales)	138,924	5.478	1.880	1.527	9.523
ROA	138,924	0.095	0.119	-0.313	0.325
Leverage	138,924	0.337	0.245	0.000	0.849
Emp	138,924	5109.472	11120.490	45	55600
ln(Emp)	138,924	7.044	1.737	3.807	10.926

Table 8
Effects of Labor Laws on the Sensitivity of Employment to Sales

Random effects regressions using firm-level data with country random effects, and year and industry fixed effects. Dependent variable is $\ln(Emp_t/Emp_{t-1})$. Errors are clustered at the country level. P-values are reported in parentheses.

Panel A: Effects of Employment Laws					
	(1)	(2)	(3)	(4)	(5)
Constant	0.0334	0.0284	0.0284	0.0304	0.0322
	(0.004)	(0.019)	(0.005)	(0.002)	(0.000)
$\ln(Sales_t/Sales_{t-1})$	0.4858	0.3243	0.3826	0.3276	0.3451
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$\ln(Sales_t/Sales_{t-1})$*Alt_emp	-0.2571				
	(0.165)				
Alt_emp	-0.0177				
	(0.515)				
$\ln(Sales_t/Sales_{t-1})$*Over_time		0.0598			
		(0.346)			
Over_time		-0.0063			
		(0.423)			
$\ln(Sales_t/Sales_{t-1})$*Cost_fire			-0.1435		
			(0.406)		
Cost_fire			-0.0284		
			(0.107)		
$\ln(Sales_t/Sales_{t-1})$*Dism_proc				0.0580	
				(0.578)	
Dism_proc				-0.0179	
				(0.176)	
$\ln(Sales_t/Sales_{t-1})$*Emp_law					-0.0124
					(0.940)
Emp_law					-0.0234
					(0.145)
Control Variables					
ln(Sales)	-0.0022	-0.0022	-0.0028	-0.0024	-0.0024
	(0.069)	(0.112)	(0.013)	(0.056)	(0.046)
ROA	0.1696	0.1662	0.1769	0.1703	0.1715
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0311	-0.0324	-0.0307	-0.0317	-0.0311
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y	Y
Country random effects	Y	Y	Y	Y	Y
Country-level clustering	Y	Y	Y	Y	Y
N (firm years)	138803	138803	138803	138803	138803
Overall R^2	0.1781	0.1768	0.1791	0.1768	0.1768
Wald Chi^2 (38)	64493.95	558870.35	100761.25	143130.7	73409.33

Panel B: Effects of Collective Relations Laws			
	(1)	(2)	(3)
Constant	0.0237	0.0059	0.0176
	(0.037)	(0.759)	(0.176)
$\ln(Sales_t/Sales_{t-1})$	0.4445	0.4828	0.5252
	(0.000)	(0.000)	(0.000)
$\ln(Sales_t/Sales_{t-1})$*union_pwr	-0.3251		
	(0.002)		
union_pwr	0.0186		
	(0.086)		
$\ln(Sales_t/Sales_{t-1})$*coll_disp		-0.3287	
		(0.223)	
coll_disp		0.0561	
		(0.040)	
$\ln(Sales_t/Sales_{t-1})$*coll_rln			-0.4909
			(0.006)
coll_rln			0.0360
			(0.010)
Control Variables			
ln(Sales)	-0.0021	-0.0024	-0.0022
	(0.147)	(0.070)	(0.108)
ROA	0.1732	0.1698	0.1738
	(0.000)	(0.000)	(0.000)
Leverage	-0.0331	-0.0334	-0.0336
	(0.0000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y
Industry fixed effects	Y	Y	Y
Country random effects	Y	Y	Y
Country-level clustering	Y	Y	Y
N (firm years)	138803	138803	138803
Overall R^2	0.1847	0.1782	0.1838
Wald Chi^2 (38)	129473.42	116374.63	90630.88

