Government Procurement and Wage Theft

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Abstract

Wage theft is the largest form of theft committed in the U.S. It includes the lack of payment for overtime hours or forcing employees to underreport hours worked. We examine the relation between government contracting and wage theft and find that contracting with governmental agencies is related to supplier firm employees experiencing a reduction in wage theft. Further analysis shows that this relation is driven by supplier firm improved financial reporting. Cross-sectional analysis suggest that this relation is more pronounced when there is greater scope for government monitoring of its suppliers. To mitigate endogeneity concerns we perform differences-in-differences identification tests based on first time contractors and the Obama Administration government contracting reform.

Keywords: government procurement, wage theft, employee wellbeing, government

monitoring

JEL classification: G18, G38, G39, J31, J83, M14, M41

1. Introduction

Wage theft is the largest form of theft committed in the U.S. It is a problem that affects the wellbeing of the most important group of stakeholders of the firm, its employees. It is estimated that wage theft in the U.S. amounts to $15 billion per year (EPI 2017). Typical violations related to wage theft include the non-payment of overtime and the under-reporting of hours worked (Raghunandan 2021a). For example, Amazon was charged a $61.7 million fine to settle wage theft violations in respect of the non-payment of tips to employees over two years (FTC 2021). Large firms such as Bank of America, Wells Fargo, FedEx, were also among firms that were fined for wage theft (GJF 2018). Wage theft is so pervasive in the U.S. that in 2019, District Attorney Larry Krasner created a unit specifically tasked with investigating crimes against workers (GQ 2019).

Notwithstanding that wage theft has negative consequences on both firms and employees, its determinants are still largely unexplored. Despite numerous legislative and executive steps to control wage theft, a comprehensive solution to this problem remains elusive. Further, while the ESG movement, generally promoting a focus on all stakeholders including employees, is on the rise, it does not seem to motivate firms enough to self-regulate and reduce wage theft. Hence, examining the role of the government in addressing the issue is crucial (Freiss, 2022).

In this study, we examine the extent to which government affects wage theft through monitoring of its suppliers. Government is an important customer for two reasons. First, government spending represents about 20% of the U.S. GDP (Cohen and Li 2020; Dhaliwal et al. 2016) and hence, its procurement process affects many firms. Second, monitoring by the government is much more extensive and thorough than any other customer as it follows Federal Acquisition Regulations (FARs) requiring federal agencies to contract with "*responsible sources*" that have "*a satisfactory record of integrity and business ethics*".

FARs specify the rules that govern the relationship between the government and its contractors. Specifically, it includes detailed specifications of controls and audits to be performed by the government. To ensure that it is not a wasteful spender (Liebman and Mahoney 2017), the government must verify any documents, accounting procedures, and other records such as payroll sheets and registers that it deems necessary to ascertain that the supplier is able to fulfil the requirements of the contract while acting ethically and with integrity (Samuels 2021). Hence, we conjecture that government contracting and related government oversight improves firms' processes and procedures relating to employee wages ultimately reducing the incidence of employee wage theft in contracting firms.

To test this research question, we use data on wage theft from the Wage and Hour Division of the Labor Department's WHISARD database. In contrast to other databases, WHISARD provides start and end dates for each violation. This is important for our research design as it allows us to accurately identify when the violation occurs. We merge these data with a dataset of government contracts awarded between 2000 and 2020 available through the US Government Spending Open Data initiative.[1] In this way, we capture the impact of the government, as a customer, on its suppliers irrespective of the contract size.[2] This provides us with a unique, comprehensive, and powerful setting to study how government contracting affects employee wellbeing.

We find that government contracting is negatively related to the number of wage theft violations and the magnitude of penalties levied by regulators for wage theft violations. One channel through which government contracting reduces wage theft is through improvement in the firms' internal processes and systems, as captured by a reduction in financial restatements.

[1] From 2006, U.S. government agencies were obliged to disclose their transactions with contractors receiving public funds. These data are now available in the Federal Procurement Data System–Next Generation database (FPDS–NG) at www.USAspending.gov.

[2] The literature examining customer-supplier relationships (for e.g., Chen et al. 2022, Liu et al. 2021) generally focuses exclusively on major customers, without considering that other customers besides major customers might influence supplier policy choices.

In cross-sectional analysis we find that the negative relation between government contracting, and wage theft is stronger in settings where there is greater scope for government monitoring of its suppliers. Specifically, we find that the relation between government contracting, and wage theft is stronger when the contract is subject to cost-plus pricing and when it does not include a cost accounting standards clause.

Further to mitigate endogeneity concerns and establish causality for the relation between government contracting and wage theft we undertake two sets of difference-in-differences analysis. First, to ensure that our results are not driven by self-selection bias where firms self-select to supply the government, we focus on firms which receive their first government contract during our sample period. Second, we examine the relation between government contracting and wage theft around the issuance of presidential executive order number 13665, announced on 8 April 2014, which required stricter monitoring of suppliers by governmental agencies. Results for these tests corroborate the notion that the reduction in wage theft is driven by government contracting.

Finally, we subject our results to several robustness tests. First, to ensure that our results are not driven by firm interactions with the government other than through government contracting, we run the baseline model including controls for government subsidies received by the company. Second, to ensure that lobbying activity does not diminish the effects of government contracting on wage theft, we run the baseline model including controls for firm lobbying of governmental agencies. Third, we use alternative measures for the number of violations and magnitude of penalties to ensure that our results are not driven by how we calculate our dependent variables. Fourth, we use the value of contracts scaled by total awards as an alternative measure of government contracting that captures the importance of the contract to the government. Fifth, given that by construction the dependent variables are left-truncated (both dependent variables are greater or equal to zero), and right-skewed, we perform

our analysis using Poisson regression. Sixth, to ensure that our results are not driven by industry or state-specific shocks we run our baseline model with a tighter fixed effect structure where we include interactions between industry and year-quarter fixed effects, and state and year-quarter fixed effects. Results for these robustness tests support our baseline results.

Our paper contributes to several strands of literature. First, we add to the literature on the role of non-investor stakeholders, such as customers and suppliers, on a firm's policies. Non-investor stakeholders can affect firms' accounting policies through demand for financial information, direct monitoring, bargaining power, or liquidation threat.[3] Government is a special type of a stakeholder. As a customer it is subject to FARs that mandate special requirements on government agencies in the contracting process. Hence, government contracting has an important effect on supplier firms.[4] He and Kohlbeck (2021) claim that government contacts are associated with improvements in financial reporting quality while Samuels (2021) claims that government can also alter their suppliers' external reporting due to improvements in internal information process requirements. We contribute to this literature by showing the relation between government contracting and supplier wage theft.

[3] Hui, Klasa, and Yeung (2012) find that powerful suppliers and customers use their bargaining power to demand more conservative accounting. Banerjee, Dasgupta, and Kim (2008) show that liquidation threat affects supplier-customer relationships and firms with large principal customers having lower leverage. Further, Raman and Shahrur (2008) find that earnings management by the firm correlates positively with the investments by suppliers and customers. Costello (2013) shows that if financial statements are more reliable, customers and suppliers are less likely to rely on financial covenants to reduce moral hazard. Bowen, Ducharme, and Shores (1995) show that implicit claims between firms and stakeholders affect long-term accounting methods. Dhaliwal et al. (2020) show that supply chain relationships are associated with auditor assessments, while Dou, Hope, and Thomas (2013) find that supply chain relationships are important in an international context. They show that firms smooth reported income more if they operate in a weak contract environment and in industries with relationship-specific investments.

[4] There is a literature on the effects of government on firms in general. Government has a stabilising effect on firms during crisis (Goldman 2020). This stabilising effect improves the quality of supplier management forecasts (Cheng, Huang, and Zhang 2020). Further, extant literature suggests that government monitoring also has an effect on contracting with debtholders. Cohen et al. (2021) show that firms where the government is a major customer have fewer covenants and are less likely to have performance pricing provisions in their loan contracts. Firms sensitive to government procurement pay higher political costs (Mills, Nutter, and Schwab 2013), have lower long-term CEO wealth performance sensitivity (Hadley 2019), higher profitability (Cohen and Li 2020) and more capital investment (Hebous and Zimmermann 2021).

Second, we contribute to the literature on corporate misconduct. Extant literature documents that firms are more likely to engage in corporate misconduct such as employee mistreatment and workplace misconduct, if they are under pressure (Caskey and Ozel 2017; Raghunandan 2021a; Chircop, Tarsalewska, and Trzeciakiewicz 2021). Monitoring by management or institutional investors results in a reduction of workplace violations (Heese and Pérez-Cavazos 2020; Li and Raghunandan 2021a). We add to this literature by showing that government contracting, through its oversight, influences the firm relations with its employees and reduces a specific type of corporate misconduct i.e., wage theft.

Third, we contribute to the nascent literature examining the effectiveness of corporate governance mechanisms and external monitors in disciplining firms to deter and remedy misconduct (e.g., Berger and Lee 2022; Call et al. 2018; Christensen et al. 2017; Correia 2014; Dey, Heese, and Pérez-Cavazos 2021; Duro, Heese, and Ormazabal 2019; Kleymenova and Tomy, 2022; Nguyen 2021; Silvers 2016; Soltes 2020; Hope, Jiang, and Vyas 2021). We add to this literature by showing that at the time of government contract award the firms are more likely to improve internal controls, in order to comply with FARs as the threat of non-compliance might result in future penalties, early-termination or not-awarding future government contracts. This serves as a government disciplining action and results in reduction in wage theft.

