

Contractor Politics: How Political Events Influence  
Private Prison Company Stock Shares in the Pre and  
Post Trump Era (PLEASE DO NOT CITE OR  
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## **Abstract**

The U.S. private prison industry is extremely lucrative, with the two largest companies, Core Civic and Geo Group, generating more than \$3 billion in revenue in 2016. These companies increasingly rely upon the growing detained immigrant supply to fill “bed space” in privately owned or managed detention facilities. Two events, though, show how economically vulnerable prison companies are to the political process: 1) In August 2016, the Obama Administration announced plans to phase out the use of private prisons; 2) Donald Trump ran and won on an unambiguously anti-immigrant, anti-Mexican platform, cuing investors. Both events dramatically influenced prison company stock share prices and trading volume. We advance a theory of “Contractor Politics”: private government contractors whose business model is largely dependent on winning government contracts will see greater stock fluctuation due to key political events relative to other types of contractors. Further, stock fluctuation varies as a function of ideological alignment between company and election winner. Our time-series analysis supports our theoretical framework. To further test our generalizable theory, we find similar results for Lockheed Martin (ideologically aligned; similar business model), but not for ExxonMobil (ideologically aligned; different business model).

Keywords: Immigration policy; Private Prisons; Criminal Justice

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# Introduction

On November 8th, 2016, Donald Trump — immigration hardliner and private prison advocate — became the 45th president of the United States. The day after the election, stock prices and volume traded soared for two of the largest private prison corporations in the United States, Core Civic (CCA) and The GEO Group. The dramatic increase in stock market returns represents a complete reversal from their previous downward trend. A few months prior to the 2016 election in August, both companies lost more than 40 percent of their market value after the Obama Administration declared its intention to phase out its use of private prison facilities in the containment of the nation's prisoners and undocumented immigrants. The decision came after the government in several audits uncovered multiple instances of inadequate medical care, under staffing, and weak federal oversight.<sup>1</sup> By February, 2017, however, stock prices increased once again after Attorney General Jeff Sessions reversed the Obama-era policy and formally re-established its 20 year relationship with private prison companies.

The rather sudden shifts in stock market prices suggest that some industries are highly susceptible to elections and government policy-making. Although researchers have established a relationship between politics and the economy (Lewis-Beck and Stegmaier, 2018; Nadeau and Lewis-Beck, 2001; Fauvelle-Aymar and Stegmaier, 2013; Nadeau et al., 1999), little empirical research has investigated how elections and government policies affect stock market returns for specific U.S. industries (Knight, 2006; Jayachandran, 2006). Research on the subject suggests firms can financially benefit (harm) from having ideological allies (enemies) control branches of national government (Den Hartog and Monroe, 2008). However, we don't know the extent to which these firms benefit nor do we understand the politically relevant mechanisms that drive differences in firm stock-market valuations.

We address this apparent gap in the literature by examining how private prison company valuations react to political events, government decisions, and shock events. To explain stock returns and volatility, we advance a theory of "Contractor Politics." In addition to possessing ideological allies (opponents) in government, we argue that private government contractors whose business

model is largely dependent on establishing public-private partnerships will see greater market fluctuation due to key political events, government decisions, and shock events relative to other types of contractors. To test our general theory, we concentrate our efforts on the private prison industry. Although the private prison industry has received support from and donated to both political parties (Collingwood, Morín and El-Khatib, 2018), more recent events suggest that it has found a stronger ideological ally in the Republican Party.<sup>2</sup> Moreover, unlike other industries, the private prison industry bases much of its revenue stream on obtaining long-term government contracts to design, build, finance, maintain, and operate prison and immigrant detention facilities.

We estimate several exogenous shock ARIMA time-series models to analyze daily stock market share close value and trade data of the two largest private prison corporations—Core Civic and The Geo Group—from 2016 - 2018, and then from 2000-2018. During this time period, we focus on the 2016 presidential and 2018 midterm elections, two key government decisions (i.e. Yates memo to phase out private prisons and Sessions memo to rescind order), and two shock events (i.e. family separation as a result of Trump’s zero tolerance policy and the much publicized death of an undocumented immigrant in a private prison facility—Jean Jiminez-Joseph). Additionally, we conduct robustness checks by analyzing share close value and trade data for Lockheed Martin and ExxonMobil. Both corporations are ideologically aligned with the Republican Party. However, the corporations differ in their contractual relationship with government, which enables us to test the extent to which public-partnerships react differently to political events, government decision-making, and shock-events.