Panel C: Effects of Social Security Laws				
	(1)	(2)	(3)	(4)
Constant	0.0003	0.0467	0.0349	0.0438
	(0.985)	(0.000)	(0.049)	(0.001)
$\ln(Sales_t/Sales_{t-1})$	0.4202	0.2593	0.2087	0.1556
	(0.036)	(0.007)	(0.000)	(0.079)
$\ln(Sales_t/Sales_{t-1})$*Old_age	-0.1263			
	(0.650)			
Old_age	0.0432			
	(0.033)			
$\ln(Sales_t/Sales_{t-1})$*Sickness		0.1220		
		(0.318)		
Sickness		-0.0284		
		(0.093)		
$\ln(Sales_t/Sales_{t-1})$*Unemp_ben			0.1927	
			(0.000)	
Unemp_ben			-0.0124	
			(0.227)	
$\ln(Sales_t/Sales_{t-1})$*Soc_sec				0.2791
				(0.009)
Soc_sec				-0.0253
				(0.128)
Control Variables				
ln(Sales)	-0.0022	-0.0022	-0.0021	-0.0021
	(0.135)	(0.097)	(0.129)	(0.149)
ROA	0.1661	0.1672	0.1646	0.1647
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0331	-0.0329	-0.0326	-0.0327
	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y
Country random effects	Y	Y	Y	Y
Country-level clustering	Y	Y	Y	Y
N (firm years)	138803	138803	138803	138803
Overall R^2	0.1767	0.1769	0.1781	0.1774
Wald Chi^2 (38)	106898.07	220829.26	470051.57	321394.02

Table 9
Effects of Corporate Governance on the Sensitivity of Employment to Sales

Random effects regressions using firm-level data with country random effects, and year and industry fixed effects. Dependent variable is $\ln(Emp_t/Emp_{t-1})$. Errors are clustered at the country level. P-values are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.0206	0.0133	0.0343	0.0250	0.0276	0.0259
	(0.281)	(0.558)	(0.018)	(0.004)	(0.043)	(0.034)
$\ln(Sales_t/Sales_{t-1})$	0.1725	0.5668	0.2481	0.4313	0.3837	0.3466
	(0.078)	(0.001)	(0.005)	(0.000)	(0.000)	(0.000)
$\ln(Sales_t/Sales_{t-1})$*Ant_dir	0.2487					
	(0.085)					
Ant_dir	0.0028					
	(0.854)					
$\ln(Sales_t/Sales_{t-1})$*R_ant_dir		-0.3612				
		(0.233)				
R_ant_dir		0.0208				
		(0.430)				
$\ln(Sales_t/Sales_{t-1})$*Self_deal			0.1475			
			(0.254)			
Self_deal			-0.0106			
			(0.538)			
$\ln(Sales_t/Sales_{t-1})$*Own_conc				-0.3118		
				(0.107)		
Own_conc				-0.0047		
				(0.860)		
$\ln(Sales_t/Sales_{t-1})$*Creditor					-0.0883	
					(0.539)	
Creditor					-0.0064	
					(0.563)	
$\ln(Sales_t/Sales_{t-1})$*Wrk_part						-0.0465
						(0.677)
Wrk_part						-0.0068
						(0.574)
Control Variables						
ln(Sales)	-0.0020	-0.0022	-0.0022	-0.0023	-0.0023	-0.0022
	(0.159)	(0.129)	(0.146)	(0.058)	(0.116)	(0.102)
ROA	0.1692	0.1677	0.1667	0.1696	0.1664	0.1676
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0307	-0.0327	-0.0330	-0.0315	-0.0328	-0.0318
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y	Y	Y
Country random effects	Y	Y	Y	Y	Y	Y
Country-level clustering	Y	Y	Y	Y	Y	Y
N (firm years)	138803	138803	138803	138803		138803
Overall R^2	0.1798	0.1795	0.1774	0.1787	0.1775	0.1766
Wald Chi^2 (38)	108477.96	58071.12	304644.07	104045.37	277596.57	159769.40

Table 10
Effects of Legal Origin on the Sensitivity of Employment to Sales

Random effects regressions using firm-level data with country random effects, and year and industry fixed effects. Dependent variable is $\ln(Emp_t/Emp_{t-1})$. Errors are clustered at the country level. P-values are reported in parentheses.