Finally, firms sensitive to government procurement pay higher political costs (Mills, Nutter, and Schwab 2013), have lower long-term CEO wealth performance sensitivity (Hadley 2019), higher profitability (Cohen and Li 2020) and more capital investment (Hebous and Zimmermann 2021). We contribute to this literature by examining how government contracting influences the firm relations with internal stakeholders, specifically employees.

2. Government Procurement and Hypothesis Development

2.1 Institutional background

U.S. government procurement is subject to Federal Acquisition Regulations (FARs) that codify the procedures and govern the process of acquisition by executive agencies. FARs define contracting methods and acquisition planning, contract types, contracting requirements, and its management. Typically, the agency's "Contracting Officer" (CO) is responsible for the contract on behalf of the government. COs are responsible for ensuring that the contractor complies with the contract terms and its subsequent monitoring requirements. Federal procurement opportunities are typically published on the Federal Business Opportunities website and agencies allow at least 30 days for contractors to submit their bids in line with the Competition in Contracting Act (CICA 1984).

FARs require the U.S. government and its agencies to only contract with "*responsible*" future contractors. The responsibility criteria defined by FARs are related to the availability of financial resources, satisfactory performance records, integrity and business ethics, organisation, experience, accounting and operational controls, and technical skills and capacity to perform the contract. It is the CO responsibility to obtain sufficient information to ensure that the contractor satisfies FARs (FAR 2019; Feldman 2016). Before agreeing on a contract type other than fixed price, the CO ensures that the contractor's accounting system permits timely preparation of all necessary cost data in the form required by the proposed contract type (FAR 16.104 i). After awarding the contract the CO needs to monitor the supplier and run risk assessments to ensure continued compliance with FARs (Samuels 2021).

FARs define two broad categories of contracts based on compensation paid to the supplier: fixed price and cost reimbursement (also called cost-plus). Fixed price contracts deliver the goods or services at a fixed price. They are less uncertain for the government as the

ultimate price is relatively well estimated and the risk of any changes in the cost rests with the supplier. Fixed price contracts are appropriate for the acquisition of commercially available products with well-defined specifications. Cost reimbursement contracts are used when the anticipated costs cannot be precisely estimated. In cost-plus contracts, the price for the government is the contractor's cost of fulfilling the contract plus a profit margin. For cost reimbursement contracts the agency must ensure that the contractor's accounting systems is adequate, and that the government will be able to monitor the project costs. These types of contracts are appropriate in preliminary explorations, development, and test acquisitions where the level of effort is unknown (Feldman 2016).

There are many factors that influence the selection of contract type (FAR 16.104). Contracts resulting from sealed bidding are typically fixed-price contracts (FAR 16.102 a) whereas negotiated contracts might be of any type (FAR 16.102 b). Put differently, fixed-price contracts typically require effective price competition and price comparisons that permit realistic pricing (FAR 16.104, FAR 16.202-2). Conversely, cost-plus contracts, where pricing risk is carried by the government, typically result from government contracting that includes complex requirements; requirements unique to the Government (FAR 16.104 d); is urgent (FAR 16.104 e) or is acquired for the first time. In the case of cost-plus contracts, the CO needs to ensure that efficient methods and effective cost controls are used to monitor contract costs (FAR 16.301-3). Over the duration of the contract, the costs are reviewed by the government before payments are issued to ensure that they are accurate, relate to the contract, and in compliance with accounting principles mandated by the government Cost Accounting Standards (Samuels 2021; Pownall 1986).

Government contractors are also subject to detailed product quality and performance audits. FARs specify the rules for government inspections and mandate that the government carry out inspections "*at all times and places*". The audits of cost records are undertaken by

multiple agencies responsible for overseeing government contractors (FAR 2019). The contractors are subject to formal and informal penalties. The literature shows that following fraud investigations, government reduces the contract dollar volume by around 15% even for cases that result in a settlement (Heese and Pérez-Cavazos 2019).

2.2 Wage theft

The Fair Labor Standards Act (FLSA) establishes minimum wage, overtime pay, recordkeeping, and youth employment standards while the Department of Labor Wage and Hour Division (WHD) is responsible for enforcing the requirements of the FLSA. WHD inspects firms to check if they comply with required standards. These inspections are either a response to worker's complaints or unannounced random audits of firms. There is a relatively high frequency of WHD investigations, with an average of more than 20,000 investigations per year (Raghunandan 2021a). Typical examples of violations that constitute wage theft include the failure to pay overtime, the failure to pay minimum wages, the failure to keep accurate records, and the failure to meet certificate terms and pay commensurate rates for workers with disabilities, among others.

WHD issue penalties if they find any violations of FLSA standards. The penalties typically constitute the equivalent of the back pay due to employees and fines levied by WHD. Given penalties are publicly disclosed, violations of FLSA standards also lead to reputational costs. For example, Johnson (2020) shows that penalties issued by Occupational Safety and Health Administration (OSHA) to publicly name-and-shame violators lead to a drop in the number of violations.

2.3 Government contracting and wage theft

Compliance with FARs is essential for government suppliers since this ensures that contractor employees are paid at least the minimum wage, are compensated for overtime, and work in safe and healthy environments. The government contractors are also obliged to retain

accounting procedures and practices data (FAR 4.703 a) as well as administration records such as payroll sheets, salary registers and clock cards (FAR 4.705-2). At the same time, the requirements of FARs ensure that government contractors provide detailed information on cost estimates such as billing information, accounts payable details and labor timekeeping that must accurately reflect the underlying transactions (Samuels 2021). Government contractors are subject to detailed audits of these costs so that any inconsistencies in reporting that result in wage theft can be detected. Therefore, any violations resulting in wage theft can put the contractor at risk of government penalties. These might include (i) termination and charges for the cost of re-procurement, (ii) debarment from future (up to 3 years) government contracts, and (iii) penalties including the cost of unpaid wages (FAR 2019; Feldman 2016). The above discussion suggests that the government has the potential to be an effective external monitor.[5] Thus, for government contractors, cost monitoring with a credible threat of detection should result in a lower incidence of wage theft.

Further, government is a special type of a customer. Apart from being a customer, it is also a regulator. Government as a regulator needs to ensure that employees are well paid for their efforts. For example, on April 21st, 2021 the Biden-Harris Administration raised the minimum wage for federal contractors to $15.[6] The main goal was to "promote economy and efficiency in federal contracting, providing value for taxpayers by enhancing worker productivity and generating higher-quality work by boosting workers' health, morale, and effort". Thus, government as a customer aims to ensure that workers are paid appropriately for their effort and the number of hours worked. Fairly treating workers leads to more

[5] Prior literature suggests that external monitors and regulatory changes have an effect on misconduct in general. For example, Call et al. (2018) and Dey, Heese, and Pérez-Cavazos (2021) show that whistle-blowers are a valuable source of information for regulators. Also, changes in disclosure requirements have an effect on misconduct (Christensen et al. 2017; Kleymenova and Tomy, 2022). Direct interventions in the firm's behaviour by appointing external monitors result in a a decrease of violations in general (Gallo, Lynch, Tomy 2022).

[6] https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/27/fact-sheet-biden-harris-administration-issues-an-executive-order-to-raise-the-minimum-wage-to-15-for-federal-contractors/

productive workers which deliver better quality end products for the benefit of the customer, i.e., the government. Therefore, we should observe less wage theft in firms that become government contractors.

3. Data

3.1 Wage theft data

Data on wage and hour violations (generally classified as wage theft) are collected directly from the Wage and Hour Division of the Labor Department's WHISARD database [7]. The database contains information on the violations, corresponding penalties, number of employees affected as well as start and end date for each violation. Detailed information on the period over which the violation occurred allows for the aggregation of violations by period. We aggregate the data on wage theft at the quarterly level to match the quarterly government contracting data. Like Raghunandan (2021a), we compute wage theft penalties for each firm-quarter by first evenly allocating penalty amounts and violation counts for multiperiod violations across the period of offence for each violation, and then aggregating to firm-quarter level. To do so we use total dollar value of backwages related to wage theft (WHISARD item *bw_atp_amt*) and case violation count (WHISARD item *case_violtn_cnt*).

3.2. Government contracting data

We obtain information on government contracting from the USAspending.gov[8] website. This website contains information on entities that receive federal awards (including contracts, grants, and loans), exceeding a transaction value of $3,000, of which disclosure is required by the Federal Funding Accountability and Transparency Act (FFATA) of 2006. The details provided include the plant level company name, address, and DUNS number (plant-level company identifier that is used by government agencies). To match the federal contracting

[7] The data is available at https://enforcedata.dol.gov/views/data_summary.php
[8] The data is available at: https://files.usaspending.gov/database_download/

data with financial quarterly data similar to prior literature (e.g., Hebous and Zimmermann 2021, Hesse and Pérez-Cavazos 2019) we aggregate contract awards by quarter-year and collapse it at the parent DUNS number.

3.3. Sample selection

We construct our sample in the following way. We start with the universe of US listed firms on Compustat. We merge these firms with data on wage theft sourced directly from the Wage and Hour Division of the Labor Department's WHISARD database, by using parent-subsidiary matching provided by Violation Tracker of Good Jobs First. In this way, our sample consists of firms which have been investigated at least once by the Wage and Hour Division of the Labor Department in our sample period.[9] Next, we add government contracting data sourced from the Federal Procurement Data System–Next Generation using company DUNS. Any firms which feature in the wage theft violations (WHISARD) database but do not feature in the Federal Procurement Data System–Next Generation database are assumed to have zero government contracts for that quarter.