Our results show clear empirical support for our theoretical expectations. In support of our Candidate/Party Alignment Hypothesis, the 2016 presidential and 2018 midterm elections had a strong influence on the private prison industry’s financial projections, increasing trade volume for both companies and increasing stock returns after the election of Donald Trump. We also find strong support for our Policy-Change Hypothesis. Although the Obama-era decision to phase out private prisons was positively associated with an increase in trade volume, no such relationship was found after the decision was made to rescind the order a year later. However, both decisions

ultimately influenced stock-market prices with the Yates memo having the greatest substantive effect on private prison's evaluations. Finally, our results demonstrate that two major political events – family separation and the death of Jean Jimenez-Joseph – are statistically associated with an increase in trade volume. While the death of Jean Jimenez-Joseph marked a substantive decrease in stock prices for the two private prison companies, child-separation had a smaller effect size.

In all, these findings have several important implications for the privatization of prisons and immigrant detention centers, and for understanding the private-public process of governance in the United States. Our results suggest that, for some public-private partnerships, aligning too closely with one party may ultimately increase a company's market fluctuation which may be undesirable to company executives and shareholders. This might explain why many companies donate equally to candidates of both parties. However, companies from some industries – by virtue of their services – logically align with one party over the other and so become vulnerable to particular political events. That said, the longer-term contractual relationship and transfer of greater government responsibility inherent to public-private partnerships further solidifies privatization and the profiteering of incarcerated individuals as an institutional and societal norm. Therefore, it is likely that private prisons will continue to pursue such partnerships at the expense of already marginalized groups in society, including African Americans, Latinos, and undocumented immigrants, and at the possible risk to their own long-term profits.

## **Elections, Policy, and Stock Markets**

Political factors play a significant role in the valuation of stock market volatility. A key argument in the stock-market literature is that businesses benefit from having ideological allies in government. The underlying rationale is that the ideological interests of elected officials naturally align with the policy and/or financial interest of some firms but not others. For instance, Republicans tend to favor policies that benefit the defense industry and Democrats tend to favor policies that benefit the green-energy industry. Such policies, moreover, manifest themselves in the form of government

contracts, increased appropriations, tax-relief, and government deregulation just to name a few. Firms –as profit-maximizing actors –can also build upon these “natural” alliances by strategically engaging in political activities (e.g. lobbying, making campaign donations) to further promote their financial interests (McWilliams, Van Fleet and Cory, 2002; Hillman, Keim and Schuler, 2004; Andres, 1985; Masters and Keim, 1985; Boies, 1989; Grier, Munger and Roberts, 1994; Hansen and Mitchell, 2000). In doing so, firms can signal overlapping ideological interests, build political relationships, and grow political networks. However, as we will show, such signaling is not cost-free, as ideologically-aligned politicians/parties can and do lose elections.

To examine the influence of ideological allies on stock-market returns and volatility, scholarship has focused on election outcomes and government decision-making. Interestingly, few have investigated how elections and government policies affect stock market returns for specific U.S. industries (Knight, 2006; Jayachandran, 2006). This research shows that publicly-traded corporations benefit when preferred candidates win elections and when partisan majorities shift in their favor. In 1980, for instance, Republican gains in the White House and the U.S. Senate led to an increase in valuations for defense-related corporations (Roberts, 1990). In 2000, Bush-favored firms increased by three percent while Gore-favored firms decreased by 10 percent (Knight, 2006). Finally, Jayachandran (2006) shows that Jim Jefford’s switch from the Republican to the Democratic party — which gave the Democrats a majority in the U.S. Senate — decreased equity evaluations of firms that contributed to Republicans in the previous election cycle (-.08 percent for every \$250,000). The partisan move also had a similar effect on the energy industry, increasing valuations of renewable-energy firms and decreasing valuations of oil-based firms (Den Hartog and Monroe, 2008).

Nevertheless, ample evidence suggests that elections and policies affect stock-markets more broadly. For instance, stock markets are especially sensitive to competitive elections in which there isn’t a clear winner. Specifically, markets are more volatile when election outcomes are uncertain. Using polling data and delayed winner announcements to determine uncertainty in elections, Li and Born (2006); Nippani and Medlin (2002); Nippani and Arize (2005); He et al. (2009) find

competitive elections can increase stock prices. In addition to stock market returns, Goodell and Bodey (2012) find price-earning ratios among S&P 500 companies (P/E) are inversely related with certainty in U.S. elections.<sup>3</sup> Finally, Goodell and Vähämaa (2013) use Iowa Electronic Markets data and the VIX volatility index to measure uncertainty in presidential elections and stock market volatility, respectively. They find a clear and positive correlation between the two measures across five presidential election cycles (1992-2008) (see also Gemmill (1992); Białkowski, Gottschalk and Wisniewski (2008)).

Stock markets also benefit from having particular political parties in control of government – though how the stock market performs can vary across time. Early research indicates a strong initial positive (negative) reaction to the election of Republican (Democratic) presidents (Niederhoffer, Gibbs and Bullock, 1970; Riley and Luksetich, 1980; Aggarwal and Schirm, 1992). However, the relationship between the party of the president and stock market returns reverse over 4 years with stock markets performing better under Democratic presidential administrations. In their study of four-year presidential terms between 1927 and 1988, for example, Santa-Clara and Valkanov (2003) observe an average 9 percentage point difference between Democratic and Republican administrations. However, others do not find a relationship between partisanship and stock market returns (Sy and Al Zaman, 2011; Jones and Banning, 2009). Instead, scholars attribute the relationship between Democratic presidencies and election cycles to higher market and default risk premiums that tend to occur under Democratic administrations (see Sy and Al Zaman (2011)).