	(1)	(2)
Constant	0.0273	-0.0176
	(0.005)	(0.670)
$\ln(Sales_t/Sales_{t-1})$	0.4011	-0.4994
	(0.000)	(0.000)
$\ln(Sales_t/Sales_{t-1})$*French	-0.1045	-0.0446
	(0.068)	(0.189)
French	0.0045	0.0052
	(0.351)	(0.308)
$\ln(Sales_t/Sales_{t-1})$*German	-0.2169	-0.2247
	(0.001)	(0.000)
German	0.0126	0.0114
	(0.067)	(0.109)
$\ln(Sales_t/Sales_{t-1})$*Scand	-0.0472	-0.0765
	(0.232)	(0.014)
Scand	0.0025	0.0011
	(0.670)	(0.852)
$\ln(Sales_t/Sales_{t-1})$*ln(GNP)		0.0899
		(0.000)
ln(GNP)		0.0042
		(0.256)
Control Variables		
log_rev(2004)	-0.0021	-0.0026
	(0.130)	(0.048)
ROA(t-1)	0.1743	0.1823
	(0.000)	(0.000)
Leverage(t-1)	-0.0335	-0.0321
	(0.000)	(0.000)
Year fixed effects	Y	Y
Industry fixed effects	Y	Y
Country random effects	Y	Y
Country-level clustering	Y	Y
N (firm years)	138803	138803
Overall R^2	0.1850	0.1903
Wald Chi^2 (38)	92428.51	74918.32

Table 11
Effects of Labor Laws on the Speed of Employment Adjustment

Random effects regressions using firm-level data with country random effects, and year and industry fixed effects. Dependent variable is $\ln(Emp_t/Emp_{t-1})$. Errors are clustered at the country level. P-values are reported in parentheses.

Panel A: Effects of Employment Laws					
	(1)	(2)	(3)	(4)	(5)
Constant	0.1324	0.1297	0.1221	0.1257	0.1269
	(0.013)	(0.000)	(0.000)	(0.000)	(0.000)
$\ln(Sales_t)$	0.0360	0.0358	0.0355	0.0359	0.0358
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$\ln(Emp_{t-1})$	-0.0227	-0.0215	-0.0201	-0.0211	-0.0211
	(0.012)	(0.000)	(0.001)	(0.000)	(0.001)
$\ln(Emp_{t-1})$*Alt_emp	0.0028				
	(0.783)				
Alt_emp	-0.0086				
	(0.914)				
$\ln(Emp_{t-1})$*Over_time		0.0012			
		(0.671)			
Over_time		-0.0097			
		(0.676)			
$\ln(Emp_{t-1})$*Cost_fire			-0.0029		
			(0.726)		
Cost_fire			0.0124		
			(0.857)		
$\ln(Emp_{t-1})$*Dism_proc				-0.0003	
				(0.959)	
Dism_proc				0.0084	
				(0.870)	
$\ln(Emp_{t-1})$*Emp_law					0.0001
					(0.992)
Emp_law					(0.0005)
					(0.994)
Control Variables					
ln(Assets)	-0.0230	-0.0230	-0.0229	-0.0229	-0.0229
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.1581	0.1599	0.1614	0.1575	0.1591
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0489	-0.0484	-0.0482	-0.0490	-0.0486
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y	Y
Country random effects	Y	Y	Y	Y	Y
Country-level clustering	Y	Y	Y	Y	Y
N (firm years)	138923	138923	138923	138923	138923
Overall R^2	0.0706	0.0706	0.0707	0.0706	0.0706
Wald Chi^2 (38)	80871.49	138060.71	52625.20	394569.92	55548.85