We concentrate on publicly listed firms by merging the resultant dataset with Compustat, from which we source data for our control variables. Like previous studies exploring government procurement, we exclude financial firms (Mills, Nutter, and Schwab 2013, Goldman 2020), utility firms (Mills, Nutter, and Schwab 2013), and health service firms (Heese and Pérez-Cavazos 2019; Goldman 2020). Further, we drop all observations with negative sales values (Goldman 2020). To align financial data with the data on wage theft and government contracting, which are measured over calendar years, we limit the sample to firms that have December fiscal year ends. Our sample contains 23,089 observations for 346 unique firms spanning from 2001Q1 to 2020Q1.

[9] Similar to Raghunandan (2021a) we avoid mislabelling unmatched firms as non-violators.

3.4 Distribution of wage theft violations and government contracts by industry

As shown in Panel A, Table 1, there is variation in the number of wage theft violations across industries. Specifically, the industry category Wholesale, Retail and Some Services has the highest number of violations with 42,830 violations corresponding to over $15.8 million in penalties. This is followed by industry category "Other" consisting of Mining, Construction, Building Materials, Transport, Hotels, Business Services and Entertainment that has 40,034 violations corresponding to over $24.9 million in penalties. The industry category with the lowest number of wage theft violations is the Healthcare, Medical Equipment and Drugs category with 586 violations corresponding to $439,303 in penalties.

There is also significant variation in the aggregate value of government contracting across industries. As shown in Panel B, Table 1, the Manufacturing industry category with aggregate government contracting of $113 billion has the largest share of government contracting over the sample period. This is followed by the Business Equipment industry category with aggregate government contracting of $107 billion. The distribution of violations and government contracting across industries indicates that violations and government contracting are not randomly assigned to industries, but industry specific characteristics likely influence the number of violations and the amount of government contracting.

[Insert Table 1 here]

4. Research design and results

4.1 Government contracting and wage theft

We examine the effect of government contracting on wage theft by estimating the following OLS regression model:

$$WageTheft_{i,q} = \alpha_0 + \alpha_1 \frac{Contract_{i,q}}{Sales_{i,q}} + \alpha_2 Controls_{i,q} + FEs + \varepsilon_q \quad (1)$$

where *WageTheft* is measured as either (1) *Violations*, the natural logarithm of one plus the total number of violations for wage theft attributable to firm *i* during quarter *q*, or (2) *Penalties*, the natural logarithm of one plus the total value of penalties in US dollars ($) for wage theft attributable to firm *i* during quarter *q*. While the former variable captures the incidence of wage theft violations, the latter variable captures the severity of wage theft violations. We measure government contracting using *Contract/Sales*, that is the total value of contracts obligated to firm *i* in quarter *q* scaled by firm sales transformed into scaled quintiles ranging from 0 to 1. We follow Samuels (2021) and transform this variable into quintiles to ensure that outliers do not unduly bias our analysis. Further, this variable allows us to measure not only the amount of government contracting with the firm, but also indicates the importance of government contracting to the firm. The dependent variables and the independent variable of interest are measured contemporaneously since we assume that government oversight from government contracting is immediately captured in wage and theft violations.[10]

Following Hesse and Pérez-Cavazos (2020) we include several firm controls such as *Size* measured as the natural logarithm of total assets measured at the prior fiscal quarter end, *Leverage* measured as the ratio of total liabilities to total equity measured at the prior fiscal quarter-end and *ROA* defined as return on assets for the fiscal quarter. We include S*ales_growth* measured as the end of fiscal quarter sales minus beginning of fiscal quarter sales, divided by beginning of fiscal quarter sales. We also include industry, state, and year-quarter fixed effects to capture unobservable time-invariant industry and state specific determinants of wage theft, and time-variant determinants of wage theft, respectively. Further, throughout the analysis, we cluster standard errors by firm to ensure that our results are not

[10] As discussed in Section 3.1 our measures for wage theft capture the period over which wage theft violations occurred and not the time when wage theft was identified.

biased from having multiple observations for the same firm. All continuous variables are winsorized at the top and bottom percentile.

4.2 Summary statistics

Panel A, Table 2 shows descriptive statistics for the variables in Eq. 1. As evident from the descriptive statistics, the distributions of both *Violations* and *Penalties* are right-skewed. Specifically, *Violations (Penalties)* has a mean of 0.407 (1.911) and a standard deviation of 1.03 (3.53). The independent variable of interest, *Contract/Sales* is standardized so that it ranges from 0 to 1 and has a mean of 0.487. The average firm in our sample has $10.90 billion in total assets (logged 8.194), leverage of 28.4%, return on assets of 1.2% and sales growth of 2.7%.

Panel B, Table 2 shows the correlation matrix for the variables in Eq.1. As expected, it shows a high positive correlation of 80.5% between *Violations* and *Penalties.* Contrary to our expectations, the correlation between *Contract/Sales* and both *Violations* and *Penalties* is positive and significant suggesting that government contracting is positively related to the magnitude and severity of violations. A caveat of this analysis is that it doesn't control for other possible determinants of violations.

Results for control variables suggest that larger firms have higher violations and penalties while firms with higher leverage have lower violations and penalties. Further, the positive correlation between *Contract/Sales* and both *Size* and *ROA* suggests that larger firms and better performing firms get a greater share of government contracting. Finally, the negative correlation between *Contract/Sales* and both *Leverage* and *Sales_growth* suggests that firms with higher liability-to-equity and firms with greater increases in sales get a lower share of government contracting.

[Insert Table 2 here]

4.3 Main Results

In Table 3 we test for the relationship between government contracting and wage theft. Column 1 shows the results when *Penalties* is the dependent variable while Column 2 shows the results when *Violations* is the dependent variable. The negative coefficients on *Contract/Sales* for both *Penalties* and *Violations* provide support to hypothesis 1. Specifically, these results suggest that government contracting is negatively related to both the magnitude and severity of wage theft. The coefficient for *Contract/Sales* when *Penalties* (*Violations*) is the dependent variable is -0.449 (-0.163) and significant at the 1% level. These results are not only statistically but also economically significant, where an increase in *Contract/Sales* of one quintile corresponds to an increase of 4.7% in *Penalties* and 8.1% in *Violations.*[11]

Results for the control variables are largely insignificant except for *Size*, which is positive and significant at the 1% level suggesting that larger firms are related to higher violations and penalties. In line with Eq.1 and prior literature (e.g., Cohen and Li 2020) this analysis includes industry and state fixed effects to control for time invariant industry- and state-level differences, and year-quarter fixed effects to control for time-variant factors such as political cycles, elections, changes in the regulatory environment and economic conditions.

[Insert Table 3 here]

4.4 The channel for the relation between government contracting and contractors' wage theft

Having identified a negative relation between government contracting and wage theft we attempt to identify the channel through which government contracting influences wage violations. Specifically, we ask the question: What is the channel through which government contracting influences its suppliers' wage theft? We claim that the reduction in wage theft is the result of improved reporting quality and monitoring.

[11] One quintile of *Contract/Sales* has a value of 0.20. An increase of one quintile in *Contract/Sales* is related to a reduction of -0.090 (-0.449*0.20) in *Penalties* and -0.033 (-0.163*0.20) in *Violations* which correspond to a reduction of 4.71% from mean *Penalties* and 8.11% from mean *Violations.*

The government has a significant impact on its contractors' systems and processes. The U.S. government and its agencies often require changes to suppliers' reporting systems and practices. Government suppliers undertake customer-specific investments to address the requirements of FARs (Samuels 2021). Specifically, contractors are obliged to make available to the government and retain for a specific period of time data relating to accounting procedures and practices (FAR 4.703 a) as well as pay administration records such as payroll sheets, salary registers and clock cards (FAR 4.705-2). In general, institutional theories suggest that cost and management accounting systems mandated by government requirements to satisfy external needs are often implemented also for internal reporting (Geiger and Ittner 1996). To ensure that improvements in the contractors' internal control environment are not only undertaken but are also maintained through the contracting period, government agencies undertake periodic audits of contractors. The scope of such audits is broader, they are more detailed and more frequent than financial audits performed by auditors (Samuels 2021). Through such audits the contracting agency gains "…knowledge of the contractor's control environment, information and communication methods, processes for assessing risk, monitoring processes, and control activities relevant to the assertion or the subject matter" (DCAA Guidebook 2021). The importance of such audits is enforced through public scrutiny of the government and the serious consequences for contractors resulting from termination, penalties, or debarment in case of identified serious deficiencies. Improvements in internal monitoring result in better internal and external reporting and affect the firm's operations and accounting transparency (Samuels 2021). For example, Cohen and Li (2020) and Cheng et al. (2020) find that government contracting increases supplier asset turnover, lowers operational uncertainty and improves management earnings forecasts.

Hence, we conjecture that government contracting influences contractors' wage theft through its effect on contractors' reporting processes and systems. Firms also adjust their

management accounting systems to comply with FARs, and the government ensures suppliers conform with FARs through monitoring. Since we are not able to directly observe the quality of reporting processes and systems, we undertake a series of tests to corroborate these channels.

First, drawing on Chen, Cheng, and Lo (2014) and Desai, Krishnamurthy, and Venkataraman (2006) we use restatements to proxy for improvement in the contractors' reporting processes and systems. As financial statement quality is a direct product of internal reporting processes and systems, we expect government contracting to improve financial statement quality, hence reducing restatements. To test this conjecture, we use Eq. 2 where the dependent variable is *Restatement,* an indicator variable that takes the value of one for firm-quarters where the financial statements have been restated, and zero otherwise.

$$Restatement_{i,q} = \alpha_0 + \alpha_1 \frac{Contract_{i,q}}{Sales_{i,q}} + \alpha_2 Controls_{i,q} + FEs + \varepsilon_q \quad (2)$$

For this analysis, we source information on *Restatements* from the Audit Analytics restatement database, and we consider all types of restatements (i.e., both material and immaterial) since high-quality reporting processes and systems should reduce all types of restatements. To ensure that each firm in our sample is covered by the Audit Analytics database, we only include in the sample for this analysis firms that feature in the Audit Analytics database at any point in time during our sample period. This requirement reduces the sample for this analysis to 13,286 observations. Financial statements for firm-quarter observations which do not feature in this database are assumed not to be restated, and *Restatements* takes the value of zero for these observations. The independent variable of interest is *Contract/Sales* which captures government contracting. As government contracting improves internal processes and systems, hence reducing restatements, we expect α_1 to be negative. All variables are defined as in Eq.1.