Finally, stock markets react to monetary and fiscal policies set forth by government (Fama and French, 1988; Thorbecke, 1997; Patelis, 1997; Gertler and Gilchrist, 1993; Jensen and Johnson, 1995; Conover, Jensen and Johnson, 1999; Galí and Gertler, 2007; Bjørnland and Leitemo, 2009). Regarding monetary policy, Thorbecke (1997)'s study of 30 industries finds that stock returns tend to increase when the Federal Reserve implements expansionary policies. Rigobon and Sack (2004) also demonstrate that stock markets are responsive to the Federal Open Market Committee Meetings and when the Chairman of the Federal Reserve speaks to Congress. Specifically, the authors find that a 25-basis point increase in three-month interest rate results in a 1.9% decline in

the S&P 500 index and a 2.5% decline in the Nasdaq index. Finally, Bernanke and Kuttner (2005) find that stock markets react strongly to unanticipated monetary actions by the Federal Reserve. On average, the authors find a hypothetical unanticipated 25-basis-point cut in the Federal funds rate target is associated with about a 1% increase in broad stock indexes. Fiscal policies play a comparatively minor role in stock market behavior (Afonso and Sousa, 2011) and interact with one another to influence stock market returns. For example, Jansen et al. (2008) show that rate increases, coupled with increases in the fiscal surplus, can have a substantive impact on the stock market. Similarly, Chatziantoniou, Duffy and Filis (2013, 18) show that while fiscal policies do not directly influence stock markets in the U.S., changes to the the money supply affect interest rates, which in turn negatively affect stock markets.

Overall, the evidence suggests a seemingly clear relationship between elections and government decision-making on the one hand and stock market returns on the other. A key limitation, however, is that previous scholarship on stock markets tend to treat industries as monolithic, as it does not fully explain why stock market returns and volatility for some industries are likely to react to political events while other do not. Specifically, the relationships between corporations and government can vary considerably. Although many firms have relatively few financial ties to government, some firms, such as private prison corporations, possess much stronger financial ties to government and are ultimately dependent on winning government contracts to generate profits. In the following section, we resolve this discrepancy by presenting our theory of “Contractor Politics” and explain how private prison industry stock market returns are especially susceptible to elections, government decision-making, and political events.

## **Theory of Contractor Politics**

Our theory of contractor politics generally states that a firm’s financial relationship with government will play a significant and substantive role in stock market returns and volatility. Firms that have a particularly strong financial relationship with government are those that enter into



public-private partnerships. Public private partnerships are broadly defined as, “A division of labor between government and the private sector across policy spheres as much as to any specific collaboration between government and the private sectors on particular policy projects” (Rosenau, 2000, 1). However, government departments and agencies have designed alternative definitions that are specific to their project goals.<sup>4</sup>

Private-public partnerships differ from firms that engage in standard contractual agreements with government. The key difference between the two types is the presence of bundled contracts, shared decision making between public and private entities, and greater financial risk that government places on private firms to complete a project.<sup>5</sup> Under conventional contractual arrangements, the public entity assumes all financial risk, maintains complete control over final decision-making, and awards a private company –typically the lowest bidder –with either single or multiple contracts to complete discrete tasks. The contractual relationship ends upon completion of the contract. In public-private partnerships, however, the government bundles to varying degrees the design, build, operation, and maintenance of a project. Both public and private entities also share greater responsibility in the delivery of bundled projects; and at times, the public entity may require private firms to finance a project with the promise of reimbursement at a later date – either through tax revenue or revenue generated by the project. <sup>6</sup> Public private partnerships, therefore, have the potential to last as short as a few years or as long as decades depending on the arrangement of bundled contracts, responsibility, and financial risk.

The strength of the partnership can also vary considerably. There are several types of public-private partnerships based upon the degree of public and private sector responsibility and financial risk. In a Design-Build (DB) partnership, the government transfers the least amount of risk and responsibility to private firms. Private firms contract with government for a fixed price to jointly manage the design and construction of a project while the government finances, operates, and maintains a project. Government can also transfer greater financial risk and responsibility to private firms by engaging in Design-Build-Finance, Design-Build-Operate, and Design-Build-Maintain partnerships. In DBF partnerships, private firms provide up-front capital to design and

build a project with the expectation of financial reimbursement from government. In DBO and DBM partnerships, private firms can also contract with government to maintain or operate a facility after the design and construction of a project. Alternatively, government can contract with private firms to maintain and operate already existing facilities over an extended period of time. Finally, in Design-Build-Finance-Operate (DBFO) and Design-Build-Finance-Operate-Maintain (DBFOM) partnerships, government transfers the greatest amount of risk and decision-making to private firms. In such instances, the government transfers (nearly) all aspects of a project, including the design, build, operations, and maintenance of a project to a private firm while retaining ownership of the project over a concession period –typically 25-30 years. During the concession period, the private firm raises revenue through the operation and maintenance of the project until the end of the lease term.<sup>7</sup>