Panel B: Effects of Collective Relations Laws			
	(1)	(2)	(3)
Constant	0.1688	0.2129	0.2069
	(0.000)	(0.000)	(0.000)
$\ln(Sales_t)$	0.0370	0.0360	0.0368
	(0.000)	(0.000)	(0.000)
$\ln(Emp_{t-1})$	-0.0281	-0.0327	-0.0323
	(0.000)	(0.000)	(0.000)
$\ln(Emp_{t-1})$*Union_pwr	0.0162		
	(0.000)		
Union_pwr	-0.1462		
	(0.000)		
$\ln(Emp_{t-1})$*Coll_disp		0.0256	
		(0.041)	
Coll_disp		-0.1973	
		(0.068)	
$\ln(Emp_{t-1})$*Coll_rln			0.0254
			(0.000)
Coll_rln			-0.2215
			(0.000)
Control Variables			
ln(Assets)	-0.0224	-0.0229	-0.0224
	(0.000)	(0.000)	(0.000)
ROA	0.1610	0.1683	0.1610
	(0.000)	(0.000)	(0.000)
Leverage	-0.0441	-0.0483	-0.0452
	(0.0000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y
Industry fixed effects	Y	Y	Y
Country random effects	Y	Y	Y
Country-level clustering	Y	Y	Y
N (firm years)	138923	138803	138803
Overall R^2	0.0736	0.1782	0.1838
Wald Chi^2 (38)	24312.14	116374.63	90630.88

Panel C: Effects of Social Security Laws				
	(1)	(2)	(3)	(4)
Constant	0.1437	0.0681	0.1322	0.0967
	(0.011)	(0.307)	(0.000)	(0.048)
ln($Sales_t$)	0.0358	0.0358	0.0371	0.0361
	(0.000)	(0.000)	(0.000)	(0.000)
ln(Emp_{t-1})	-0.0251	-0.0135	-0.0195	-0.0152
	(0.002)	(0.135)	(0.000)	(0.031)
ln(Emp_{t-1})*Old_age	0.0065			
	(0.489)			
Old_age	-0.0257			
	(0.760)			
ln(Emp_{t-1})*Sickness		-0.0115		
		(0.260)		
Sickness		0.0881		
		(0.325)		
ln(Emp_{t-1})*Unemp_ben			-0.0030	
			(0.410)	
Unemp_ben			-0.0066	
			(0.802)	
ln(Emp_{t-1})*Soc_sec				-0.0089
				(0.201)
Soc_sec				0.0452
				(0.466)
Control Variables				
ln(Assets)	-0.0230	-0.0229	-0.0234	-0.0230
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.1600	0.1592	0.1542	0.1586
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0488	-0.0483	-0.0489	-0.0485
	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y
Country random effects	Y	Y	Y	Y
Country-level clustering	Y	Y	Y	Y
N (firm years)	138923	138923	138923	138923
Overall R^2	0.0707	0.0708	0.0712	0.0707
Wald Chi^2 (38)	52492.83	29609.53	44011.71	46696.97