Panel A, Table 4, shows the results of this analysis. In line with expectations, α_1 is negative and statistically significant suggesting that government contracting reduces restatements. To further examine whether improvement in internal processes and systems is the channel through which government contracting reduces wage theft, we run Eq.1 including *Restatements* as one of the independent variables. Specifically, we expect both *Restatements* and *Contract/Sales* to be statistically significant where, the coefficient on *Restatements* is positive suggesting a positive relation between restatements and wage theft, and the coefficient on *Contract/Sales* is negative suggesting a negative relation between government contracting and wage theft. Panel B, Table 4, shows the results of this analysis. In line with expectations, the coefficient on *Restatement* is positive when either *Penalties* or *Violations* is the dependent variable, albeit only significant at the 10% level when *Violations* is the dependent variable. Further, the coefficient on *Contract/Sales* is -0.570 (-0.241) when *Penalties* (*Violations*) is the dependent variable. The results shown in Table 4 provide support for the conjecture that government contracting improves contractors' internal reporting processes and systems, and this improvement in the internal operations of the firm reduces wage theft.

[Insert Table 4 here]

Second, to further examine the channel through which government contracting influences wage theft we undertake cross-sectional analysis where we examine whether the strength of the relation between government contracting, and wage theft is a function of government monitoring. Specifically, we expect enhanced government monitoring in case of 1) cost-plus contracts and 2) contracts that lack a cost accounting standards clause.

In subsection 2.1 we mentioned that there are two categories of contracts: fixed-price and cost-reimbursement (also referred to as "cost-plus") contracts. Cost-plus contracts are riskier for the government as the price cannot be precisely estimated and the total cost of the contract will only be determined once all the conditions of the contract are fulfilled by the

supplier. For cost reimbursement contracts the agency must ensure that the contractor's accounting systems are adequate, and that the government will be able to monitor the costs. These types of contracts are appropriate in preliminary, development and test acquisitions where the level of effort is unknown (Feldman 2016). Given "cost-plus" contracts require enhanced government monitoring, we expect a stronger negative relation between government contracting and wage theft for these contracts than for other contracts.

To test this conjecture, as shown in Eq.3 we add two additional variables to Eq.1. Specifically, *Cost-plus,* is an indicator variable that takes the value of 1 if firm *i* was awarded a cost-plus government contract in quarter *q;* and *Contract/Sales* Cost-plus* is an interaction capturing the effect of any incremental governmental monitoring from cost-plus contracts. The vector of controls is defined as in Eq.1.

$$WageTheft_{i,q} = \alpha_0 + \alpha_1 CostPlus_{i,q} + \alpha_2 CostPlus_{i,q} * \frac{Contract_{i,q}}{Sales_{i,q}} + \alpha_3 \frac{Contract_{i,q}}{Sales_{i,q}} + \alpha_2 Controls_{i,q} + FEs + \varepsilon_q \quad (3)$$

Panel A, Table 5, shows the results of this analysis. The coefficient on *Contract/Sales* is negative and significant suggesting that government contracting is negatively related to wage theft irrespective of the type of contract. Further in line, with our conjecture that cost-plus contracts attract greater government monitoring, the coefficient on *Contract/Sales*Cost-plus* is negative and significant. This suggests that the negative relation between government contracting, and wage theft is stronger when government contracting takes the form of cost-plus contracts.

To further support the idea that the reduction in wage theft is driven by monitoring, and its consequent improvement in the contractors' internal process and systems, we undertake another cross-sectional analysis. Specifically, we test whether the relation between government contracting, and wage theft is stronger for contracts that lack a cost accounting standards clause. For most negotiated contracts the CO is required to insert in the contract a cost

accounting standards clause as set out in §52.230-2 of FARs. Specifically, the cost accounting standards clause requires contracting parties to: a) comply with all cost accounting standards, any modifications and interpretations thereto; b) submit a Disclosure Statement in which the contractor explains its cost accounting practices including, procedures applied to distinguish between direct and indirect costs, and the basis used to allocate indirect costs; c) follow consistently the cost accounting practices set out in the Disclosure Statement, when accumulating and reporting contract performance cost data; and d) permit any authorized government official to access and make copies of any pertinent documentation required to assess compliance with the cost accounting standards clause. Given that contracts without a cost accounting standards clause provide government with a lower level of assurance as to the robustness of the contractor costing system, we posit that government will exercise greater oversight on firms without such clause. In this respect, we expect the negative relation between government contracting and wage theft to be stronger for contracts that lack a cost accounting standards clause.

To test this conjecture we use Eq.4, where *Non-CAS* is an indicator variable that equals 1 if the contract lacks a cost accounting standards clause, and 0 otherwise. *Contract/Sales* Non-CAS* is an interaction term that captures the effect of any incremental government oversight on contracts that lack a cost accounting standards clause and wage theft. All other variables are defined as in Eq.1.

$$WageTheft_{i,q} = \alpha_0 + \alpha_1 Non-CAS_{i,q} + \alpha_2 \frac{Contract_{i,q}}{Sales_{i,q}} * Non-CAS_{i,q} + \alpha_3 \frac{Contract_{i,q}}{Sales_{i,q}} + \alpha_4 Controls_{i,q} + FEs + \varepsilon_q \quad (4)$$

Panel B, Table 5, shows the results of this analysis. The coefficient on *Contract/Sales* is negative and significant at the 5% level irrespective of whether *Penalties* or *Violations* is the dependent variable. This result suggests that the negative relation between government contracting, and wage theft is irrespective of the inclusion of the cost accounting standards

clause in the contract. The coefficient on interaction *Contract/Sales* Non-CAS* is negative and significant at the 1% level irrespective of whether *Penalties* or *Violations* is the dependent variable. This result provides support to our conjecture that the negative relation between government contracting, and wage theft is stronger in the presence of greater government oversight, as captured by the lack of a cost accounting standards clause.

[Insert Table 5 here]

4.5 Difference-in-difference analysis

While the use of a tight fixed effect structure alleviates endogeneity concerns, it does not completely address such concerns since there might be time variable firm specific characteristics which might be associated with both government contracting and wage theft. Hence, to provide further support to our empirical analysis we conduct two sets of tests. In the first analysis drawing on Samuels (2021) we narrow our focus on those firms that receive their first government contract during our sample period while in the second analysis, we focus on a legislative change that enhanced employee protection against employment discrimination.

4.5.1 First time contractors

Firms that first begin contracting with the government likely experience the strongest effects from government requirements and monitoring, hence such firms should experience the greatest variation in their internal processes and systems. These changes in processes and systems are intended to ensure that the firm complies with FARs. Exploiting this time-series variation allows us to link government contracting to a reduction in wage theft, hence supporting our baseline results.

We identify firms that receive their first government contract during our sample period as first-time contractors. To ensure that such firms have not received government contracts prior to our sample period, following Samuels (2021), we require firms identified as first-time contractors to have at least eight quarters before the contract award without any obligated

federal dollar. We refer to these firms as the treatment group. The control group consists of firms that have received multiple government contracts throughout the sample period, hence are seasoned government contractors. We examine the six-year window surrounding the year in which first-time contractors receive their first government contract.

We form matched sample in the following way. First, we form one-to-one matched pairs by estimating the propensity score in the year prior to which first time contractors receive their first contract, as a function of the control variables in Eq.1. Then we match each first-time contractor to a corresponding control firm, with replacement, on the propensity score and state group[12]. Untabulated tests for differences in means of covariates between treatment and control firms are statistically insignificant suggesting no significant differences in firm characteristics between the two groups of firms. We then estimate Eq.5.

$$WageTheft_{i,q} = \alpha_0 + \alpha_1 Treated * Post_{i,q} + \alpha_2 Post_{i,q} + \alpha_3 Controls_{i,q} + FEs + \varepsilon_q \quad (5)$$

Where *Treated* is an indicator variable that takes the value of 1 for first time contractors, and 0 for matched control contractors, and *Post* is an indicator variable that takes the value of 1 for the 12 quarters following the first government contract and 0 otherwise. Other independent variables are defined as in Eq.1. Further, similar to Eq.1, we include industry, state and year-quarter fixed effects in this specification.

Table 6 shows the results for this analysis. In line with expectations, the coefficient on interaction term *Treated*Post* is negative irrespective of whether *Penalties* or *Violations* is the dependent variable, albeit only significant when *Violations* [coeff.: -0.301; t-stat.: -2.49] is the dependent variable. This result suggests that government contracting has an incrementally negative effect on wage theft for first time government contractors relative to seasoned

[12] We define state groups in accordance with Galvin (2016), who examines state-level public policies protecting workers from wage theft.

government contractors. While this analysis tries to mitigate the endogeneity concerns surrounding our setting, it is pertinent to note an important caveat of this analysis. Specifically, like the analysis in Samuels (2021), even though this analysis takes the form of a staggered differences-in-differences, the shock being examined, first-time government contracting, is not entirely exogenous to the treatment firms.