In the United States, industries engage in a variety of public-private partnerships across a wide array of policy domains. For example, the Department of Defense has entered into public-private partnerships with defense contractors, including Lockheed Martin and Boeing, to design, build, and maintain (DBM) air and missile defense systems, satellites, aircraft, and rotary and mission systems.<sup>8</sup> The Department of Transportation has also encouraged state governments to enter into long-term concessionary agreements to design, build, finance, operate, and maintain (DBFOM) surface transportation projects (e.g. highways, bridges, tunnels, rail lines, transit systems) as well as airports and ports of entry.<sup>9</sup>

Based on the above reasoning, therefore, we expect public-private partnerships to be particularly sensitive to elections and policy-making – especially when firms possess ideological allies (or enemies) in government. Given their unique characteristics described above (i.e. bundled responsibilities, shared decision-making, and heightened financial risk), public-private partnerships possess greater financial ties to government and therefore should be more responsive to political events, policies, and exogenous shocks than firms with relatively weaker financial ties to government. Finally, stock-market returns and volatility should also depend to some degree on the overall strength of the public-private partnership itself with DBFOMs possessing the greatest amount of

overall sensitivity to politics and DBs possessing the weakest.

## **The Private Prison Industry in the Trump Era**

To test our argument, we focus on the private prison industry because it possess ideological allies in government and has engaged in numerous public-private partnerships. The U.S. prison industry largely follows the DBFOM model. Allen and English (2013) note that “private prisons finance, design, construct, and manage a prison for an agreed period of time, usually 25-30 years, after which time the building reverts to the ownership of the state.”<sup>10</sup> In 2017, for example, the U.S. Immigration and Customs Enforcement contracted with The GEO Group to design and build a privately-owned, 1,000-bed immigrant detention facility worth a reported cost of \$110 million and an estimated \$40 million in return. Upon completion in 2018, the GEO Group would be responsible for operating the facility for 10 years with opportunities to renew its federal contract with ICE.<sup>11</sup> However, it’s important to note that private prison companies can also provide very specific services, such as security and transportation, over shorter periods of time.

Given the rather close financial relationship between private prison companies and government, we contend that stock-market returns for the private prison industry will react strongly to the election of ideologically aligned candidates/parties, government decision-making in the form of policy and government contracts, and exogenous issue-relevant shocks. Although our theory of contractor politics applies across time, we focus primarily on the time period just before and after the 2016 presidential election. We focus on this particular time period because it encompasses several key events that had the potential to influence prison company stock market returns and volume trading.

Figure A1 in Appendix A shows a timeline of these political events. Prior to the 2016 election in August, the Obama Administration issued a memo to the Bureau of Prisons, instructing the Bureau to phase out its use of private prisons. In the memo, acting director, Sally Yates, cited a declining prison population and safety concerns as reasons for the decision and specifically directed the Bureau to either “decline to renew that contract [with private prisons] or substantially reduce its

scope in a manner consistent with law and the overall decline of the bureau's inmate population.”

<sup>12</sup> The memo dealt a financial blow to the private prison industry, placing its operations at risk.

By November 2016, prison industry fortunes changed with Donald Trump's election as the 45th president of the United States. During the Republican primaries, candidate Trump signaled his clear support of the private prison industry. In a townhall meeting, he stated, “I do think we can do a lot of privatizations and private prisons. It seems to work a lot better.”<sup>13</sup> Trump's support for the private prison industry has been closely linked to the industry's overwhelming preference for Donald Trump during the election. In 2016, private prison companies donated directly to Trump's campaign and gave to pro-Trump political action committees, such as Rebuilding America Now. The two largest private prison companies, CCA and The Geo Group, also donated \$250,000 each to Trump's presidential inauguration. Although it is illegal for contractors to contribute directly to candidates, the donation is understood to be a loophole in campaign finance laws as it is not illegal for contractors to contribute to ‘post election’ activities.<sup>14</sup> Finally, the GEO Group, moved its annual meeting from its traditional site in Boca Raton to a Trump-owned hotel in Miami, Florida, signaling support for Trump.<sup>15</sup> This backdrop leads to our first hypothesis:

- **H1: Candidate Alignment Hypothesis:** The election of ideologically aligned candidates will be positively associated with an increase in stock market returns *and* trade volume for the private prison industry. Conversely, the election of ideologically opposed candidates will be negatively associated with stock market returns *and* positively associated with trade volume.

