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The Effect of Labour Protection Laws on the Relationship between Leverage and Wages*

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ABSTRACT

Previous research has shown that leverage has a positive effect on wages. Using US state-level labour protection laws as an exogenous shock, we find that the adoption of the law alleviates the effect of leverage on wages. We show that the mitigating effect on the leverage-wage relationship is more pronounced for firms with strong employee bargaining power. Our study highlights the positive role played by labour protection laws in lowering firms' labour costs and improving their financial flexibility, which complements the literature and advances our understanding of the broad implications of labour protection laws.

JEL classification: G32, J31, J63, K31

Keywords: Labour protection law; leverage; employee pay; employee bargaining power; capital structure

1 Introduction

Unemployment poses significant distress and risk to employees, e.g., long delays or substantial wage cuts in reemployment, reduction in consumption and psychological and social effects (Katz and Meyer, 1990; Gibbons and Katz, 1991; Gruber, 1997; Farber, 2005; Kalil and Ziol-Guest, 2008; DeLeire and Kalil, 2010). The literature shows that, since firms are unable to fully insure workers against the costs of unemployment, employees demand wage rises to compensate for high unemployment risk (Abowd and Ashenfelter, 1981; Topel, 1984; Li, 1986; Hamermesh and Wolfe, 1990),[1] especially those working in highly-leveraged firms as such firms are often forced to lay off staff to reduce costs and avoid bankruptcy (Ofek, 1993; Asquith, Gertner, and Scharfstein, 1994; Chemmanur, Cheng, and Zhang, 2013).[2] Consequently, highly-leveraged firms usually pay higher wages (Chemmanur, Cheng, and Zhang, 2013).[3]

We know that the documented positive relationship between the firm's leverage and employees' pay stems from the lack of job security. We do not know, however, how the leverage-wage relationship would change when firms can credibly commit to more job security, such as in situations where the state adopts labour protection laws. Since labour protection legislation credibly improves employees' job security, firms would face less pressure to raise wages to compensate for high unemployment risk, particularly for highly-leveraged firms where the

[1] Abowd and Ashenfelter (1981) find that this increase could rise to 14% of total wages. Li (1986) and Hamermesh and Wolfe (1990) show that differences in unemployment risk across industries can explain up to 41% of total interindustry wage differentials.

[2] Using survey data, Brown and Matsa (2016) find that firms' financial health is an important factor for job applicants.

[3] Wage increases to compensate for the unemployment risk arising from the firm's bankruptcy risk can be as high as 2.3% of firm value (Graham, Kim, Li, and Qiu, 2019).

leverage-wage relationship is more pronounced.[4] In this study, we conduct a quasi-natural experiment by employing the state adoption of labour protection laws as an exogenous policy shock to further investigate the leverage-wage relationship. Given firms can credibly commit to more job security in such a situation, we expect to see that the adoption of labour protection laws helps *alleviate* the effect of leverage on wages.

We study the adoption of Wrongful Discharge Laws by US state courts from 1969 to 2003, focusing on the *good faith* exception since it is the most significant in increasing firing costs and, hence, reducing the unemployment risk (Kugler and Saint-Paul, 2004; Serfling, 2016). Under the good faith exception, if a court rules that a firm fires an employee unfairly – for example, out of bad faith, malice, or retaliation – the employee can recover contractual losses and punitive damages.

We use a difference-in-differences (DID) estimation method to test the causal effect of the adoption of the good faith exception on the leverage-wage relationship. The affected group contains firms headquartered in states that adopted the good faith exception and the unaffected group contains those headquartered in states that have not yet adopted the exception. Our baseline results show that the adoption of the good faith exception significantly alleviates the effect of leverage on wages.

Based on Berk, Stanton, and Zechner's (2010) model, employees demand higher wages to compensate for higher unemployment risk. Since the adoption of labour protection laws reduces unemployment risk, it can result in reduced wage demands by employees, especially

[4] Under stringent labour protection, firms cannot discharge employees arbitrarily, or they have to pay employment benefits if they discharge workers without just cause (Serfling, 2016). Labour protection, therefore, lowers workers' unemployment risk (Autor, Donohue III, and Schwab, 2006; Millan, Millan, Roman, and Van Stel, 2013; Berglund and Furåker, 2016). Consequently, firms would have less pressure to raise wages.

in highly-leveraged firms. Thus, Berk, Stanton, and Zechner's (2010) theory seems to explain the observed mitigating effect on the leverage-wage relationship. To test this, we examine how employees' bargaining power affects our results. We use labour unionisation rates to proxy for employees' bargaining power, following Klasa, Maxwell, and Ortiz-Molina (2009) and Devos and Rahman (2018). We find that leverage has a stronger effect on wages for the high employee bargaining power group and that the law's mitigating effect on the leverage-wage relationship is significant for this group only. These results are consistent with the theory of Berk, Stanton, and Zechner (2010).

We conduct further analysis to test the cross-sectional variations of the effect of the good faith exception on the leverage-wage relationship. First, we argue that the effect should be more pronounced for firms with more financial constraints or distress because the employees' unemployment risk is higher in this group of firms and hence the demand for wage increases goes up. Consistent with our expectations, we find that our results are significant only for firms subject to high financial constraints or distress.

Next, we investigate how the effect of the good faith exception varies across firms with high- and low-skilled employees or those with high- and low-layoff rates. The literature shows that firms have incentives to retain their skilled workers even when they are financially distressed since hiring and training new workers for the same level of skills can be very costly (Brown and Petersen, 2011; Ghaly, Dang, and Stathopoulos, 2015; Guney, Karpuz, and Ozkan, 2017). This suggests that low-skilled employees are more vulnerable to job cuts than high-skilled employees in financial distress. Hence, they demand higher compensation to insure their human capital risk (Berk, Stanton, and Zechner, 2010). Thus, the adoption of the good faith exception should therefore principally affect low-skilled employees or employees in high-layoff firms. We find that the effect of the exception on the leverage-wage relationship exhibits mainly for firms with low-skilled employees and high-layoff rates. This is consistent with the literature that leverage increases wages for employees who cannot fully insure their human capital risk (Chemmanur, Cheng, and Zhang, 2013).

We also perform a battery of tests to check the robustness of our results. First, following Bertrand and Mullainathan (2003), Simintzi, Vig, and Volpin (2015) and Serfling (2016), we conduct a pre-treatment analysis to test whether there is any difference in pre-treatment trends in the leverage-wage relationship between the affected and unaffected groups. Second, we implement a placebo test to ensure that our finding is indeed driven by the good faith exception and not any unobservable factors that coincide with the exception. Third, we perform a Heckman two-step analysis to control for potential sample selection bias. Fourth, we test our baseline results by using the propensity score matching sample. Fifth, we control for several alternative measures of leverage or industry-, state-, or region-specific time trends to ensure that our results are robust. We find consistent results in all these tests.

Building on prior work documenting the relationship between firms' leverage and employees' pay (Chemmanur, Cheng, and Zhang, 2013), we study the strength and persistence of this relationship when faced with exogenous policy shocks such as the adoption of labour protection laws. We find that the adoption of the good faith exception alleviates the effect of leverage on wages, especially for firms subject to high financial constraints or distress, low-skilled jobs and high-layoff rates.

Although a growing body of literature documents that labour protection policies distort corporate decisions by reducing firms' labour adjustment flexibility such as the financial policy (Agrawal and Matsa, 2013; Simintzi, Vig, and Volpin, 2015; Serfling, 2016), profitability (Bird and Knopf, 2009), investment and firm performance (Bai, Fairhurst, and Serfling, 2020), privatisation (Subramanian and Megginson, 2018) and risk management (Qiu, 2019), we show that the adoption of labour protection laws helps highly-leveraged firms lower their labour costs by easing the pressure on wages and, hence, improves financial flexibility. Similarly, Acharya, Baghai, and Subramanian (2013, 2014) also find a positive effect of strong labour protection as it allows firms to commit to not holding up employees and thus improves innovation incentives for employees.

The rest of the paper is structured as follows. Section 2 describes the data and empirical model. Section 3 presents and explains the baseline results, Section 4 tests the cross-sectional variations of the effect of the labour protection law on the leverage-wage relationship, Section 5 performs various robustness tests and Section 6 concludes the paper.

2 Data and empirical model

2.1 Labor protection law

Among the exogenous and staggered state-level Wrongful Discharge Laws (WDLs) adopted by US state courts, the *good faith* exception is the most far-reaching and influential one that increases firing costs and reduces unemployment risk (Kugler and Saint-Paul, 2004; Serfling, 2016). In our study, we focus mainly on the effect of the good faith exception on the relationship between leverage and wage.[5]

The good faith exception confers on employees the right to sue employers for wrongful termination, protecting employees from unfair dismissal. The exception requires employers to treat employees fairly. We identify the adoption year of the good faith exception from the literature (Serfling, 2016; Bai, Fairhurst, and Serfling, 2020).[6] Appendix Table A2 reports the years of the adoption of good faith exceptions for each state.