[Insert Table 6 here]

4.5.2 Obama Administration reform

To assuage the above-mentioned concern, we supplement our analysis with another difference-in-differences analysis where the shock, a legislative change, is arguably unrelated to the treatment group. Specifically, we examine changes in wage theft surrounding the issue of presidential executive order number 13665, announced on 8 April 2014, and that had as its objective to provide a uniform policy for the Federal Government to prohibit Federal contractors from discriminating against employees and job applicants who inquire about, discuss, or disclose their compensation or the compensation of other employees or applicants. This legislative change improved employee safeguards against discrimination and arguably increased government monitoring of contractors' employee policies, procedures, and systems. Hence, we argue that following the issue of executive order 13665, there is a reduction in wage theft for government contractors relative to non-government contractors.

Since this legislative change affected all firms that receive or might potentially receive government contracts in the future, to test this conjecture we treat all firms that received government contracting during our sample period, as our treatment group. Conversely, the control group for this analysis consists of firms that are not in receipt of government contracting at any point during our sample period. To test this conjecture, we use a regression model like Eq.5 where *Treatment* refers to firms that receive government contracts at any point in time in our sample period, *Post* refers to the period following the issue of the executive order and

*Treatment*Post* captures the incremental effect of executive order 13665 on treatment firms. Further, similar to Eq.1, we include industry, state and year-quarter fixed effects in this specification.

Table 7 shows the results of this analysis. The coefficient on *Treatment*Post* is -0.472 (-0.120) and t-statistic is -1.97 (-1.48) when *Penalties (Violations)* is the dependent variable. These results suggest that the issue of executive order 13665 had a greater impact on government contractors (treatment firms) relative to non-government contractors (control firms) in that government contractors experienced a greater reduction in wage theft relative to non-government contractors.

[Insert Table 7 here]

5. Robustness tests

We submit our results to a series of tests to ensure the robustness of our results. Specifically, we ensure that our results are robust to (1) controlling for government subsidies, (2) government lobbying (3) alternative measures of wage theft, (4) a different measure of government contracting, (5) alternative estimation methods and (6) a tighter fixed effect structure. We discuss these tests in detail in the following sections.

5.1 Controlling for government subsidies

To ensure that our results are driven by government contracting, we test for the robustness of our results when including government subsidies as a control in our baseline model. Subsidies are typically awarded by state governments to stimulate economic growth in the region. Subsidies can take various forms such as reimbursements, direct cash payments or discounted access to resources (De Simone, Lester and Raghunandan 2021; Raghunandan 2021b). As subsidies are typically granted on certain conditions, the companies benefiting from subsidies have obligations to fulfil. We want to ensure that subsidies do not represent a

correlated omitted variable, hence, to ensure the robustness of our results, we run our baseline model including government subsidies in our vector of control variables.

Specifically, in line with Raghunandan (2021b) we make use of Subsidy Tracker, maintained by Good Jobs First that provides data on over 600,000 economic development subsidies. We successfully merge this data with our sample for 11,691 observations. These are observations for which subsidy data features in Subsidy Tracker. We run Eq.1 including *Subsidy*, an indicator variable that takes the value of 1, if the firm received government subsidies in that quarter, and 0 otherwise.

Panel A, Table 8, shows the results for this analysis. The coefficient on *Contract/Sales* is negative and significant irrespective of whether *Penalties* or *Violations* is the dependent variable. Conversely, the coefficients on *Subsidy* are positive, and significant only when *Penalties* is the dependent variable. Together, these results suggest that our baseline results are robust to controlling for government subsidies and that government subsidies are not related to the incidence and severity of wage theft in firms.

5.2 Controlling for firm lobbying of the government

To ensure that the observed results are driven by government contracting as opposed to interaction between firms and government entities other than government contracting, we examine whether our results are robust to controlling for lobbying. Lobbying refers to activities undertaken by companies intended to influence government activities. We merge data on lobbying from the OpenSecrets.org[13] lobbying database with our dataset and create an indicator variable *Lobbying* which takes the value of 1 for the quarters in the year in which the firm appears in the lobbying database and 0 otherwise.

Panel B, Table 8, shows the results for this analysis. The coefficient on *Contract/Sales* is negative and significant irrespective of whether *Penalties* or *Violations* is the dependent

[13] Lobbying data is publicly available at: https://www.opensecrets.org/federal-lobbying.

variable. Conversely, the coefficients on *Lobbying* are negative but insignificant. Together, these results suggest that our baseline results are robust to controlling for lobbying and firm-government interactions through lobbying activities do not drive our results.

5.3 Alternative measures of wage theft violations

Notwithstanding that we control for size in our baseline model, since the incidence of wage theft and penalties for wage theft violations is a function of the size of the organisation, in this robustness test we use alternative measures of our dependent variables which arguably are less sensitive to firm size. Specifically, we scale the size of penalties and the number of wage theft violations by the number of employees affected, where *Penalties_per_ee* is penalties per employee and *Violations_per_ee* is number of violations per employee. We substitute these measures for penalties and violations with the dependent variables used in our baseline models.

Panel C, Table 8 shows the results for this analysis. The coefficient on *Contract/Sales* is -0.029 (-0.266) when *Penalties_per_ee (Violations_per_ee)* is the dependent variable and significant at the 10% (5%) level. These results suggest that firm size does not drive our baseline results and our results are robust to alternative measures of wage theft violations.

5.4 Alternative measures of government contracting

To measure the importance of government contracting, we use *Contract/Sales* as our independent variable of interest. While scaling the value of government contracts by sales captures the importance of government contracting to the firm, scaling the value of government contracts by total government contracts granted in a quarter, *Total_awards*, captures the importance of firm government contracting to governmental agencies. Both measures capture the importance of government contracting, hence if our story that government contracting elicits government monitoring of firms which in turn triggers improvement in firm internal reporting and systems holds, both measures should be negatively related to wage theft. To test this conjecture, we substitute *Contract/Sales* in our baseline model with

Contract/Total_awards. Like for *Contract/Sales* we expect a negative and significant coefficient on *Contract/Total_awards.*

Panel D, Table 8 shows the results for this analysis. In line with expectations, the coefficient on *Contract/Total_awards* is -0.440 (-0.159) when *Penalties (Violations)* is the dependent variable and significant at the 1% level. This result suggests that our baseline results are robust to alternative measures of government contracting.

5.5 Alternative estimation models

As the number of wage theft violations is a count variable, to ensure that our baseline results are not driven by the choice of estimation method (Cohn, Liu and Wardlaw 2022), in this section we run our baseline model using an alternative estimation method, i.e., Poisson regression. Instead of using the logarithmic transformations of violations and penalties as our dependent variables, in this section we use the number of violations and transform the raw distribution of penalties into quintiles. Hence, *Penalties (Q)* refers to the value of penalties expressed in quintiles and *Violations* refers to the number of violations.

Panel E, Table 8 shows the results for this analysis. In line with the results of our baseline model, the coefficients on *Contract/Sales* are negative and significant at the 5% level when *Penalties (Q)* [coeff.: -0.079, t-stat.: -2.16] is the dependent variable and at the 1% level when *Violations (count)* [coeff.: -0.537, t-stat.: -2.90] is the dependent variable. These results suggest that our baseline results are robust to alternative estimation methods.

5.5 Fixed effects

While in our baseline analysis we include industry, state, and year-quarter fixed effects to control for industry and state time-invariant characteristics, and time trends respectively, there is the possibility that industry or state-level time-variant shocks might bias our analysis. Specifically, while year-quarter fixed effects capture shocks, which are common to all firms in our sample, there might be industry-level or state-level shocks that only impact a subset of

firms in our sample. To address this concern, we run our baseline model including *Industry FE *Year-quarter FE* and *State FE*Year-quarter FE.*

Panel E, Table 8 shows the results for this analysis. Columns (1) and (2) show the results when we include *Industry FE *Year-quarter FE* and columns (3) and (4) show the results when we include *State FE*Year-quarter FE* in our baseline model. In all specifications, the coefficient on *Contract/Sales* is negative, supporting our baseline results.

[Insert Table 8 here]

6. Conclusion

Notwithstanding that wage theft is one of the most common types of corporate misconduct in the U.S. (EPI 2017), there is a paucity of studies that examine the determinants of such misconduct. The U.S. government is one of the largest customers in the U.S. undertaking billions of dollars in transactions each year. Further, the U.S. government is often regarded as an employer of choice that adopts best practices in employee relations. It is in the interest of the government to ensure that it contracts with suppliers that uphold good employee relations. In this respect, the U.S. government requires its contractors to follow FARs, that set out requirements relating to billing information, accounts payable, labour timekeeping and pay. Failure to follow FARs might lead to the termination of the contract and charges for the cost of repurchasing, debarment from participation in future contracts and penalties.

Given the requirements set out in FARs, we expect government contracting to result in contractors improving their internal processes and systems to ensure compliance with FARs. Hence, we conjecture that government contracting is related to wage theft. Using a sample of U.S. listed firms and data from the Department of Labour Wage and Hour division we find that government contracting is negatively related to wage theft and that improvement in internal systems and practices is the channel that drives this relation. Further, we find that this relation is stronger in the case of cost-plus and contracts that lack a standard cost accounting clause,

two types of contracts which require increased government monitoring. Finally, to attribute causality to the observed relation we undertake two difference-in-differences analysis. First, we focus on first-time government contractors - these are likely the ones on which government contracting has most effect - and second, we focus on the issue of presidential executive order number 13665, announced on 8 April 2014, that has as its objective to prohibit Federal contractors from discriminating against employees and job applicants who inquire about, discuss, or disclose their compensation or the compensation of other employees or applicants. We conjecture that government monitoring increased following the issue of this executive order.