Soon after the election, the Trump administration rewarded the private prison industry with a series of executive orders that increased the supply of prisoners and detainees. In February 2017, Attorney General Jeff Sessions issued a memo reversing the Obama-era decision to phase out private prisons. In the memo, Jeff Sessions argued that Yates' directive went against “longstanding Justice Department policy and practice” and “impaired the Bureau's ability to meet the future needs of the federal correctional system.”<sup>16</sup> The reversal came just days after Trump signed a series of executive orders that among other things, called for the construction of more detention

centers along the Southwest border and an increase in federal efforts to identify, capture, and deport undocumented immigrants.<sup>17</sup> However, these events demonstrated the Administration's punitive and harsh immigration policies, cuing investors that the Administration was intent on immigrant capture, containment, and deportation. Therefore, we introduce our second hypothesis:

- **H2: Policy Alignment Hypothesis.** The implementation of prison-relevant punitive immigration policies will be associated with an increase in stock market returns *and* trade volume for the private prison industry. Conversely, when prison-relevant punitive immigration policies are lifted or welcoming policies enacted, stock market returns will drop *and* trade volume will increase.

The financial gains likely made by the election of Donald Trump and his subsequent executive orders was quickly curtailed by shock events that ultimately led to negative press. Evidence of malfeasance and abuse have been well-documented in the private prison industry.<sup>18</sup> In May 2017, Jean Jimenez-Joseph – a DACA recipient with mental illness – committed suicide in a Core Civic immigration detention facility after spending 19 days in solitary confinement for protesting the facilities' poor conditions.<sup>19</sup> The death generated significant attention in the media. In the wake of Trump's hardline immigration policies, the death drew attention to an increase in the rising death toll and poor conditions in private prisons. Moreover, Georgia's Bureau of Investigations found that prison operators failed to routinely check on Jimenez-Joseph, denied Jimenez-Joseph visitors without justification, and failed to send his attorney requested documents.<sup>20</sup> Given the overwhelming negative press surrounding the death, we expect the death of Jean Jimenez-Joseph to significantly increase trade volume and decrease stock-share value among private prison contractors.

Nearly a year later, in April 2018, the Trump Administration initiated its policy of zero-tolerance.<sup>21</sup> The executive order directed federal agencies to prosecute all adult undocumented immigrants and those with children would now be charged with child-smuggling thereby justifying the separation. This resulted in the separation of more than 2,000 children from their parents at the U.S.-Mexico border, causing panic and public outcry in June, 2018.<sup>22</sup> Since these announcements, ICE reported a 42 percent and 11 percent increase in arrests in Trump's first and second

years in office, respectively.<sup>2324</sup> Although one might anticipate the explosive reaction to the child detention crisis might be bad for the prison industry, another way to think about it is the crisis symbolized the Administration's immigrant crackdown. These harsh policies, then, should lead to a greater demand for detention. Thus, investors may see an immigration crisis such as this as actually very good for the prison industry. Thus, we introduce our third hypothesis:

- **H3: Shock Event Hypothesis.** Events that generate prison industry press that might auger a downward shift in prisoner supply will be associated with a decrease (increase) in stock-market returns and an increase in trade volume. However, events that signal the robustness of the industry will be associated with a increase in stock-market returns and an increase in trade volume.

Finally, our theory of contractor politics suggests that stock market returns and trade volume will be disproportionately responsive to some administrations but not others – based on ideological alignment. Although Democrats and Republicans alike have historically favored the private prison industry, private prison companies generally prefer Republican presidential administrations to Democratic ones. However, we take the position that stock-market returns for the private prison industry will have a substantially more positive reaction to the Trump administration than the previous Republican administration – given Trump's unabashed prison industry support. Although both Bush and Trump administrations demonstrated support for the private prison industry, Trump's pre-campaign support for private prisons and comparatively hard-line stance on immigration makes him a stronger ideological ally. Given these key differences, we hypothesize the following:

- **H4: Election Hypothesis** The outcome of the 2016 election will have a greater substantive and positive effect on private prison stock market returns and trade volume than will the 2000 and 2004 presidential election outcomes.

## Data and Method

We rely on a variety of data sources to test our hypotheses deduced from our theoretical framework. Our primary data source comes from the Yahoo Financial application programming interface, which tracks the U.S. stock market. We gathered daily stock market share close value and trade data from 2016 - 2018 for the two largest private prison companies: Core Civic (CXW) Geo Group (GEO).<sup>25</sup> Thus, for two years (except weekends and holidays) we have daily values. We then create relevant exogenous shock time points based on real-world events.