2.2 Sample selection

Our sample contains public firms headquartered in the US excluding financial and utility firms (SIC 6000-6999 and SIC 4900-4999). Following Chemmanur, Cheng, and Zhang (2013), we require that each firm has a positive book value of equity and no missing observations for average employee pay, leverage, market equity, average sales per employee, market-to-book ratio, tangibility and SIC code.

Following Bai, Fairhurst, and Serfling (2020), our sample period starts in 1969, which is five years before the adoption of the first good faith exception by New Hampshire in 1974, and ends in 2003 which is five years after the last adoption of a good faith exception by Louisianan in 1998.[7] We use the Compustat state abbreviation (the variable 'state') to locate each firm's headquarters (Agrawal and Matsa, 2013; Serfling, 2016; Bai, Fairhurst, and Serfling, 2020).[8]

[5]In our analyses, we also include other two wrongful discharge laws (i.e., the implied contract and public policy exceptions) as control variables and our results are consistent. In addition, we find no evidence that these two policies have any significant effects on the leverage-wage relation, which is in line with Serfling (2016) and Bai, Fairhurst, and Serfling (2020)

[6]In Section 5.7, we also use the time scheme in Autor, Donohue III, and Schwab (2006) to identify the adoption of the good faith exception and find consistent results.

[7]In Section 5.7, we conduct analyses for alternative sample periods and find consistent results.

[8]One potential concern is that a few of the firms could have workers working outside the state where they are headquartered and hence the state of headquarters from Compustat may not capture all the variation in labor

We then match the adoption of the law to the state where each firm is headquartered.

We collect the accounting data from Compustat. The state-level GDP and population data are from the Bureau of Economic Analysis and the US Census Bureau, respectively. The information about state-level members in the House of Representatives and Senate is from the US Census Bureau. The consumer price index and labour unionisation data are from the Federal Reserve Economic Data and Unionstats.com.[9]

We winsorise all the continuous variables except the macroeconomic variables at their 1st and 99th percentiles to mitigate the effect of outliers. All dollar amounts are deflated to 1983 dollars using the consumer price index (Flannery and Rangan, 2006). Our industry classification is based on the Fama and French 48 industries.[10] The final sample contains 12,365 firm-year observations from 1,726 public firms between 1969 and 2003.

Table 1 reports summary statistics. The mean employee pay is $25,069, similar to the literature (Chemmanur, Cheng, and Zhang, 2013). The mean of the good faith dummy is 11%, which is also in line with the literature (Acharya, Baghai, and Subramanian, 2014; Serfling, 2016). It suggests that 11% of firm-year in our sample is under the good faith exception. The mean of leverage is 40.2%, similar to that found by Baker and Wurgler (2002). The mean tangibility is 71.1%, consistent with Chemmanur, Cheng, and Zhang's (2013) findings. The average political balance is 59.7%, comparable to 58% in Bai, Fairhurst, and Serfling (2020).

protection. Serfling (2016) documents that executive or managerial positions account for majority of plaintiffs in wrongful termination cases and these positions are more likely to be at headquarters. Thus, the state of headquarters enables us to capture the most variation in labor protection. In addition, we exclude firms in retail, wholesale, or transport industries, and firms with international operations from our sample for robustness tests in Section 5.7 because employees in these firms are likely to be geographically dispersed (Agrawal and Matsa, 2013; Serfling, 2016). We find consistent results.

[9]See Hirsch and Macpherson (2003) for details on construction of this database.

[10]We obtain the industry classification from Ken French's website: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/.

Overall, our summary statistics are consistent with the literature.

[Table 1 about here]

2.3 Empirical model

The adoption of state-level labour protection laws provides an opportunity to examine how the laws affect the leverage-wage relationship in a DID test. One advantage of the test is that all the affected firms belong to both affected and unaffected groups at different times, mitigating the concerns that differences between affected and unaffected groups may drive our results. Using the DID test, we augment the model in Chemmanur, Cheng, and Zhang (2013) to study how the adoption of state-level labour protection laws affects the leverage-wage relationship:

$$\begin{aligned} Ln(Average\ employee\ pay)_{i,s,t} = & \alpha + \beta_1 Good\ Faith_{s,t} \times Leverage_{i,s,t} + \beta_2 Leverage_{i,s,t} \\ & + \beta_3 Good\ Faith_{s,t} + \delta X_{i,s,t} + \theta Z_{s,t} \\ & + \eta_j + \gamma_s + \upsilon_t + \varepsilon_{i,s,t}, \end{aligned} \tag{1}$$

where subscripts i, j, s and t denote the firm, industry, state and year, respectively. The dependent variable $Ln(Average\ employee\ pay)$ is the natural log of average employee pay. The presence of state and year fixed effects in Equation (1) enables us to estimate the effect of labour protection laws on the leverage-wage relationship in a DID setting; that is, the before-after difference in the leverage-wage relationship in a state and year where the state has adopted the labour protection law vis-à-vis before-after difference in a state and year where the state has not.

Following Chemmanur, Cheng, and Zhang (2013), we measure the average employee pay as total staff expenses divided by the number of employees. *Good Faith* is a dummy variable that equals one if the state where a firm is headquartered has adopted the good faith exception before the month that the current fiscal year ends and zero otherwise.[11] *Leverage* is the market leverage measured as the ratio of total assets minus the book value of equity to total assets minus the book value of equity plus the market value of equity (Baker and Wurgler, 2002).

We use market leverage in our main regression since it captures the influence of stock performance on debt ratio, which is important for debt ratio dynamics (Welch, 2004). Our results are robust under three alternative leverage measures: financial debt to market value of assets, total debt to market value of assets and total debt to market value of assets plus preferred stock minus deferred taxes.

To test the effect of labour protection laws on the leverage-wage relation, we interact the good faith exception with leverage, i.e., $Good\ Faith \times Leverage$. We expect the coefficient β_1 to be significantly negative if the adoption of the good faith exception alleviates the leverage-wage relationship.

Following Chemmanur, Cheng, and Zhang (2013), we also control firm size, average sales per employee, market-to-book and tangibility in the vector X. Firm size is the natural log of the market value of equity (Chemmanur, Cheng, and Zhang, 2013). Larger firms tend to pay higher salaries than smaller firms. Average sales per employee is the total sales divided by the number of employees, which is a proxy for productivity. Firms with higher productivity tend to pay higher wages. Market-to-book value is a proxy for growth opportunities and is measured

[11] New Hampshire and Oklahoma reversed their adoption of the good faith exception in 1980 and 1989, respectively. We set the corresponding dummy to zero after these dates.

as the ratio of the market value of equity to the book value of equity. Tangibility is the ratio of gross property, plant and equipment to total assets. Firms with higher tangibility are more likely to have higher productivity and higher wages (Cronqvist, Heyman, Nilsson, Svaleryd, and Vlachos, 2009).

In addition, we include state-level factors in the vector Z to control for the differences in the macroeconomic environment between states (Serfling, 2016). We control for the adoption of the implied contract and public policy exceptions to mitigate the compounding effects of state-level laws. We use state GDP per capita and state GDP growth to control for local economic conditions. State GDP per capita is the annual GDP of a state divided by its population, and state GDP growth is the state-level GDP growth per annum. Following Bai, Fairhurst, and Serfling (2020), we include the proportion of a state's Congress members in the US House of Representatives and Senate from the Democratic Party to control for local political environments.

Like Chemmanur, Cheng, and Zhang (2013), we include year dummies (υ_t) to control for time-specific variation in employee pay and industry dummies (η_j) to control for the heterogeneity in employee pay across industries 'because a great deal of heterogeneity in pay practices evident across industries' (Page 489). We also control for state-specific fixed effects (γ_s) to ensure that our results reflect within-state variation over time rather than simple cross-sectional differences. We cluster standard errors at the state-level since the variable *Good Faith* varies at the state-level. Appendix Table A1 provides detailed definitions and sources of the variables.

3 Main results

3.1 The baseline estimation

Table 2 reports our baseline DID estimation results. Specification 1 presents the results of the common firm-level determinants of employee pay (Chemmanur, Cheng, and Zhang, 2013). The positive and statistically significant coefficient on leverage (0.193) suggests that leverage increases employee pay, consistent with Chemmanur, Cheng, and Zhang (2013). The coefficients on other variables are also in line with the literature (Cronqvist, Heyman, Nilsson, Svaleryd, and Vlachos, 2009; Chemmanur, Cheng, and Zhang, 2013).

In Specification 2, we interact the good faith exception with leverage to test the effect of the adoption of the law on the leverage-wage relationship. In Specification 3, we also interact leverage with the implied contract and public policy exceptions to examine their effect on the leverage-wage relationship. Consistent with Serfling (2016) and Bai, Fairhurst, and Serfling (2020), we find no significant evidence of these two policies as they are less influential than the good faith exception in reducing the unemployment risk (Kugler and Saint-Paul, 2004). Specification 4 is our full model, which further controls for the state-level GDP variables and political environment.