Results for these analyses suggest that first-time contractors experience a larger reduction in wage theft relative to control contractors. Further, following the issue of executive order number 13665, government contractors experience a larger reduction in wage theft relative to non-government contractors. Taken together these results suggest that government contracting has a strong monitoring role which reduces contractor wage theft. We submit our results to several robustness tests such as the use of alternative measures of wage theft and government contracting. Results for these tests suggest that our results are not sensitive to research design choices.

References

Banerjee, S., Dasgupta, S. and Kim, Y., 2008. Buyer–supplier relationships and the stakeholder theory of capital structure. *Journal of Finance* 63 (5): 2507-2552.

Berger, P.G., Lee, H., 2022. Did the Dodd–Frank Whistleblower Provision Deter Accounting Fraud?. *Journal of Accounting Research* 60 (4): 1337-1378.

Bowen, R., DuCharme, L. and Shores D., 1995. Stakeholders' implicit claims and accounting method choice. *Journal of Accounting and Economics* 20 (3): 255–295.

Call, A.C., Martin, G.S., Sharp, N.Y. and Wilde, J.H., 2018. Whistleblowers and outcomes of financial misrepresentation enforcement actions. *Journal of Accounting Research*, *56*(1): 123-171.

Caskey, J., Ozel, N. B., 2017. Earnings expectations and employee safety. *Journal of Accounting and Economics* 63 (1): 121-141.

Chen, J., Su, X., Tian, X. and Xu, B., 2022. Does customer-base structure influence managerial risk-taking incentives?. *Journal of Financial Economics* 143(1): 462-483.

Chen, X., Cheng, Q. and Lo, A. K. (2014). Is the decline in the information content of earnings following restatements short-lived? *The Accounting Review* 89 (1): 177-207.

Cheng, A. C., Huang, W. and Zhang, S., 2020. Major government customer and management earnings forecasts. *Frontiers of Business Research in China* 14 (1): 1-20.

Chircop, J., Tarsalewska, M. and Trzeciakiewicz, A., 2020. CEO Risk Taking Equity Incentives and Workplace Misconduct. Available at SSRN 3511638.

Christensen, H.B., Floyd, E., Liu, L.Y. and Maffett, M., 2017. The real effects of mandated information on social responsibility in financial reports: Evidence from mine-safety records. *Journal of Accounting and Economics* 64(2-3): 284-304.

Cohen, D., Li, B., Li, N. and Lou, Y., 2021. Major government customers and loan contract terms. *Review of Accounting Studies*, *Forthcoming.*

Cohen, D.A., Li, B., 2020. Customer-base concentration, investment, and profitability: The US government as a major customer. *The Accounting Review 95* (1): 101-131.

Cohn, J.B., Liu, Z. and Wardlaw, M.I., 2022. Count (and count-like) data in finance. *Journal of Financial Economics* 146(2): 529-551.

Correia, M.M., 2014. Political connections and SEC enforcement. *Journal of Accounting and Economics* 57(2-3): 241-262.

Costello, A., 2013. Mitigating incentive conflicts in inter–firm relationships: Evidence from long–term supply contracts. *Journal of Accounting and Economics* 56 (1): 19–39.

DCAA, 2021. *DCAA Guidebook 2021,* Defense Contract Audit Agency, available at https://www.dcaa.mil.

De Simone, Lester, and Raghunandan 2021. Tax Subsidy Information and Local Economic Effects (March 15, 2021). Available at SSRN: https://ssrn.com/abstract=3482207

Desai, H., Krishnamurthy, S., and Venkataraman, K., 2006. Do short sellers target firms with poor earnings quality? Evidence from earnings restatements. *Review of Accounting Studies* 11 (1): 71-90.

Dey, A., Heese, J. and Pérez-Cavazos, G., 2021. Cash-for-Information Whistleblower Programs: Effects on Whistleblowing and Consequences for Whistleblowers. *Journal of Accounting Research* 59(5): 1689-1740.

Duro, M., Heese, J. and Ormazabal, G., 2019. The effect of enforcement transparency: Evidence from SEC comment-letter reviews. *Review of Accounting Studies* 24(3): 780-823.

Dhaliwal, D., Judd, S., Serfling, M. and Shaikh, S., 2016. Customer concentration risk and the cost of equity capital. *Journal of Accounting and Economics* 61 (1): 23–48.

Dhaliwal, D., Michas, P., Naiker, V., Sharma, D., 2020. Greater reliance on major customers and auditor going concern opinions. *Contemporary Accounting Research* 37, 160-188.
Dou, Y., Hope, O.K. and Thomas, W.B., 2013. Relationship-specificity, contract enforceability, and income smoothing. *The Accounting Review* 88 (5): 1629-1656.
EPI, 2017. https://www.epi.org/publication/employers-steal-billions-from-workers-paychecks-each-year/
FTC, 2021. Federal Trade Commission https://www.ftc.gov/news-events/press-releases/2021/02/amazon-pay-617-million-settle-ftc-charges-it-withheld-some
Feldman, S. W., 2016. *Government Contracts in a Nutshell*, 6th edition, West. West Academic Publishing.
Friess, J.C., 2022. ESG's Democratic Deficit: Why Corporate Governance Cannot Protect Stakeholders. Available at SSRN 4136714.
Gallo, L.A., Lynch, K. and Tomy, R.E., 2022. Out of Site, Out of Mind? The Role of the Government-Appointed Corporate Monitor. The Role of the Government-Appointed Corporate Monitor (February 4, 2022). Chicago Booth Research Paper, (22-07).
Galvin, D., 2016. Deterring Wage Theft: Alt-Labor, State Politics, and the Policy Determinants of Minimum Wage Compliance. *Perspectives on Politics* 14(2): 324-350.
Geiger, D. and Ittner, C., 1996. The influence of funding source and legislative requirements on government cost accounting practices. *Accounting, Organizations and Society* 21 (6): 549–567.
Goldman, J., 2020. Government as customer of last resort: The stabilizing effects of government purchases on firms. *The Review of Financial Studies* 33 (2): 610-643.
GJF, 2018 Good Jobs First https://www.goodjobsfirst.org/news/releases/report-wage-theft-pervasive-corporate-america
GQ, 2019 https://www.gq.com/story/wage-theft
Hadley, B., 2019. Executive compensation and political sensitivity: Evidence from government contractors. *Journal of Corporate Finance* 59: 276-301.
He, Z., Kohlbeck, M. J., Federal Government Contracts and Financial Reporting Quality (March 18, 2021). Available at SSRN 3807526.
Hebous, S., Zimmermann, T., 2021. Can government demand stimulate private investment? Evidence from US federal procurement. *Journal of Monetary Economics* 118: 178-194.
Heese, J., Pérez-Cavazos, G., 2019. Fraud allegations and government contracting. *Journal of Accounting Research*, *57*(3): 675-719.
Heese, J., Pérez-Cavazos, G., 2020. When the boss comes to town: The effects of headquarters' visits on facility-level misconduct. *The Accounting Review* 95 (6): 235-261.
Hope, O.K., Jiang, S. and Vyas, D., 2021. Government procurement and financial statement certification: Evidence from private firms in emerging economies. *Journal of International Business Studies* 51 (4): 718-745.
Hui, K., Klasa, S., and Yeung E., 2012. Corporate suppliers and customers and accounting conservatism. *Journal of Accounting and Economics* 53 (1), 115–135.
Johnson, M., 2020. Regulation by Shaming: Deterrence Effects of Publicizing Violations of Workplace Safety and Health Laws. *American Economic Review* 110 (6): 1866-1904.
Kleymenova, A., Tomy, R.E., 2022. Observing enforcement: Evidence from banking. *Journal of Accounting Research* 60(4): 1583-1633.
Li, X., Raghunandan, A., 2021. Institutional ownership and labor-related misconduct: Evidence from US federal violations. *Available at SSRN 3460126*.
Liebman J.B. and Mahoney N., 2017. Do Expiring Budgets Lead to Wasteful Year-End Spending? Evidence from Federal Procurement. *American Economic Review* 107(11): 3510-3549.

Mills, L.F., Nutter, S.E. and Schwab, C.M., 2013. The effect of political sensitivity and bargaining power on taxes: Evidence from federal contractors. *The Accounting Review 88* (3): 977-1005.

Nguyen, T., 2021. The Effectiveness of White-Collar Crime Enforcement: Evidence from the War on Terror. *Journal of Accounting Research,* 59(1): 5-58.

Pownall, G., 1986. An empirical analysis of the regulation of the defense contracting industry: The Cost Accounting Standards Board. *Journal of Accounting Research*, 291–315.

Raghunandan, A., 2021a. Financial misconduct and employee mistreatment: Evidence from wage theft. *Review of Accounting Studies*, 26(3): 867-905..

Raghunandan, A., 2021b. Government subsidies and corporate fraud. *Available at SSRN* 3035254.

Samuels, D. 2021. Government Procurement and Changes in Firm Transparency. *The Accounting Review* 96 (1): 401-320.

Silvers, R., 2016. The valuation impact of SEC enforcement actions on nontarget foreign firms. *Journal of Accounting Research* 54(1): 187-234.

Soltes, E., 2020. Paper versus practice: A field investigation of integrity hotlines. *Journal of Accounting Research* 58(2): 429-472.