Figure 1 presents Core Civic's time series across the 2016-2018 time period. The top left panel reveals daily volume traded; whereas the top right panel displays daily differenced volume traded. We include bands representing one and two standard deviations away from the differenced mean. The largest daily trade values occurred on the following days: August 18, 2016, November 9, 2016, and June 22, 2018. The first date captures the Obama Administration's executive announcement phasing out private prisons. This led to a fury of trading activity, with stocks tumbling dramatically. The second date captures the effects of the 2018 general election victory of Donald Trump. CCA Stocks rose dramatically following Trump's victory. The final date captures trading in response to the immigrant child separation crisis in the summer of 2018.

The Bottom left panel reveals daily Core Civic share value, with a comparison point for the Dow Jones Industrial average across the same time period. The bottom right panel reveals daily differenced share value. Much like the volume plots, the largest daily share changes occurred on August 18 and November 9th, 2016.

[INSERT FIGURE 1 ABOUT HERE]

However, the bottom right plot reveals a new data point: On May 15, 2017, an undocumented immigrant, Jean Jimenez-Joseph, a Panamanian national allegedly killed himself whilst detained in Core Civic's Stewart Detention Center in Lumpkin, GA. While waiting his immigrant court date, Jimenez-Joseph violated facility rules by jumping from one story to the next. He was disciplined and placed in solitary confinement for 20 days according to facility rules. During this time

he allegedly hung himself with his own bed sheet. His death, which garnered significant media attention, clearly affected Core Civic's share value. Figure A2 in Appendix A confirms the incident's salience, with spikes in Google searches for "Jean Jimenez-Joseph" among the mass public occurring during the same week of his death.<sup>26</sup>

The second company we analyze is The GEO Group, a prison company based out of South Florida. Figure 2 presents the same style of plots as presented in Figure 1. The figures reveal very similar patterns as those found in Core Civic plots.

[INSERT FIGURE 2 ABOUT HERE]

We augment both time series data with additional variables, which we use to evaluate our hypotheses. First, we include fixed effects for both quarter of the year and day of the week. This inclusion entails including dummy variables for quarter 2, 3, and 4, with quarter 1 as the comparison group. Dummy variables for day of the week include Tuesday, Wednesday, Thursday, Friday, with Monday as the dummy. Stocks are not traded on the weekend. We include a measure for time, to account for possible drift. This is simply a count variable with 1 indicating the first day of the series and 753 the last day of the series.

Our key measures vary slightly depending on the nature of the independent variable. This is because the volume time series generally hovers around low numbers, and occasionally experiences major shocks. For this reason, our first set of interruption independent variables capture the day of the shock, with the expectation that the trade volume will almost immediately fall back to low (mean) trade levels. These variables take on a value of 0 for all days not experiencing an exogenous shock, and 1 for the day of the shock.<sup>27</sup>

Thus, for both Core Civic and The Geo Group, we have shock values for Obama memorandum (phasing out private prisons) (August 18, 2018), election day 2016 (November 9, 2018, day after), Sessions' order rescinding private prison phase out (February 2, 2017), the date after a highly salient death of an immigration in a Core Civic detention facility (May 15, 2017), child detention crisis (June 22, 2018, day after Justice Department asks federal judge to change rules for detaining children), and election day 2018 (November 6, 2018).



However, share value time series tend to represent more of an actual series instead of a stable system with sudden shocks. Therefore, we measure our shocks to this system as full-on dummy variables, where the value takes on a 0 before the shock, and a 1 after. We include the same time-date (e.g., election day 2016) variables from our trade volume analyses.

These measures all provide direct tests of our hypotheses. The election day variables measure our candidate alignment hypothesis (H1). The Obama and Sessions memos outline our policy expectations hypothesis (H2). And child detention crisis and death at a detention center measure our exogenous shock events hypothesis (H3). To test the 2016 election hypothesis (H4), we extended the time series from 1999 - 2018, and just include covariates for presidential election days: 2000, 2004, 2008, 2012, and 2016.

Finally, we analyze our data using an Autoregressive Integrated Moving Average (ARIMA) time series modeling approach (Hannan and Rissanen, 1982; Liu, 1989). The ARIMA method accounts for time series non-stationarity by incorporating auto-regressive and moving average terms. We use a technique that applies an automatic algorithm that chooses the best possible model based on Akaike Information Criterion information. In addition, this automatic process incorporates unit root tests. Each model is estimated using the `auto.arima()` function in the *forecast* R package (Hyndman, Khandakar et al., 2007).

We also include several other analyses as robustness checks. As a placebo, we gathered stock prices from Pattern Energy Group, Inc. (NYSE Stock Exchange: PEGI). PEGI is a renewable energy company owning holdings in wind and solar energy, based out of San Francisco. We do not anticipate PEGI stock time series to respond to the prison company exogenous shocks. For some robustness checks, we also incorporate the Dow Jones Industrial Average (DJI) as a lag variable, as well as firm-level information.

## Results

We begin by first assessing hypotheses 1-3 with a similar model setup. For each firm, we analyze both daily stock volume traded and share value during the years 2016-2018. We select this time period due to the extreme stock volatility observed, which we think is at least partially related to U.S. domestic politics. For various robustness checks and additional analyses, however, we extend the time series.