In all these specifications, the coefficients on our main variable of interest (*Good Faith* $\times$ *Leverage*) are negative and statistically significant. In Specification 4, for example, the coefficient on leverage (0.222, similar to 0.23 in Chemmanur, Cheng, and Zhang, 2013) suggests that a one standard deviation increase in leverage (0.233 as in Table 1) increases the natural log of wages by 0.052 (=0.233*0.222), which translates to a 5.3% increase in wages.

However, after accounting for the adoption of the good faith exception, the coefficient on $Goodfaith \times Leverage$ is negative (-0.241), which suggests that the adoption of the law alleviates the effect of leverage on wages.[12] The F-statistics for the sum of the coefficients on leverage and the interaction variable, $Good\ Faith \times Leverage$, also confirm that the overall effect of leverage is insignificant after the adoption of the good faith exception.

[Table 2 about here]

3.2 Employee bargaining power

Berk, Stanton, and Zechner's (2010) model shows that employees demand wage increases to compensate for the unemployment risk arising from high leverage. Since the adoption of labour protection laws reduces the unemployment risk, it can result in a decrease in the wages demanded by the employees, especially for highly-leveraged firms. Hence, Berk et al.'s theory seems to explain our baseline results.

To test this, we investigate how employees' degree of bargaining power affects our results. According to Berk, Stanton, and Zechner (2010), the observed mitigating effect should be more pronounced for firms with stronger employee bargaining power because of their decreased demand for high wages given the newly introduced protection from the labour law. It should

[12]We also test the relationship between leverage and executive pay and examine the effect of the adoption of the good faith exception on this relationship. We use two common measures of executive compensation from ExecuComp: (1) TDC1, the total compensation whose stocks and options are valued using grant date fair value (Keller and Olney, 2021); and (2) TDC2, the total compensation whose stocks are valued at the time of vesting and options are valued at the time of exercise (Eisfeldt and Papanikolaou, 2014). Appendix Table A3 reports the results. We find a significant positive relationship between leverage and executive compensation, similar to the baseline results. However, the adoption of labour protection laws has a weaker mitigating effect on this relationship. This weaker effect is, however, not difficult to understand. Executives are the most powerful people in the firm and have significantly more resources than average employees to protect their own interests. Hence, the adoption of labour protection laws has a weaker effect on executives than on ordinary employees.

have a much bigger effect on firms where employee bargaining power is strong. If employees' bargaining power is limited or weak, then whether they increase or decrease their demand for wages should not have any significant effect on the firm. Thus, Berk et al.'s model can be tested, to some extent, by separating the firms into strong and weak employees' bargaining power groups.

We use labour unionisation rates as a proxy for employee bargaining power, following Klasa, Maxwell, and Ortiz-Molina (2009) and Devos and Rahman (2018). We employ both state- and industry-level union coverage ratios, compiled from the Current Population Survey by Hirsch and Macpherson (2003) and available at Unionstats.com. Since this database uses the Census Industry Classification (CIC), we match CIC codes to SIC or NAICS industry codes in our sample, as in Klasa, Maxwell, and Ortiz-Molina (2009), and then assign industry unionisation rates to the firm. We classify a firm into a high employee bargaining power group if it has a unionisation rate above the annual median and vice versa. Since the union data starts in 1983, our sample size is reduced in these tests.

Table 3 reports the results. We show that leverage has a stronger effect on wages for high bargaining power groups and the coefficients on the interaction term (*Good Faith* $\times$ *Leverage*) are significant only for these groups. In addition, the empirical p-values, following Cleary (1999), show the statistical differences between the coefficients on the paired subsamples. Overall, these results are consistent with Berk, Stanton, and Zechner (2010), which provides a theoretical explanation for our baseline results.

[Table 3 about here]

4 Further results: cross-sectional variations

In this section, we test the cross-sectional variations of the effect of the good faith exception on the leverage-wage relationship. We argue that our results should be more pronounced in situations where the adoption of the law has a larger effect on improving employee job security.

4.1 Financial constraints and financial distress

Firms with more financial constraints or distress are under higher pressure to cut their labour costs since they have more difficulty accessing external financial resources (Alimov, 2015; Ellul and Pagano, 2019). However, cutting costs by firing employees is more difficult under employment protection laws due to high labour adjustment costs (Autor, Donohue III, and Schwab, 2006; Millan, Millan, Roman, and Van Stel, 2013; Serfling, 2016). Thus, the adoption of the labour protection law reduces employees' unemployment risk, particularly for more financially constrained or distressed firms, which can result in a decrease in wage demands by employees. Hence, our main results should be more pronounced for financially constrained or distressed firms.

We use both size and dividend payment to measure financial constraint.[13] Small non-dividend payers are classified as financially constrained firms and large dividend payers as financially unconstrained firms. In Panel A of Table 4, we estimate Equation (1) by splitting our sample into two subsamples based on financial constraints. Consistent with our expectation, we find that the coefficient on the interaction term (*Good Faith* $\times$ *Leverage*) is significant only for firms with more financial constraints.

[13] We also measure financial constraints using the Kaplan and Zingales (1997) index and find similar results.

[Table 4 about here]

In Panel B, we estimate Equation (1) by splitting the sample into two subsamples based on financial distress. We use the modified Altman's (1968) Z-score from Leary and Roberts (2014) and the financial distress index of Zmijewski (1984) to proxy for financial distress, which is calculated as follows:

$$\begin{aligned} Modified\ Altman's\ Z-score = & 3.3 \times \frac{earnings\ before\ interest\ and\ taxes}{total\ assets} + \frac{sales}{total\ assets} \\ & + 1.4 \times \frac{retained\ earnings}{total\ assets} + 1.2 \times \frac{working\ capital}{total\ assets}; \end{aligned} \tag{2}$$

$$\begin{aligned} Zmijewski's\ index = & -4.336 - 4.513 \times \frac{net\ income}{total\ assets} + 5.679 \times \frac{total\ liabilities}{total\ assets} \\ & + 0.004 \times \frac{current\ assets}{\text{current liabilities}}. \end{aligned} \tag{3}$$

Firms below (above) the annual median of the modified Altman's Z-score or above (below) the annual median of Zmijewski's financial distress index are defined as the high (low) financial distress group. Consistent with our expectations, we find that the coefficients on the interaction term ($Good\ Faith \times Leverage$) are significant only for firms subject to high financial distress.

Our results show that the good faith exception plays a significant role for more financially distressed firms. However, it is of limited value for employees when a firm goes bankrupt since such firms are not constrained by firing restrictions. Thus, testing the effect of the adoption of the good faith exception on the leverage-wage relationship would become irrelevant if it were under the situation of bankruptcy.

4.2 The level of unemployment risk

The existing literature argues that firms have strong incentives to retain their high-skilled labour as firing employees with high general skills can be very costly and is likely to cause significant productivity losses (Brown and Petersen, 2011, 2015; Ghaly, Dang, and Stathopoulos, 2015, 2017; Guney, Karpuz, and Ozkan, 2017).

This suggests that the unemployment risk for high-skilled employees is lower than that for low-skilled employees. Thus, high leverage increases the unemployment risk, especially for low-skilled workers as it is hard for them to insure their human capital risk (Berk, Stanton, and Zechner, 2010). Hence, the adoption of the good faith exception improves job security, especially for low-skilled employees and, thus, alleviates the wage pressure on firms with a high proportion of such employees. As a result, the effect of the adoption of the good faith exception on the leverage-wage relationship should be more pronounced for firms with low-skilled employees.

In Panel A of Table 5, we classify firms with R&D investments as the high-skilled labour group and firms without R&D investments as the low-skilled labour group (Ghaly et al., 2017). We use the industrial labour skill index from Belo, Li, Lin, and Zhao (2017) to split the sample into high and low-labour-skill industries. Since the labour skill index is available from 1988, our sample size is reduced. We identify industries with skilled labour by calculating the percentage of employees working in occupations that require a high level of training and preparation. A high index score indicates that most workers in the industry have extensive skills to perform their jobs.

We find that the coefficients on leverage are positive and significant for low-skilled labour, whereas they are insignificant for high-skilled labour. This suggests that high leverage is mainly a concern for low-skilled workers since the unemployment risk is particularly high for them. They thus demand wage increases to compensate for the risk arising from high leverage (Berk, Stanton, and Zechner, 2010). More importantly, the coefficients on the interaction of good faith with leverage, *Good Faith* $\times$ *Leverage*, are negative and significant only for low-skilled employees, consistent with our prediction.

In Panel B, we test whether the effect of the good faith exception on the leverage-wage relationship differs across industries with high or low-layoff rates. Since employees in high-layoff industries have a higher unemployment risk than those in low-layoff industries, the good faith effect should be more pronounced for high-layoff industries.