Table 12
Effects of Corporate Governance on the Speed of Employment Adjustment

Random effects regressions using firm-level data with country random effects, and year and industry fixed effects. Dependent variable is $\ln(Emp_t/Emp_{t-1})$. Errors are clustered at the country level. P-values are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.0583	0.1844	0.0537	0.1169	0.1298	0.1293
	(0.060)	(0.004)	(0.105)	(0.000)	(0.000)	(0.000)
$\ln(Sales_t)$	0.0357	0.0357	0.0364	0.0368	0.0354	0.0358
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
$\ln(Emp_{t-1})$	-0.0143	-0.0265	-0.0135	-0.0209	-0.0207	-0.0214
	(0.002)	(0.001)	(0.001)	(0.002)	(0.000)	(0.000)
$\ln(Emp_{t-1})$*Ant_dir	-0.0104					
	(0.016)					
Ant_dir	0.0954					
	(0.007)					
$\ln(Emp_{t-1})$*R_ant_dir		0.0084				
		(0.569)				
R_ant_dir		-0.0972				
		(0.404)				
$\ln(Emp_{t-1})$*Self_deal			-0.0133			
			(0.013)			
Self_deal			0.1170			
			(0.004)			
$\ln(Emp_{t-1})$*Own_conc				-0.0023		
				(0.831)		
Own_conc				0.0464		
				(0.570)		
$\ln(Emp_{t-1})$*Creditor					-0.0004	
					(0.944)	
Creditor					-0.0100	
					(0.813)	
$\ln(Emp_{t-1})$*Wrk_part						0.0025
						(0.583)
Wrk_part						-0.0183
						(0.624)
Control Variables						
ln(Assets)	-0.0226	-0.0227	-0.0229	-0.0234	-0.0228	-0.0229
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.1659	0.1582	0.1613	0.1532	0.1605	0.1601
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0462	-0.0486	-0.0465	-0.0491	-0.0488	-0.0485
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y	Y	Y
Country random effects	Y	Y	Y	Y	Y	Y
Country-level clustering	Y	Y	Y	Y	Y	Y
N (firm years)	138923	138923	138923	138923	138923	138923
Overall R^2	0.0713	0.0713	0.0716	0.0709	0.0709	0.0706
Wald Chi^2 (38)	50723.8	40576.6	31510.9	352769.5	190083.8	85280.95

Table 13
Individual effects of Labor Laws and Corporate Governance on the Sensitivity of Employment to Sales

Random effects regressions using firm-level data with country random effects, and year and industry fixed effects. Dependent variable is $\ln(Emp_t/Emp_{t-1})$. Errors are clustered at the country level. P-values are reported in parentheses.

	(1)	(2)	(3)	(4)
Constant	0.0151	0.0131	0.0096	0.0022
	(0.386)	(0.540)	(0.578)	(0.917)
$\ln(Sales_t/Sales_{t-1})$	0.6486	0.6773	0.7264	0.7099
	(0.000)	(0.000)	(0.000)	(0.000)
$\ln(Sales_t/Sales_{t-1})$*Union_pwr	-0.3166	-0.4890		
	(0.001)	(0.000)		
Union_pwr	0.0175	0.0254		
	(0.125)	(0.095)		
$\ln(Sales_t/Sales_{t-1})$*Coll_rln			-0.4768	-0.6566
			(0.003)	(0.000)
Coll_rln			0.0344	0.0491
			(0.021)	(0.004)
$\ln(Sales_t/Sales_{t-1})$*R_ant_dir	-0.3305		-0.3302	
	(0.028)		(0.042)	
R_ant_dir	0.0130		0.0124	
	(0.513)		(0.509)	
$\ln(Sales_t/Sales_{t-1})$*Self_deal		-0.2884		-0.1957
		(0.023)		(0.081)
Self_deal		0.0130		0.0167
		(0.519)		(0.332)
Control Variables				
ln(Sales)	-0.0022	-0.0021	-0.0023	-0.0022
	(0.149)	(0.147)	(0.110)	(0.109)
ROA	0.1751	0.1747	0.1757	0.1754
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0335	-0.0333	-0.0340	-0.0336
	(0.000)	(0.000)	(0.000)	(0.000)
Year fixed effects	Y	Y	Y	Y
Industry fixed effects	Y	Y	Y	Y
Country random effects	Y	Y	Y	Y
Country-level clustering	Y	Y	Y	Y
N (firm years)	138923	138923	138923	138923
Overall R^2	0.1875	0.1868	0.1866	0.1850
Wald Chi^2 (38)	187452.26	97049.08	57022.51	44040.03