Our analysis begins with Core Civic's trade volume time series. Table A1 in Appendix A presents three columns, the first is the full model estimating different exogenous events' effects on Core Civic's trade volume. The second column is the same model with a logged dependent variable, and the third column is the same as the first model but stripped of the fixed effects for quarter and day. For volume, we find results broadly supportive of our hypotheses.

First, we examine the candidate/party alignment hypothesis (H1) in the context of trade volume. To find support for this hypothesis, we should expect to see a rise in trade volume following both the 2016 and 2018 general elections.<sup>28</sup> Column 1 reveals statistically significant results for the 2016 election day covariate but not for the 2018 election day covariate. The 2016 election is associated with an increase in stock trading to the tune of about 20 million trades, whereas, the 2018 election is associate with about 827,000 trades (but not statistically significant). Both covariates, however, are statistically significant in column 2 (logged dependent variable). Still, clearly, we find strong support for hypothesis 1 vis-à-vis stock volume trading.

Second, we evaluate the policy-change hypothesis (H2) in the context of the stock volume time series. To confirm H2, the dates capturing key policy change announcements ("Obama begins phasing out private prisons" and "Sessions re-institutes private prisons") should increase trading beyond the series' baseline. We find strong and consistent support for the former policy event (Obama's order to phase out private prisons), leading to a 30 million share increase in trade volume. This is the largest effect observed in the entire series. However, Sessions' policy announcement to rescind the order had no such effect on trading. Likely, Trump's victory coming on the heels of a virulently anti-immigrant campaign signaled to investors an imminent private prison immigration

policy shift. Thus, stocks had already responded in terms of trade volume by the time Sessions made the rescinding announcement.

Finally, to evaluate our “events” hypothesis (H3) in the context of trade volume, we include measures capturing the child detention crisis and the well-publicized death of Jean Jimenez-Joseph in a Core Civic facility. As anticipated, both real-world events generated positive and statistically significant effects on the number of stocks traded. The child detention crisis, as measured, increased trading by nearly 9 million shares, whereas the death of Jimenez-Joseph nearly 3.5 million shares. Overall, our results are essentially the same across the three models (volume, volume logged, without fixed effects)

Table A2 in Appendix A next addresses Core Civic share value to provide additional tests of our hypotheses. Turning to Column 1, once again, we find strong support for our candidate alignment hypotheses (H1). As expected, the 2016 general – unexpectedly won by a strongly anti-immigrant candidate, Donald Trump – led to a rise in Core Civic share prices to the tune of just over \$6 (note the mean of the series is \$25.60). However, the 2018 general – won by Democrats who are likely perceived by investors to be less supportive of punitive immigration measures – is associated with a drop in Core Civic share prices of about \$1.50. The results are virtually the same whether we include fixed effects (Column 2) for quarter or for day of the week.

On policy (H2), the Yates memorandum phasing out private prisons dropped prison stocks significantly – over \$9.50 percentage points. This is the largest single drop in the time series. However, unlike the trade volume model presented in Table A1, Sessions’ memo rescinding Obama’s order did have a statistically significant albeit small effect on Core Civic share value (about a \$1 increase in the series’ value).

Finally, to test hypothesis 3, we expect key real-world events to influence stock prices depending on whether investors interpret events as “good” for the prison industry or “bad” for the industry. Although one might anticipate the explosive reaction to the child detention crisis might be bad for the prison industry, another way to think about it is the crisis symbolized the Administration’s immigrant crackdown. These harsh policies, then, should lead to a greater demand for detention.

Thus, investors may see an immigration crisis as actually very good for the prison industry. This interpretation is consistent with our findings, as the child detention crisis is associated with nearly a 1-point increase in Core Civic's stock share.

However, the May 15, 2017, death of an immigrant held in Core Civic's custody, Jean Jimenez-Joseph, garnered significant media attention. Surely, this is "bad" for the prison industry because the death reveals possible unsafe conditions within the detention facility. A death may lead to increased scrutiny and oversight, which might further reveal legal and human rights violations. This could ultimately lead to demand for prison reform. Indeed, this event is associated with a drop in stock value of nearly \$3.5. Thus, we find strong support for our events hypothesis.

Turning to the Geo Group, we observe an almost identical relationship between our dependent and independent variables as observed with Core Civic (see Table A3 in Appendix A). We will move more quickly through this section due to the overlap with Core Civic's stock profile.

In general, the two firms' stock profiles perform similarly. As with Core Civic, Column 1 in Table A3 reveals that the 2016 general election – but not the 2018 general election – is associated with a large rise in share trading (more than 10 million shares in 2016). The Yates memo phasing out private prisons massively influenced stock trading (about 28 million Geo Group share trades), but Sessions' order rescinding the Yates memo does not influence trading. Furthermore, we find limited support for the events hypothesis with this series. Neither the child detention crisis nor the death of Jimenez-Joseph (note the death occurred in a Core Civic facility) elicited statistically significant effects in trade volume in Column 1. However, once the series is logged, we do observe a rise in trading due to Jimenez-Joseph's death.