Following Agrawal and Matsa (2013), we use layoff rates at three-digit NAICS industries and classify the industries into low-layoff and high-layoff based on the median of the layoff rates. Panel B shows that the coefficient on leverage is positive and significant only for the high-layoff group and the coefficient on the interaction *Good Faith* $\times$ *Leverage* is negative and significant only for the same group, which is consistent with our prediction. Table 5 provides further support to our baseline results that reduced unemployment risk under the good faith exception alleviates the leverage-wage relationship.

[Table 5 about here]

5 Robustness tests

5.1 Pre-treatment trends and placebo tests

One of the assumptions in our DID test is that firms headquartered in states with and without adopting the good faith exception (i.e., affected and unaffected firms, respectively) exhibit similar pre-treatment trends in the leverage-wage relationship. To alleviate potential endogeneity concerns about this parallel-trend assumption, we perform pre-treatment trend analysis (Bertrand and Mullainathan, 2003; Simintzi, Vig, and Volpin, 2015; Serfling, 2016). We replace the good faith dummy variable (*Good Faith*) in Equation (1) with the following dummy variables: $Good\ Faith\ (-2)$ which equals one if a firm is headquartered in a state that has subsequently adopted the good faith exception two years from now; $Good\ Faith\ (-1)$ which equals one if a firm is headquartered in a state that has adopted the good faith exception one year from now; $Good\ Faith\ (0)$ is the contemporaneous value of *Good Faith*; $Good\ Faith\ (1)$ which equals one if a firm is headquartered in a state that has adopted the exception one year ago; and $Good\ Faith\ (2+)$ which equals one if a firm is headquartered in a state that adopted the exception two or more years previously.[14] A negative and significant coefficient on the interaction, $Good\ faith\ (-2) \times Leverage$ or $Good\ faith\ (-1) \times Leverage$ would be problematic since this indicates that the effect of leverage on wages was already weakening even before the adoption of the good faith exception.

In Table 6, we find that the coefficients on $Good\ faith\ (-2) \times Leverage$ and $Good\ faith\ (-1) \times Leverage$ are statistically insignificant. The coefficient on the interaction $Good\ faith\ (2+) \times$

[14] Because New Hampshire reversed the good faith provision in 1980 and Oklahoma in 1989, we drop observations for those states from those times following Serfling (2016).

Leverage is, however, negative and statistically significant, which is consistent with Serfling (2016) and Bai, Fairhurst, and Serfling (2020) that firms respond to the good faith exception two or more years after the adoption. Overall, Table 6 shows that the mitigating effect on the leverage-wage relationship appears only after the adoption of the good faith exception, suggesting that our results are not driven by pre-treatment trends.

[Table 6 about here]

Another concern is that our results could be driven by unobservable factors which may coincide with the good faith exception but are omitted from our tests. To address this, we apply a placebo test to examine whether the leverage-wage relationship is affected by pseudo-adoptions. Following Cornaggia, Mao, Tian, and Wolfe (2015), we calculate the empirical distribution of adoption years and randomly assign the adoption years to states. If our results are caused by unobservable shocks, the pseudo-adoptions should exhibit a significant effect. In untabulated results,[15] we find that the pseudo-adoptions do not have any significant effect on the leverage-wage relationship.

5.2 Tests for sample selection bias

A potential sample selection bias could occur if firms selectively choose to report their total staff expenses. We address this concern by using a Heckman (1979) two-step analysis. In the first stage, we use a probit model to estimate the likelihood that a firm reports its employee expenses. The dependent variable is a dummy variable that takes the value of one if a firm reports its

[15] Results are untabulated to preserve space but are available on request.

labour costs and zero otherwise. In addition to other control variables shown in Equation (1), we add a dummy variable for the stock exchange on which a firm is listed. Chemmanur, Cheng, and Zhang (2013) find that firms listed on different stock exchanges have different reporting behaviours.

Panel A of Table 7 presents the results of the first stage analysis. It shows that firms of large size, high tangibility, high sales per employee and in states with low GDP per capita tend to report their total staff expenses. The stock exchange also influences their decisions on reporting their total staff expenses (Chemmanur, Cheng, and Zhang, 2013).

In Panel B, we perform the second stage analysis. We add the inverse Mills ratio derived from the first stage probit model in Equation (1) to test whether the potential sample selection bias drives our results. We expect the coefficient on the interaction term, *Good Faith* $\times$ *Leverage*, to be significantly negative after controlling for the inverse Mills ratio. Results are consistent with our expectations, suggesting that our results are less likely to be driven by sample selection bias.

[Table 7 about here]

5.3 Propensity score matching

In this subsection, we test the robustness of our results by controlling for the differences in firm- and state-level variables between the affected and unaffected groups. We use the propensity score matching method to match the affected firm-year observations (i.e., firm-years headquartered in states adopting the good faith exception) with unaffected firm-years (i.e., firm-years headquartered in states not adopting the good faith exception) by implementing one-to-one nearest-neighbour matching with replacement. We match firms in the affected group with those in the unaffected group in year $t-1$, where t is the year adopting the good faith exception. Using logistic regression, we estimate propensity scores by regressing the good faith exception dummy variable, *Good Faith*, on control variables in Equation (1) to estimate the likelihood of being affected.

We create two matched samples. For the first, we estimate propensity scores on leverage, tangibility, average sales per employee, firm size and market-to-book. For the second, we also include state GDP growth and political balance. We then match each affected firm at year $t-1$ to one unaffected firm with replacement such that their propensity scores are within a calliper of 0.2 standard deviations.[16] We require the matched firms to be from the same year and the same Fama-French 48 industry. Matching at year $t-1$ results in a low number of affected firms, which is similar to that of Serfling (2016).

Panel A of Table 8 presents the differences in the mean values of the matched variables between the affected and unaffected groups for the first and second matched samples. Since we match with replacement, the number of unaffected observations is smaller than that of affected observations, i.e., some unaffected observations are used more than once. The t-values show that the mean values of the variables are not significantly different between the two groups, which indicates the reliability of our matched samples.

Next, we examine the effect of the adoption of good faith exception on the leverage-wage relationship by estimating Equation (1) for the matched samples. Panel B shows that the good

[16] Austin (2011) argues that the logit of propensity score with a calliper of 0.2 standard deviations minimises errors and bias.

faith exception significantly affects the leverage-wage relationship in the matched samples. This provides further support to our main results, suggesting that our findings are not driven by the differences between the affected and unaffected groups.

[Table 8 about here]

5.4 Further tests on endogeneity

Another concern is that we interact leverage with good faith exception in our analysis, but the good faith exception also has a negative effect on leverage (Serfling, 2016) making it difficult to cleanly interpret the effect of the good faith exception on the leverage-wage relationship. To address this, we perform additional tests reported in Appendix Table A4. First, we use lagged instead of contemporaneous leverage as the explanatory variable, given that the current adoption of good faith exception is less likely to affect leverage a few years ago. We report the results for leverage lagged up to 3 years before the adoption and we find consistent results.[17]

Second, we use the marginal corporate tax rate as an instrumental variable (IV) for leverage in a two-stage least square (2SLS) analysis to further address the endogeneity concerns. Graham (1996a) suggests a positive relationship between the tax benefits of debt and a firm's marginal tax rate, resulting in a positive correlation between the marginal tax rate and leverage (e.g., Leary and Roberts, 2010). Chemmanur, Cheng, and Zhang (2013) also use the marginal corporate tax rate as an IV to address endogeneity concerns in leverage when they examine the effect of leverage on wages. They argue that this IV significantly addresses the endogeneity

[17] Results are robust when using leverage lagged up to 2 years or 4 years prior to the adoption of the good faith exception.

concerns of leverage.

Following the literature, we collect the marginal tax rate from John Graham's website (Graham, 1996a,b; Molina, 2005; Chemmanur, Cheng, and Zhang, 2013). Our findings in the first stage show that the IV (marginal corporate tax rate) is positively and significantly related to leverage and results suggest that the marginal tax rate is a valid instrument for leverage. In the second stage, we use the predicted leverage from the first stage and interact it with the good faith exception. We find robust results consistent with our baseline results.

Third, we use the system-generalised method of moments (GMM) proposed by Blundell and Bond (1998), which uses instruments in both levels and first differences. System-GMM addresses the potential endogeneity of the variables by jointly estimating the equations in differences (first-difference transformation) and levels. One of the advantages of this method is that variables, including lagged and differenced variables, are potentially valid instruments unless they fail to pass the diagnostic tests. Blundell and Bond (1998) and Antoniou, Guney, and Paudyal (2008) argue that the two-step GMM is more efficient than the one-step GMM as in the latter one-step standard errors are asymptotically inefficient. Therefore, we use the two-step system-GMM with lagged levels dated t-3 and earlier as instruments for the regressions in differences and lagged differences dated t-2 as instruments for the regressions in levels.[18] The results are in line with our baseline results.