APPENDIX 1 – Variable description

Variable name	Definition [source of data]
Wage and Hour Violations Measures	
Penalties	Total value of penalties in US dollars ($) for wage theft attributable to firm *i* during quarter *q*. [WHISARD]
Violations	Total number of violations for wage theft attributable to firm *i* during quarter *q*. [WHISARD]
Penalties_per_ee	Total value of penalties for wage theft attributable to firm *i* during quarter *q* per employee affected by the wage theft. [WHISARD]
Violations_per_ee	Total number of violations for wage theft attributable to firm *i* during quarter *q* per employee affected by the wage theft. [WHISARD]
Government Procurement Measures	
Contract/Sales	Total value of contracts obligated to a firm *i* in quarter *q* scaled by firm sales transformed into quintile ranks scaled to range from 0 to 1. [USAspending.gov, Compustat]
Contract/Total_awards	Total value of contracts obligated to a firm *i* in quarter *q* scaled by total value of contracts awarded by federal agencies to all firms in quarter q transformed into quintile ranks scaled to range from 0 to 1. [USAspending.gov, Compustat]
Cost-plus	Dummy variable equal 1 if the company was awarded a cost-plus type of contract as defined by FAR (i.e., cost sharing, cost plus award fee, cost plus incentive fee, cost no fee, or cost-plus fixed fee), and 0 otherwise. [USAspending.gov]
Non-CAS	Dummy variable equal 1 if the contract lacks a cost accounting standards clause, and 0 otherwise. [USAspending.gov]
Financial controls	
Size	Natural logarithm of total assets measured at the prior fiscal quarter-end. [Compustat]
Leverage	The ratio of total liabilities to total equity measured at the prior fiscal quarter-end. [Compustat]
ROA	Net income scaled by total assets. [Compustat]

Sales_growth	End of fiscal quarter sales minus beginning of fiscal quarter sales, divided by beginning of fiscal quarter sales. [Compustat]
Other	
Subsidies	Binary indicator variable for whether the firm received any subsidies from the government. [Subsidy Tracker]
Lobbying	Binary indicator variable which takes the value of 1 for the quarters in the year in which the firm appears in the lobbying database of Opensecrets.org and 0 otherwise. [opensecrets.org]
Restatements	Binary indicator for whether the firm issued any restatements including both material and immaterial restatements related to an accounting rule (GAAP/FASB) application failure, financial fraud, irregularities and misrepresentations, or errors in accounting and clerical applications. [Audit Analytics]

TABLE 1 – Distribution of variables of interest

Panel A: Distribution of wage theft violations by industry

Fama-French industry classification (type 12)*	Total violations	Total penalties (US$)
Consumer Nondurables	1,446	1,759,661
Consumer Durables	1,791	1,156,736
Manufacturing	13,921	14,400,000
Oil, Gas, and Coal Extraction and Products	4,681	6,801,783
Chemicals and Allied Products	1,305	663,128
Business Equipment	8,513	11,600,000
Telephone and Television Transmission	29,819	9,512,551
Wholesale, Retail, and Some Services	42,830	15,800,000
Healthcare, Medical Equipment, and Drugs	586	439,303
Other	40,034	24,900,000
Total	144,927	87,000,000

Panel B: Distribution of government contracts by industry

Fama-French Industry classification (type 12)*	Aggregate value of contracts (US$ millions)
Consumer Nondurables	5,240
Consumer Durables	9,260
Manufacturing	113,000
Oil, Gas, and Coal Extraction and Products	15,200
Chemicals and Allied Products	1,610
Business Equipment	107,000
Telephone and Television Transmission	14,600
Wholesale, Retail, and Some Services	8,990
Healthcare, Medical Equipment, and Drugs	14,500
Other	84,600
Total	375,000

Table 1: The table presents a distribution of wage theft violations (in Panel A) and government contracts (in Panel B) by industry defined by Fama-French type 12 classification. The industry classification description is available at Kenneth R. French website at https://mba.tuck.dartmouth.edu/.

TABLE 2 – Summary statistics

Panel A: Descriptive statistics

	Mean	Std. dev.	10th	Median	90th
Penalties	1.911	3.530	0.000	0.000	8.400
Violations	0.407	1.025	0.000	0.000	1.629
Contract/Sales	0.487	0.496	0.000	0.000	1.000
Size	8.194	1.651	6.052	8.192	10.525
Leverage	0.284	0.271	0.005	0.248	0.553
ROA	0.012	0.034	-0.006	0.013	0.035
Sales_growth	0.027	0.190	-0.134	0.016	0.175

Panel B: Correlation matrix

	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)	*Penalties*	1						
(2)	*Violations*	0.805*	1					
(3)	*Contract/Sales*	0.051*	0.030*	1				
(4)	*Size*	0.096*	0.063*	0.250*	1			
(5)	*Leverage*	-0.036*	-0.037*	-0.089*	0.118*	1		
(6)	*ROA*	0.028*	0.020*	-0.000	0.001	-0.062*	1	
(7)	*Sales_growth*	0.008	0.011	-0.024*	-0.045*	-0.002	0.092*	1

Table 2: The table presents statistics for the sample including 23,089 quarterly observations covering 346 unique firms spanning from 2001Q1 to 2020Q1. Panel A presents summary statistics. Panel B presents the matrix of correlations coefficients. The definitions of all variables are provided in the Appendix 1. * indicates the significance of the correlation coefficient at 10% level.

TABLE 3 – Government contracting and wage and hour violations

Variable	(1) *Penalties*	(2) *Violations*
Contract/Sales	-0.449***	-0.163***
	(-2.88)	(-3.78)
Size	0.347***	0.073***
	(5.00)	(3.52)
Leverage	-0.166	-0.084
	(-0.68)	(-1.24)
ROA	1.906*	0.449
	(1.91)	(1.59)
Sales_growth	0.073	0.035
	(0.66)	(1.11)
Constant	-3.020***	-0.541**
	(-3.63)	(-2.22)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.198	0.176
N	23,089	23,089

Table 3: This table reports the coefficients of OLS regressions. The dependent variable in model (1) is the natural logarithm of the total value of penalties plus one. The dependent variable in model (2) is the natural logarithm of the total number of violations plus one. *Leverage* and *Size* are lagged one quarter, while *ROA* and *Sales_growth* are measured contemporaneously. The sample spans the period from 2001Q1 to 2020Q1. All variables are defined in Appendix 1. The values reported in parentheses below coefficients represent t-statistics. Standard errors are clustered at firm level. *, **, *** represent significance at 1%, 5%, and 10% respectively.

TABLE 4 – Government contracting, restatements and wage and hour violations

Panel A: Government contracting and restatements

Variable	*Restatement*
Contract/Sales	-0.023*
	(-1.70)
Size	0.008
	(1.24)
Leverage	-0.004
	(-0.09)
ROA	-0.127
	(-1.48)
Sales_growth	-0.001
	(-0.15)
Constant	0.008
	(0.09)
Industry FE	Yes
State FE	Yes
Year-quarter FE	Yes
R^2	0.124
N	13,286

Panel B: Government contracting, restatements and wage and hour violations

Variable	(1) *Penalties*	(2) *Violations*
Restatement	0.321	0.189*
	(0.98)	(1.73)
Contract/Sales	-0.570***	-0.241***
	(-2.66)	(-3.92)
Size	0.558***	0.164***
	(5.25)	(4.90)
Leverage	-0.185	-0.029
	(-0.32)	(-0.19)
ROA	3.455**	1.016***
	(2.54)	(3.00)
Sales_growth	-0.085	0.017
	(-0.65)	(0.46)
Constant	-2.802**	-0.949**
	(-2.25)	(-2.27)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.224	0.226
N	13,286	13,286

Table 4: This table reports the coefficients of OLS regressions. In Panel A the dependent variable is restatement indicator for whether the firm issued any restatements including both material and immaterial restatements. In Panel B the dependent variable in model (1) is the natural logarithm of the total value of penalties plus one. The dependent variable in model (2) is the natural logarithm of the total number of violations plus one. *Leverage* and *Size* are lagged one quarter, while *ROA* and *Sales_growth* are measured contemporaneously. *Contract/Sales*Cost-plus* is an interaction term of *Contract/Sales* ratio and *Cost-plus* contract indicator. The sample spans the period from 2001Q1 to 2020Q1. All variables are defined in Appendix 1. The values reported in parentheses below coefficients represent t-statistics. Standard errors are clustered at firm level. *, **, *** represent significance at 1%, 5%, and 10% respectively.

TABLE 5 – Type of government contract and wage and hour violations

Panel A: Cost-plus contracts

Variable	*(1)* *Penalties*	*(2)* *Violations*
Contract/Sales	-0.476***	-0.170***
	(-3.02)	(-3.87)
Cost-plus	3.342***	0.866***
	(7.95)	(3.42)
*Contract/Sales*Cost-plus*	-2.973***	-0.769**
	(-6.26)	(-2.58)
Size	0.340***	0.071***
	(4.91)	(3.44)
Leverage	-0.175	-0.087
	(-0.72)	(-1.27)
ROA	1.899*	0.447
	(1.90)	(1.59)
Sales_growth	0.082	0.037
	(0.74)	(1.18)
Constant	-2.938***	-0.519**
	(-3.53)	(-2.13)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.199	0.176
N	23,089	23,089

Panel B: Cost accounting standards clause

Variable	*(1)* *Penalties*	*(2)* *Violations*
Contract/Sales	-0.410**	-0.144**
	(-2.09)	(-2.57)
Non-CAS	0.744**	0.203**
	(2.12)	(2.10)
*Contract/Sales*Non-CAS*	-0.838***	-0.241***
	(-2.69)	(-3.04)
Size	0.351***	0.075***
	(5.05)	(3.56)
Leverage	-0.166	-0.085
	(-0.68)	(-1.24)
ROA	1.922*	0.456
	(1.93)	(1.62)
Sales_growth	0.072	0.035
	(0.65)	(1.11)
Constant	-3.014***	-0.537**
	(-3.63)	(-2.19)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.199	0.176
N	23,089	23,089

Table 5: This table reports the coefficients of OLS regressions. The dependent variable in the models (1) is the natural logarithm of the total value of penalties plus one. The dependent variable in the models (2) is the natural logarithm of the total number of violations plus one. *Leverage* and *Size* are lagged one quarter, while *ROA* and *Sales_growth* are measured contemporaneously. Panel A includes *Contract/Sales*Cost-plus,* which is an interaction term of Contract/Sales and Cost-plus contract indicator. Panel B includes Non-CAS*Contract/Sales, which is an interaction term of Non-CAS indicator and Contract/Sales. The sample spans the period from 2001Q1 to 2020Q1. All variables are defined in Appendix 1. The values reported in parentheses below coefficients represent t-statistics. Standard errors are clustered at the firm level. *, **, *** represent significance at 1%, 5%, and 10% respectively.

TABLE 6 – First time contractors

	(1) *Penalties*	(2) *Violations*
*Treatment*Post*	-0.499	-0.301**
	(-1.15)	(-2.49)
Treatment	-0.286	0.274
	(-0.58)	(1.47)
Post	0.046	0.077
	(0.16)	(1.03)
Size	0.001	-0.032
	(0.00)	(-0.63)
Leverage	-1.083	-0.371
	(-1.22)	(-1.58)
ROA	1.746	0.334
	(1.22)	(0.98)
Sales_growth	0.202	0.058
	(0.80)	(0.85)
Constant	3.103	0.819
	(1.55)	(1.44)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.324	0.395
N	4,549	4,549

Table 6: First-time contractors. This table reports difference-in-differences analysis examining the relation between government procurement and wage and hour violations. In the analysis, we employ a sample of firms that receive first government contracts (Treatment firms) and their propensity-score matched counterparts noncontractors (Control Firms). The details of the matching procedure are described in Section 4.5.1. The analysis spans a window of 24 year-quarters. The Post period begins with a quarter of the initial contract award and ends eleven quarters after. The dependent variable in model (1) is the natural logarithm of the total value of penalties plus one. The dependent variable in model (2) is the natural logarithm of the total number of violations plus one. *Leverage* and *Size* are lagged one quarter, while *ROA* and *Sales_growth* are measured contemporaneously. All control variables are defined in Appendix 1. The values reported in parentheses below coefficients represent t-statistics. Standard errors are clustered at firm level. *, **, *** represent significance at 1%, 5%, and 10% respectively.

TABLE 7 – The Impact of President Barack Obama E.O. 13665 (Non-Retaliation for Disclosure of Compensation Information)

	(1) *Penalties*	(2) *Violations*
Treatment	*-0.370*	*-0.167**
	(-1.13)	*(-1.70)*
*Treatment*Post*	-0.472**	-0.120
	(-1.97)	(-1.48)
Post	-1.801***	-0.331***
	(-5.92)	(-3.61)
Size	0.347***	0.074***
	(4.92)	(3.62)
Leverage	-0.151	-0.076
	(-0.62)	(-1.13)
ROA	1.852*	0.426
	(1.84)	(1.49)
Sales_growth	0.076	0.036
	(0.69)	(1.15)
Constant	-0.762	-0.071
	(-0.94)	(-0.30)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R2	0.198	0.176
N	23,089	23,089

Table 7: This table examines the impact of presidential executive order number 13665, announced on 8 April 2014, which objective is to provide a uniform policy for the Federal Government to prohibit Federal contractors from discriminating against employees and job applicants who inquire about, discuss, or disclose their compensation or the compensation of other employees or applicants. The treatment group includes a sample of firms, which receive government contracting at any point in time in our sample period. The control group includes a sample of firms that are not in receipt of government contracting at any point in time in our sample period. The Post period begins with a quarter of the announcement. The dependent variable in model (1) is the natural logarithm of the total value of penalties plus one. The dependent variable in model (2) is the natural logarithm of the total number of violations plus one. *Leverage* and *Size* are lagged one quarter, while *ROA* and *Sales_growth* are measured contemporaneously. All control variables are defined in Appendix 1. The values reported in parentheses below coefficients represent t-statistics. Standard errors are clustered at firm level. *, **, *** represent significance at 1%, 5%, and 10% respectively.

TABLE 8 – Robustness tests

Panel A: Government subsidies

	(1) *Penalties*	(2) *Violations*
Subsidy	0.392*	0.107
	(1.80)	(1.54)
Contract/Sales	-0.500**	-0.167***
	(-2.20)	(-2.71)
Size	0.363***	0.073**
	(3.54)	(2.37)
Leverage	-0.009	-0.009
	(-0.02)	(-0.09)
ROA	0.992	0.388
	(0.63)	(0.95)
Sales_growth	0.099	0.034
	(0.61)	(0.70)
Constant	-5.236***	-1.264***
	(-3.85)	(-3.20)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.280	0.244
N	11,691	11,691

Panel B: Lobbying

	(1) *Penalties*	(2) *Violations*
Lobbying	-0.012	-0.016
	(-0.07)	(-0.30)
Contract/Sales	-0.448***	-0.162***
	(-2.89)	(-3.77)
Size	0.348***	0.074***
	(4.99)	(3.48)
Leverage	-0.166	-0.084
	(-0.68)	(-1.23)
ROA	1.908*	0.452
	(1.91)	(1.60)
Sales_growth	0.073	0.035
	(0.66)	(1.11)
Constant	-3.021***	-0.542**
	(-3.64)	(-2.22)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.198	0.176
N	23,089	23,089

Panel C: Alternative measures of wage and hour violations

	(1) *Penalties_per_ee*	(2) *Violations_per_ee*
Contract/Sales	-0.029*	-0.266**
	(-1.93)	(-2.02)
Size	0.031***	0.310***
	(4.68)	(5.41)
Leverage	-0.009	-0.062
	(-0.33)	(-0.25)
ROA	0.205**	1.583*
	(2.15)	(1.90)
Sales_growth	-0.001	0.031
	(-0.06)	(0.34)
Constant	-0.280**	-2.476**
	(-2.30)	(-2.20)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R2	0.176	0.181
N	23,089	23,089

Panel D: Alternative measure for government contracting

	(1) *Penalties*	(2) *Violations*
Contract/Total_awards	-0.440***	-0.159***
	(-2.87)	(-3.75)
Size	0.348***	0.074***
	(5.02)	(3.54)
Leverage	-0.165	-0.084
	(-0.68)	(-1.23)
ROA	1.912*	0.452
	(1.91)	(1.60)
Sales_growth	0.074	0.035
	(0.66)	(1.12)
Constant	-3.030***	-0.544**
	(-3.64)	(-2.23)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
R^2	0.198	0.176
N	23,089	23,089

Panel E: Alternative estimation methods

	(1) *Penalties(Q)*	(2) *Violations(count)*
Contract/Sales	-0.079**	-0.537***
	(-2.16)	(-2.90)
Size	0.092***	0.658***
	(5.68)	(3.65)
Leverage	-0.040	-2.125**
	(-0.54)	(-2.04)
ROA	0.705**	4.701
	(2.12)	(1.59)
Sales_growth	0.013	0.201
	(0.51)	(0.98)
Constant	-1.087***	-5.453***
	(-4.42)	(-3.77)
Industry FE	Yes	Yes
State FE	Yes	Yes
Year-quarter FE	Yes	Yes
Log-likelihood	-38,317.70	-223,329.46
N	23,089	23,089

Panel F: Different fixed effect structure

	(1) *Penalties*	(2) *Violations*	(3) *Penalties*	(4) *Violations*
Contract/Sales	-0.627**	-0.213***	-0.437**	-0.164***
	(-2.27)	(-2.81)	(-2.54)	(-3.43)
Size	0.320***	0.072**	0.336***	0.067***
	(3.06)	(2.21)	(4.42)	(3.06)
Leverage	-0.163	-0.066	-0.234	-0.097
	(-0.42)	(-0.60)	(-0.89)	(-1.29)
ROA	0.226	-0.074	1.815*	0.418
	(0.13)	(-0.15)	(1.75)	(1.44)
Sales_growth	0.263	0.085	0.095	0.038
	(1.07)	(1.21)	(0.81)	(1.15)
Constant	-1.175	-0.153	-2.026***	-0.463**
	(-0.93)	(-0.46)	(-2.68)	(-2.20)
Industry FE	No	No	Yes	Yes
State FE	Yes	Yes	No	No
Industry *x* Year-quarter FE	Yes	Yes	No	No
State *x* Year-quarter FE	No	No	Yes	Yes
R^2	0.589	0.560	0.292	0.289
N	23,089	23,089	23,089	23,089

Table 8: This table reports five types of robustness tests. Panel A includes Subsidy, an indicator variable that takes the value of one, if the firm received government subsidies in that quarter, and zero otherwise. Panel B uses alternative dependent variables, i.e. in model (1) penalties per employee in model (2) a number of violations per employee. Panel C employs an alternative measure of government contracting, i.e. total value of contracts obligated to a firm *i* in quarter *q* scaled by total value of contracts awarded by federal agencies to all firms in quarter q transformed into quintile ranks scaled to range from 0 to 1. Panel D reports coefficients of Poisson regressions. Panel E reports coefficients of OLS regressions with year-quarter fixed effects interacted with industry and year-quarter fixed effects interacted with state fixed effects. *Leverage* and *Size* are lagged one quarter, while *ROA* and *Sales_growth* are measured contemporaneously. All control variables are defined in Appendix 1. The values reported in parentheses below coefficients represent t-statistics. Standard errors are clustered at firm level. *, **, *** represent significance at 1%, 5%, and 10% respectively.