We also report the statistics for the diagnostic checks. The test for the correlation in the first-differenced residuals shows that our GMM estimation is consistent. The Hansen J-test statistic assesses over-identifying restrictions, whereas the difference-in-Hansen test tests the

[18] Results using lagged levels dated t-4 and earlier and lagged differences dated t-3 are consistent.

validity of the additional differenced instruments for the levels equation. Values in these tests indicate that the instruments we use are valid as low values would indicate a potential problem with instruments. Overall, our results pass the diagnostic tests.

5.5 Alternative measures of leverage

In this subsection, we use three alternative measures of leverage to check the robustness of our results. We define $Leverage1$, $Leverage2$ and $Leverage3$ as in Leary and Roberts (2010), Welch (2011) and Leary and Roberts (2014), respectively:

$$Leverage1 = \frac{long\ term\ debt + short\ term\ debt}{long\ term\ debt + short\ term\ debt + market\ value\ of\ equity} \tag{4}$$

$$Leverage2 = \frac{long\ term\ debt + long\ term\ debt\ due\ in\ one\ year}{long\ term\ debt + long\ term\ debt\ due\ in\ one\ year + market\ value\ of\ equity} \tag{5}$$

$$Leverage3 = \frac{long\ term\ debt + short\ term\ debt}{total\ debt + market\ value\ of\ equity + preferred\ stock - deferred\ taxes} \tag{6}$$

Table 9 shows that the coefficients on the interaction of the good faith exception with different leverage measures remain negative and statistically significant. Thus, the effect of the adoption of the good faith exception on the leverage-wage relationship is robust to alternative leverage measures.

[Table 9 about here]

5.6 High-dimensional fixed effects

In this subsection, we control for the high-dimensional fixed effects to ensure that the effect of the good faith exception is not caused by shocks that are common to industries, states or regions.[19] Specifically, we add $Industry \times Year$, $State \times Year$ and $Region \times Year$ fixed effects to our main specification. Table 10 shows that the coefficients on the interaction term, $Good\ faith \times Leverage$, remain negative and significant across all the specifications, which alleviates the concerns arising from the industry-specific, state-specific or region-specific time trends.

[Table 10 about here]

5.7 Further robustness checks

Finally, we perform further robustness checks on our results. First, we use historical headquarters locations from Bai, Fairhurst, and Serfling (2020) to relocate firms' headquarters,[20] since Compustat provides only the current headquarters location. Second, we use the time scheme from Autor, Donohue III, and Schwab (2006) to identify the adoption of the good faith exception. Third, we exclude industries or firms that are geographically dispersed to mitigate an effect caused by employees working outside the state where their employer is headquar-

[19] We follow the Bureau of Economic Analysis (BEA) to categorise bordering states into eight BEA regions: New England, Mideast, Great Lakes, Plains, Southeast, Southwest, Rocky Mountain and Far West.

[20] Bai et al. (2019) construct the data by collecting information from WRDSSEC Analytics Suite, the Moody's Manuals and Dun & Bradstreet's Million Dollar Directory. We thank Bai, Fairhurst, and Serfling (2020) for making these data available.

tered.[21] Fourth, we drop observations with non-missing and non-zero foreign income or taxes to exclude firms with international operations, since such firms are geographically dispersed (Serfling, 2016). Fifth, we test for alternative sample periods: the period from 1978 to 1999 (Autor, Donohue III, and Schwab, 2006), from 1971 to 1999 (Acharya, Baghai, and Subramanian, 2014) and ending our main sample period of 1995, five years after Ohio adopted the public policy exception (Serfling, 2016). Finally, we run a stacked DID model as in Gormley and Matsa (2011) and Cengiz, Dube, Lindner, and Zipperer (2019) to address the potential biases resulting from the use of two-way fixed effects regression models. Table 11 reports the results of these additional tests and they are highly consistent with our main results.

[Table 11 about here]

6 Conclusion

Prior research finds a positive relationship between leverage and employee pay as employees demand wage increases to compensate for the high unemployment risk arising from high leverage. In this paper, we study how the state's adoption of labour protection law, as an exogenous policy shock to the firm, affects the documented leverage-wage relationship. We find that the adoption of the law alleviates the effect of leverage on wages. Since employees demand higher wages to compensate for higher unemployment risk, labour protection legislation significantly improves their job security, resulting in a decrease in wage demands, especially for highly-leveraged firms (Berk, Stanton, and Zechner, 2010).

[21] Agrawal and Matsa (2013) find that employees in retail, wholesale and transport industries are likely to be geographically dispersed.

Although literature documents that labour protection laws distort corporate decisions by reducing firms' labour adjustment flexibility, we show that the adoption of these laws helps highly-leveraged firms lower their labour costs by easing the pressure of wages and, hence, improves firms' financial flexibilities. Our study, therefore, sheds new light on the role of labour protection policies in corporate finance.

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Table 1: Summary statistics

This table presents summary statistics for the main variables in the regression models. The sample consists of Compustat firms from 1969 to 2003. It includes 12,365 firm-year observations. *Average employee pay* equals the total staff expenses divided by the number of employees. *Good faith* equals one if the state where a firm is headquartered has adopted the good faith exception before the month that the fiscal year ends, and zero otherwise. *Implied contract* equals one if the state where a firm is headquartered has adopted the implied contract exception before the month that the fiscal year ends, and zero otherwise. *Public policy* equals one if the state where a firm is headquartered has adopted the public policy exception before the month that the fiscal year ends, and zero otherwise. *Leverage* is the ratio of total assets minus the book value of equity to total assets minus the book value of equity plus the market value of equity. *Tangibility* is the ratio of gross property, plant, and equipment to total assets. *Average sales per employee* equals the total sales divided by the number of employees. *Firmsize* is the natural log of the market value of equity. *Market-to-book* is the ratio of market value of equity to the book value of equity. *State GDP PC* equals the GDP of a state scaled by its total population. *State GDP growth* is the annual state-level GDP growth rate. *Political balance* is the fraction of a state's members in House of Representatives and Senate from the Democratic Party. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th to mitigate the effect of outliers. All dollar amounts are deflated to 1983 dollars using the consumer price index. Appendix Table A1 provides the complete variable definitions.

Statistic	N	Mean	St. Dev.	Pctl(25)	Median	Pctl(75)
Dependent variable						
Average employee pay ($ thousands)	12,365	25.069	12.306	17.369	24.683	32.417
Main explanatory variables						
Good faith	12,365	0.110	0.313	0	0	0
Other variables						
Implied contract	12,365	0.467	0.499	0	0	1
Public policy	12,365	0.504	0.500	0	1	1
Leverage	12,365	0.402	0.233	0.211	0.389	0.571
Tangibility	12,365	0.711	0.374	0.430	0.713	0.993
Average sales per employee ($ thousands)	12,365	101.137	99.249	52.329	77.726	114.503
Market equity ($ millions)	12,365	1,397.876	3,565.912	26.204	156.598	950.374
Market-to-Book	12,365	2.331	3.577	0.782	1.314	2.358
State GDP PC	12,365	16,379	3,067	14,119	15,964	18,216
State GDP growth	12,365	0.027	0.037	0.005	0.030	0.051
Political balance	12,365	0.597	0.147	0.506	0.575	0.678

Table 2: Labor protection laws and the leverage-wage relation: Baseline results

This table presents the OLS estimation results of Equation (1). The sample consists of Compustat firms from 1969 to 2003. The dependent variable is the natural log of average employee pay. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. t-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

	Dependent: Ln(Average employee pay)			
	(1)	(2)	(3)	(4)
Good faith × Leverage		−0.242***	−0.212**	−0.241***
		(−3.251)	(−2.572)	(−3.215)
Leverage	0.193***	0.221***	0.253***	0.222***
	(3.861)	(4.405)	(3.705)	(4.443)
Good faith		0.094**	0.079*	0.098**
		(2.271)	(1.696)	(2.476)
Implied contract × Leverage			−0.045	
			(−0.785)	
Implied contract			0.005	−0.011
			(0.137)	(−0.423)
Public policy × Leverage			−0.027	
			(−0.400)	
Public policy			0.028	0.012
			(0.678)	(0.464)
Tangibility	0.078	0.078	0.079	0.078
	(1.552)	(1.555)	(1.551)	(1.506)
Average sales per employee	0.002***	0.002***	0.002***	0.002***
	(6.816)	(6.787)	(6.743)	(6.787)
Firm size	0.029***	0.029***	0.029***	0.029***
	(5.437)	(5.413)	(5.347)	(5.527)
Market-to-book	0.004*	0.004	0.004	0.004
	(1.720)	(1.513)	(1.525)	(1.549)
Ln(State GDP PC)				0.002
				(0.018)
State GDP growth				0.082
				(0.428)
Political balance				−0.148
				(−1.161)
Constant	2.593***	2.578***	2.562***	2.639*
	(43.595)	(41.095)	(44.030)	(1.935)
F-statistic (Good faith × Leverage + Leverage = 0)		0.095	0.152	0.077
(p-value)		(0.760)	(0.699)	(0.783)
State fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	12,362	12,362	12,362	12,362
Adjusted R^2	0.495	0.496	0.496	0.496

Table 3: Explanation of baseline results: Employee bargaining power

This table presents the OLS estimation results of Equation (1) for the subsamples formed based on employee bargaining power. The sample consists of Compustat firms. The dependent variable is the natural log of average employee pay. We use both state-level (in Columns 1 and 2) and industry-level (in Columns 3 and 4) percentages of union coverage. Since the union data start from 1983, our sample size is reduced. We classify a firm into the low employee bargaining power group in Columns 1 and 3 (high employee bargaining power group in Columns 2 and 4) if it has a unionization rate below (above) the annual median value. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. The empirical p-values are determined using the simulation procedure to show differences between the coefficients on the interaction terms for the two subsamples. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. t-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

	Dependent: Ln(Average employee pay)			
	Low employee bargaining power (1)	High employee bargaining power (2)	Low employee bargaining power (3)	High employee bargaining power (4)
Good faith × Leverage	−0.059	−0.363***	−0.126	−0.236*
	(−0.391)	(−3.370)	(−0.982)	(−1.901)
Leverage	0.167*	0.228**	0.145	0.198**
	(1.996)	(2.691)	(1.629)	(2.544)
Good faith	−0.009	0.549***	−0.107	0.273**
	(−0.078)	(5.500)	(−0.736)	(2.604)
Control variables	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	3,345	3,248	3,472	3,088
Adjusted R^2	0.529	0.524	0.550	0.417
Empirical p-value (test of equal coefficient estimates on Good faith × Leverage)	(0.000)		(0.086)	

Table 4: Cross-sectional variations: Financial constraints and financial distress

This table presents the OLS estimation results of Equation (1) for the subsamples formed based on financial constraints and distress. The sample consists of Compustat firms from 1969 to 2003. The dependent variable is the natural log of average employee pay. In Panel A, we use size and dividend paying to proxy for financial constraints. We use a 70/30 split in sales to define small and large firms by following Brown and Petersen (2011). Firms with more financial constraints are defined as small dividend nonpayers. In Panel B, we use the modified Altman's (1968) Z score from Leary and Roberts (2014) and the financial distress index of Zmijewski (1984) to proxy for financial distress. Firms below (above) the annual median of Z-score in Column 2 (1) or above (below) the annual median of Zmijewski's index in Column 4 (3) are defined as the high (low) probability of financial distress group. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln(State GDP PC)*, *State GDP growth*, and *Political balance*. The empirical *p*-values are determined using the simulation procedure to show differences between the coefficients on the interaction terms for the two subsamples. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. *t*-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

Panel A: Financial constraints	Dependent: Ln(Average employee pay)	
	Size and dividend	
	Large payer (1)	Small nonpayer (2)
Good faith × Leverage	−0.041	−0.311**
	(−0.152)	(−2.483)
Leverage	0.314***	0.149
	(4.406)	(1.647)
Good faith	−0.009	0.255**
	(−0.061)	(2.065)
Control variables	Yes	Yes
State, Industry, and Year fixed effects	Yes	Yes
Observations	3,264	4,041
Adjusted R^2	0.720	0.433
Empirical *p*-value (test of equal coefficient estimates on Good faith × Leverage)	(0.004)	

Panel B: Financial distress	Dependent: Ln(Average employee pay)			
	Low (1)	High (2)	Low (3)	High (4)
Good faith × Leverage	−0.069	−0.408***	−0.282	−0.348**
	(−0.413)	(−4.410)	(−1.007)	(−2.383)
Leverage	−0.010	0.219***	−0.028	0.275***
	(−0.157)	(3.310)	(−0.348)	(3.884)
Good faith	−0.054	0.229***	0.025	0.171*
	(−0.996)	(3.972)	(0.364)	(1.789)
Control variables	Yes	Yes	Yes	Yes
State, Industry, and Year fixed effects	Yes	Yes	Yes	Yes
Observations	6,007	6,008	6,011	6,012
Adjusted R^2	0.556	0.502	0.519	0.513
Empirical *p*-value (test of equal coefficient estimates on Good faith × Leverage)	(0.000)		(0.180)	

Table 5: Cross-sectional variations: Labor skills and layoff rates

This table presents the OLS estimation results of Equation (1) for the subsamples formed based on labor skill and layoff rates. The sample consists of Compustat firms from 1969 to 2003. The dependent variable is the natural log of average employee pay. In Panel A, we classify firms with no R&D investments into the low-skilled labor group in Column 1, and firms with positive R&D investments into the high-skilled labor group in Column 2. Using the industry labor skill index of Belo, Li, Lin, and Zhao (2017), we split the sample into low and high labor skill industries in Columns 3 and 4, respectively, based on the median value of this index. In panel B, by using layoff rates at three-digit NAICS industries, we classify the industries into low layoff rates in Column 1 and high layoff rates in Column 2 based on the annual median of the layoff rate. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. The empirical p-values are determined using the simulation procedure to show differences between the coefficients on the interaction terms for the two subsamples. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. t-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

Panel A: Labor skills	Dependent: Ln(Average employee pay)			
	Low skilled labor (No R&D) (1)	High skilled labor (Positive R&D) (2)	Low labor skill industries (3)	High labor skill industries (4)
Good faith × Leverage	−0.172**	−0.227	−0.298*	−0.091
	(−2.142)	(−1.500)	(−1.768)	(−0.581)
Leverage	0.259***	0.066	0.191**	0.185
	(3.474)	(0.977)	(2.095)	(1.300)
Good faith	0.007	0.082	0.081	−0.175
	(0.143)	(0.962)	(0.533)	(−1.135)
Control variables	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Observations	6,155	4,183	2,224	2,167
Adjusted R^2	0.564	0.398	0.697	0.322
Empirical p-value (test of equal coefficient estimates on Good faith × Leverage)	(0.200)		(0.034)	

Panel B: Labor layoff rates	Dependent: Ln(Average employee pay)	
	Low layoff rates (1)	High layoff rates (2)
Good faith × Leverage	−0.196	−0.458***
	(−1.355)	(−3.093)
Leverage	0.160	0.254***
	(1.605)	(4.163)
Good faith	0.047	0.228***
	(0.431)	(3.091)
Control variables	Yes	Yes
State fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	3,892	4,448
Adjusted R^2	0.564	0.372
Empirical p-value (test of equal coefficient estimates on Good faith × Leverage)	(0.002)	

Table 6: The effect of pre-treatment trends

This table presents the results from pre-treatment trend analysis. The sample consists of Compustat firms from 1969 to 2003. The dependent variable is log of average employee pay. For the analysis, we replace the good faith exception dummy variable (*Good Faith*) in Equation (1) with the following five dummies: $Good\ faith\ (-2)$ equals one if the firm is headquartered in a state that will adopt the good faith exception two years from now, $Good\ faith\ (-1)$ equals one if the firm is headquartered in a state that will adopt the good faith exception next year, $Good\ faith\ (0)$ is the contemporaneous value of *Good Faith*; $Good\ faith\ (1)$ equals one if the firm is headquartered in a state that adopted the exception one year ago; and $Good\ faith\ (2+)$ equals one if the firm is headquartered in a state that adopted the exception two or more years ago. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. *t*-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

	Dependent: Ln(Average employee pay)
	(1)
Good faith (−2) × Leverage	0.287
	(1.072)
Good faith (−1) × Leverage	−0.171
	(−0.435)
Good faith (0) × Leverage	0.321
	(0.785)
Good faith (1) × Leverage	−0.170
	(−0.652)
Good faith (2+) × Leverage	−0.278***
	(−3.562)
Leverage	0.223***
	(4.607)
Good faith (−2)	−0.195
	(−1.190)
Good faith (−1)	0.053
	(0.237)
Good faith (0)	−0.204
	(−1.006)
Good faith (1)	0.074
	(0.576)
Good faith (2+)	0.115***
	(2.931)
Control variables	Yes
State fixed effects	Yes
Industry fixed effects	Yes
Year fixed effects	Yes
Observations	12,305
Adjusted R^2	0.497

Table 7: Heckman two-step analysis

This table presents the results from Heckman two-step analysis. The sample consists of Compustat firms from 1969 to 2003. In Panel A, the first stage, we employ a probit model of whether a firm reports its total staff expenses. The dependent variable is a dummy that equals one if the firm has non-missing data for the total staff expenses in Compustat and zero otherwise. The independent variables are the control variables of Equation (1) plus the firm's listing exchange dummies. In Panel B, the second stage, we include the inverse Mills ratio derived from the first stage probit model into the Equation (1). Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. *t*-statistics are in parentheses and are robust to heteroskedasticity, and standard errors in Panel B are clustered by state. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

Panel A: First stage	Dependent: Reporting dummy
Leverage	−0.006
	(−0.198)
Tangibility	0.417***
	(22.047)
Average sales per employee	−0.001***
	(−10.098)
Firm size	0.141***
	(34.413)
Market-to-book	−0.001
	(−0.526)
Ln(State GDP PC)	−0.209**
	(−2.020)
State GDP growth	−0.155
	(−0.595)
Political balance	0.044
	(0.587)
Constant	−4.266***
	(−4.089)
Exchange dummies	Jointly significant
State fixed effects	Yes
Industry fixed effects	Yes
Year fixed effects	Yes
Observations	128,119

Panel B: Second stage	Dependent: Ln(Average employee pay)
Good faith × Leverage	−0.233***
	(−3.115)
Leverage	0.236***
	(4.629)
Good faith	0.089**
	(2.201)
Inverse mills ratio	0.246**
	(2.095)
Control variables	Yes
State fixed effects	Yes
Industry fixed effects	Yes
Year fixed effects	Yes
Observations	12,362
Adjusted R^2	0.492

Table 8: Propensity score matching

This table presents the results using the propensity score matched samples. We match the affected firm-year observations (i.e., firm-years headquartered in states with the adoption of the good faith exception) with unaffected firm-years (i.e., firm-years headquartered in states without the adoption of the good faith exception) by adopting one-to-one nearest-neighbor matching with replacement. For the matched sample 1, we estimate propensity scores on *Leverage*, *Tangibility*, *Average sales per employee*, *Firm size*, and *Market-to-book*. For the matched sample 2, we also include *State GDP growth* and *Political balance*. We match firms in the affected group with those in the unaffected group in year $t-1$, where t is the adoption year of the good faith exception. We match each treatment firm at year $t-1$ to one unaffected firm with replacement such that their closest propensity scores from logit regression are within caliper of 0.2 standard deviations. We require that the matched firms should be from the same year and Fama-French 48 industry. Panel A reports the differences between the mean values of the matched variables from the affected and unaffected groups for the first and second matched samples. Since we match with replacement, the number of unaffected observations is smaller than that of affected observations (i.e., some unaffected observations are used more than once). Panel B presents the effect of the good faith adoption on the leverage-wage relation using the matched samples. The dependent variable is log of average employee pay. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. t-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

Panel A: Comparisons across matched samples in Year t-1

	Matched sample 1			Matched sample 2		
	Affected (N = 65)	Unaffected (N = 60)	t-value of Diff.	Affected (N = 60)	Unaffected (N = 53)	t-value of Diff.
Propensity score	0.008	0.008	0.094	0.008	0.008	0.021
Leverage	0.435	0.425	0.244	0.451	0.452	−0.023
Tangibility	0.717	0.723	−0.093	0.734	0.742	−0.116
Average sales per employee	111.114	114.670	−0.162	118.498	100.690	0.739
Firm size	4.789	4.982	−0.493	4.995	4.940	0.122
Market-to-book	1.700	1.525	0.535	1.919	1.491	1.080
State GDP growth				0.023	0.016	1.100
Political balance				0.619	0.626	−0.269

Panel B: The effect of the good faith adoption for the matched sample

	Dependent: Ln(Average employee pay)	
	Matched sample 1 (1)	Matched sample 2 (2)
Good faith × Leverage	−0.315*	−0.349**
	(−2.041)	(−2.465)
Leverage	0.278**	0.343**
	(2.057)	(2.377)
Good faith	0.145*	0.144*
	(1.935)	(2.042)
Control variables	Yes	Yes
State fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	1,564	1,457
Adjusted R^2	0.675	0.732

Table 9: Robustness: Alternative measures of leverage

This table presents the OLS estimation results of Equation (1) with alternative measures of leverage. The sample consists of Compustat firms from 1969 to 2003. The dependent variable is the natural log of average employee pay. *Leverage*1 in Column 1 is defined as the ratio of short-term debt and long-term debt to short-term debt and long-term debt plus the market value of equity, *Leverage*2 in Column 2 is defined as the ratio of long term debt plus long term debt due in 1 year to long term debt plus long term debt due in 1 year and the product of the number of common shares outstanding and the price per share, and *Leverage*3 in Column 3 is defined as the ratio of total debt to total debt plus the market value of equity and preferred stock minus deferred taxes. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. *t*-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

	Dependent: Ln(Average employee pay)		
	(1)	(2)	(3)
Good faith × Leverage1	−0.151**		
	(−2.134)		
Leverage1	0.094**		
	(2.453)		
Good faith × Leverage2		−0.210***	
		(−2.868)	
Leverage2		0.085**	
		(2.164)	
Good faith × Leverage3			−0.144**
			(−2.093)
Leverage3			0.096**
			(2.600)
Good faith	0.045	0.052	0.044
	(1.187)	(1.517)	(1.178)
Control variables	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Observations	12,357	12,141	12,357
Adjusted R^2	0.493	0.494	0.493

Table 10: Robustness: Controlling for high-dimensional fixed effects

This table presents the OLS estimation results of Equation (1) augmented with the high-dimensional fixed effects. These are *Industry* × *Year*, *State* × *Year*, and *Region* × *Year* fixed effects, which are controlled in Columns 1 to 3, respectively. The sample consists of Compustat firms from 1969 to 2003. The dependent variable is the natural log of average employee pay. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. *t*-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

	Dependent: Ln(Average employee pay)		
	(1)	(2)	(3)
Good faith × Leverage	−0.221**	−0.275***	−0.279***
	(−2.394)	(−4.025)	(−3.922)
Leverage	0.182***	0.217***	0.215***
	(3.518)	(4.287)	(4.094)
Good faith	0.087*	0.090	0.096
	(1.915)	(0.760)	(1.668)
Control variables	Yes	Yes	Yes
State fixed effects	Yes		
Industry fixed effects		Yes	Yes
Industry × Year fixed effects	Yes		
State × Year fixed effects		Yes	
Region × Year fixed effects			Yes
Observations	12,180	12,114	12,364
Adjusted R^2	0.505	0.488	0.490

Table 11: Further robustness checks

This table presents the estimation results of Equation (1) from several robustness tests. The dependent variable is log of average employee pay. Panel A uses alternative historical headquarter locations. Panel B uses an alternative dating scheme from Autor, Donohue III, and Schwab (2006) to identify the good faith exception. In Panel C, we exclude industries or firms that are more likely to be geographically dispersed. Column 1 of Panel C excludes the retail, wholesale, and transportation industries, whose employees are likely to be geographically dispersed. Column 2 of Panel C excludes firms with non-missing and positive foreign income or taxes. In Panels A to C, we use the full sample period from 1969 to 2003. In Panel D, we use alternative sample periods. In Columns 1 to 3 of Panel D, we use the sample periods from 1978 to 1999, from 1971 to 1999, and from 1969 to 1995, respectively. In Panel E, we use the stacked regression estimation. Control variables include *Good faith*, *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. *t*-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

Panel A: Alternative historical headquarter locations	Dependent: Ln(Average employee pay)
	(1)
Good faith × Leverage	−0.205**
	(−2.279)
Leverage	0.215**
	(2.584)
Controls, and State, Industry, and Year FEs	Yes
Observations	10,152
Adjusted R^2	0.553

Panel B: The dating scheme in Autor, Donohue III, and Schwab (2006)	Dependent: Ln(Average employee pay)
	(1)
Good faith × Leverage	−0.215***
	(−2.699)
Leverage	0.218***
	(4.334)
Controls, and State, Industry, and Year FEs	Yes
Observations	12,362
Adjusted R^2	0.495

Panel C: Exclude dispersed firms	Dependent: Ln(Average employee pay)	
	Exclude dispersed industries	Exclude international operations
	(1)	(2)
Good faith × Leverage	−0.233***	−0.150*
	(−2.786)	(−1.861)
Leverage	0.246***	0.149**
	(4.267)	(2.515)
Controls, and State, Industry, and Year FEs	Yes	Yes
Observations	9,366	8,136
Adjusted R^2	0.510	0.475

Panel D: Alternative sample periods	Dependent: Ln(Average employee pay)		
	1978-1999	1971-1999	1969-1995
	(1)	(2)	(3)
Good faith × Leverage	−0.335***	−0.314***	−0.378***
	(−3.935)	(−3.834)	(−3.901)
Leverage	0.268***	0.236***	0.251***
	(5.035)	(4.229)	(3.744)
Controls, and State, Industry, and Year FEs	Yes	Yes	Yes
Observations	7,962	10,706	9,940
Adjusted R^2	0.506	0.501	0.487

Continued

Panel E: Stacked model	Dependent: Ln(Average employee pay)
	(1)
Good faith × Leverage	−0.116***
	(−3.030)
Leverage	0.086**
	(2.054)
Controls, and Firm-cohort and Year-cohort FEs	Yes
Observations	101,311
Adjusted R^2	0.887

Appendix

Table A1: Variable definition

Variable	Definition (Compustat variable names are in bold)
Average employee pay	The total staff expenses (**xlr**) divided by the number of employees (**emp**). Source: Compustat
Good faith dummy	The dummy equals one if the state where a firm is headquartered has adopted the good faith exception before the month that the fiscal year ends, and zero otherwise.
Implied contract dummy	The dummy equals one if the state where a firm is headquartered has adopted the implied contract exception before the month that the fiscal year ends, and zero otherwise.
Public policy dummy	The dummy equals one if the state where a firm is headquartered has adopted the public policy exception before the month that the fiscal year ends, and zero otherwise.
Book value of equity	Total assets (**at**) less the sum of total liabilities (**lt**) and preferred stock (**pstkl**) (or the redemption value of preferred stock (**pstkrv**) if preferred stock is missing) plus deferred taxes (**txditc**) and convertible debt (**dcvt**). Source: Compustat
Leverage	The ratio of total assets (**at**) minus the book value of equity to total assets minus the book value of equity plus the market value of equity (**prcc_f** * **csho**). Source: Compustat
Firm size	The natural log of the market value of equity (**prcc_f** * **csho**). Source: Compustat
Average sales per employee	The total sales (**sale**) divided by the number of employees (**emp**). Source: Compustat
Market to book ratio	The ratio of market value of equity (**prcc_f** * **csho**) to the book value of equity. Source: Compustat
Tangibility	The ratio of gross property, plant, and equipment (**ppegt**) to total assets (**at**). Source: Compustat
State GDP PC	The GDP of a state scaled by its total population. Source: Bureau of Economic Analysis and US Census Bureau
State GDP growth	The annual state-level GDP growth rate. Source: Bureau of Economic Analysis
Political balance	The fraction of a state's members in House of Representatives and Senate from the Democratic Party. Source: United States Census Bureau
Dividend payer	An indicator set to one if a firm has the positive common dividend (**dvc**) and zero otherwise. Source: Compustat
Modified Altman's Z-score	The sum of 3.3 * earnings before interest and taxes (**pi**), sales (**sale**), 1.4 * retained earnings (**re**), and 1.2 * working capital (**act** − **lct**) divided by total assets (**at**). Source: Compustat
Zmijewski's financial distress index	The sum of −4.336, −4.513 * net income (**ni**) to total assets, 5.679 * total liabilities (**lt**) to total assets, and 0.004 * current assets (**act**) to current liabilities (**lct**). Source: Compustat
Labor unionization rate	The industry- or state-level percentages of union coverage. Source: Unionstats.com.
R&D expenditures	The ratio of R&D expenses (**xrd**) to lagged total assets (**at**), and is set to zero if R&D expenses are missing. Source: Compustat
Industry labor skill index	The percentage of employees working on occupations that require a high level of training and preparation. Source: Xiaoji Lin's personal website.

Variable	Definition (Compustat variable names are in bold)
Layoff separation rate	The layoff separation rates at three-digit NAICS industries. Source: Agrawal and Matsa (2013)
Leverage1	The ratio of short-term debt and long-term debt (**dlc** + **dltt**) to short-term debt and long-term debt plus the product of the number of common shares outstanding and the price per share (**prcc_f** * **csho**). Source: Compustat
Leverage2	The ratio of long term debt (**dltt**) plus long term debt due in one year (**dd1**) to long term debt plus long term debt due in one year and the market value of equity (**prcc_f** * **csho**). Source: Compustat
Leverage3	The ratio of total debt (**dltt** + **dlc**) to total debt plus the market value of equity (**prcc_f** * **csho**) and preferred stock (**pstkl**) minus deferred taxes (**txditc**). Source: Compustat
Right-to-work law	The dummy equals one if the state where a firm is headquartered has adopted the right-to-work law by year t, and zero otherwise.
Unemployment insurance law	The dummy equals one if the state where a firm is headquartered has increased at least 10% of unemployment insurance benefits at the first time in year t, and zero otherwise.
Circuit states' Good faith	The fraction of circuit states' adoption of the good faith exception.
TDC1	Executive total compensation whose stocks and options are valued using grant date fair value.
TDC2	Executive total compensation whose stocks are valued at the time of vesting and options are valued at the time of exercise.

Table A2: The year of adopting the good faith exception

This table presents the state-level adoption year of the good faith exception.

State	Adopted
Alabama	
Alaska	1983
Arizona	1985
Arkansas	
California	1980
Colorado	
Connecticut	1980
Delaware	1992
D.C.	
Florida	
Georgia	
Hawaii	
Idaho	1989
Illinois	
Indiana	
Iowa	
Kansas	
Kentucky	
Louisiana	1998
Maine	
Maryland	
Massachusetts	1977
Michigan	
Minnesota	
Mississippi	
Missouri	
Montana	1982
Nebraska	
Nevada	1987
New Hampshire	1974 (Repeal 1980)
New Jersey	
New Mexico	
New York	
North Carolina	
North Dakota	
Ohio	
Oklahoma	1985 (Repeal 1989)
Oregon	
Pennsylvania	
Rhode Island	
South Carolina	
South Dakota	
Tennessee	
Texas	
Utah	1989
Vermont	
Virginia	
Washington	
West Virginia	
Wisconsin	
Wyoming	1994

Table A3: Labor protection law and the leverage-executive pay relation

This table presents the OLS estimation results. The sample consists of Compustat firms from 1969 to 2003. The dependent variable is the natural log of executive total compensation. TDC1 is the executive total compensation whose stocks and options are valued using grant date fair value. TDC2 is the executive total compensation whose stocks are valued at the time of vesting and options are valued at the time of exercise. Control variables include *Implied contract*, *Public policy*, *Profitability*, *Firm size*, *Market-to-book*, *Executive age*, *Executive tenure*, *Executive gender*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. *t*-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

	Dependent: Ln(TDC1)	Dependent: Ln(TDC2)
	(1)	(2)
Good faith × Leverage	−0.338*	−0.230*
	(−1.826)	(−1.682)
Leverage	1.068***	0.869***
	(10.468)	(8.990)
Good faith	0.116	−0.250***
	(1.175)	(−2.858)
Control variables	Yes	Yes
State fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
Observations	9,288	9,340
Adjusted R^2	0.449	0.410

Table A4: Further tests on endogeneity

This table presents the estimation results of further endogeneity tests. The sample consists of Compustat firms from 1969 to 2003. The dependent variables are indicated at the top of each column. Column 1 uses leverage lagged up to 3 years prior to the adoption of the good faith adoption. The next two columns employ the 2SLS model. Column 2 reports the first stage of the 2SLS model uses marginal tax rates before interest to instrument for leverage. Column 3 presents the second stage of the IV model. In Column 4, we use the two-step system-GMM with lagged levels dated t-3 and older as instruments for the equations in differences and lagged differences dated t-2 as instruments for the equations in levels. Control variables include *Implied contract*, *Public policy*, *Tangibility*, *Average sales per employee*, *Firm size*, *Market-to-book*, *Ln*(*State GDP PC*), *State GDP growth*, and *Political balance*. All continuous variables except macroeconomic variables are winsorized at the 1st and 99th. Appendix Table A1 provides the complete variable definitions. For Columns 1, 2, and 3, *t*-statistics reported in parentheses are based on heteroskedasticity-robust standard errors that are clustered at the state level; for Column 4, robust *t*-statistics are reported in parentheses. The significance levels of 10%, 5%, and 1% are represented by *, **, and ***, respectively.

Dependent:	Ln(Average employee pay)	Leverage	Ln(Average employee pay)	
	(1) Lagged leverage	(2) 2SLS: First-stage	(3) 2SLS: Second-stage	(4) System-GMM
Good faith × Lagged leverage	−0.290***			
	(−3.279)			
Lagged leverage	0.196***			
	(3.781)			
Marginal tax rates		0.093***		
		(3.60)		
Good faith × Instrumented leverage			−0.257***	
			(−3.20)	
Instrumented leverage			0.197***	
			(7.20)	
Good faith × Leverage				−0.585**
				(−2.494)
Leverage				0.782***
				(4.908)
Good faith	0.098**	−0.036***	0.058**	0.201*
	(2.236)	(−2.77)	(−2.02)	(1.659)
Control variables	Yes	Yes	Yes	Yes
State fixed effects	Yes	Yes	Yes	
Industry fixed effects	Yes	Yes	Yes	
Year fixed effects	Yes	Yes	Yes	Yes
Observations	7,751	7,830	7,830	12,365
Adjusted R^2	0.586	0.352	0.583	
F-statistic		29.93***		
Correlation 1 (*p*-value)				0.000
Correlation 2 (*p*-value)				0.020
Correlation 3 (*p*-value)				0.738
Hansen J-test (*p*-value)				0.201
Difference-in-Hansen (*p*-value)				0.192