Turning to shares, we once again observe similar Geo Group findings as observed with Core Civic (see Table A4 in Appendix A). Trump's victory (Election Day 2016) is associated with a 8.6 point rise in stock share (mean share value of the series is 23.9), whereas the Democrats' victory is associated with about a 1-point loss. These findings conform with our theoretical expectations enunciated in the candidate alignment hypothesis (1).

However, policy shifts related to private prisons are extremely important to Geo Group's stock

share, as Obama's order to phase out the prison industry drops share value by more than 5 points, whereas Sessions' rescinding order brings back the company's value almost exactly 5 points.

Finally, we find no evidence that the child detention crisis as measured affected Geo Group's stock evaluation – this is the one finding that is clearly at odds with our findings for Core Civic. However, even though Jimenez-Joseph's death occurred in a Core Civic facility, we see an almost identical drop of 3 stock points for Geo Group due to his death. It seems that high profile privately owned or managed detention center deaths may influence any prison company's stock evaluation – regardless of where the death happens. Overall, our results are strongly supportive of our theoretical expectations.

Finally, to test hypothesis 4, the 2016 election hypothesis, we extended the time series from 1999 - 2018, and just include covariates for presidential election days: 2000, 2004, 2008, 2012, and 2016. This allows for a direct test and comparison across each contest. Our expectation is that we should see election effects for 2016 in both volume and share value for both Core Civic and Geo Group, but not for other election day covariates. Our reasoning for this expectation is clear: More so than any other general election candidate running during this time period, Trump's anti-immigration agenda cued investors that his immigration policies should stand to benefit the prison industry. In addition, his unexpected victory should lead investors to rush to trade the following day to capitalize on an unexpected occurrence.

Table A5 in Appendix A presents our results testing this hypothesis. Almost none of the covariates representing presidential election days 2000-2012 are statistically significant. We only find a statistically significant election day 2008 effect for Core Civic (CXW) share values to the tune of about 1 point, but this can be partially attributed to a slight uptick in the post-election market as the Dow Jones Industrial average was also on the rise at that point.

However, we find strong and consistent statistically significant effects for election day 2016. As with the other models, this election is associated with a massive increase in immediate trading and share value for both Core Civic and Geo Group. As a robustness check, we also calculated linear hypothesis Wald Tests to ensure that our 2016 covariate is indeed statistically distinct from

the other election day model covariates. Each test reveals a statistically significant chi-2 result at the 0.001 alpha level. Thus, we find very strong evidence supporting hypothesis 4.

## **Generalizing the Theory**

A major component of our contractor theory is that stock trading should respond in similar ways to similarly situated public-private partnerships. However, there is the possibility that our theory applies to our primary case – private prisons – but not other public-private partnerships. Based on our theory, we expect other public-private partnerships with strong ideological allies to react strongly to political events and ostensibly relevant policies. To evaluate this possibility, we gathered stock data from Lockheed Martin and ExxonMobil. Both contract with the Department of Defense and could potentially benefit from a Trump presidency. In 2017, nearly 70 percent of Lockheed Martin’s total revenue sales came from U.S. government contracts. Its largest public-private partnership is the F-35 fighter-jet program, which represents 25 percent of the company’s total net sales.<sup>29</sup> ExxonMobil, however, has a much more diversified revenue base, so its stocks should be less responsive to presidential politics and exogenous policy shocks.

Tables A6 and A7 in Appendix A assess Lockheed Martin (LMT) volume and trade correlates. As with the prison companies, Election Day 2016 dramatically increased LMT stock trading, but not the 2018 election. On December 12, 2016, Trump tweeted: “The F-35 program and cost is out of control. Billions of dollars can and will be saved on military (and other) purchases after January 20th.”<sup>30</sup> Fitting with news reports, we observe that this tweet increased LMT trading dramatically.

However, Table A7 reports more activity in terms of LMT share value (Figure A3, Appendix A visualizes the time series). Fitting with our expectations, LMT shares increased value (about \$8.50 per share) as a response to Trump’s victory, but dropped about \$21 in response to the 2018 midterm results. These results are consistent with our public-private partnership expectations. We also observe that four of the five of our time covariates capturing key moments in the LMT-government relationship are statistically significant. Both of Trump’s tweets (criticizing F35; pulling out of Syria) considerably drive down LMT share value. Other date covariates (Lockheed reduces con-

tract cost; final Pentagon contract) capture how the results of contract negotiations ultimately do influence share value. In total, these results are consistent with our theoretical framework.

However, if our argument that public-private partnerships are especially vulnerable to government policy-making and political events, we should not anticipate ExxonMobil's stock profile to fluctuate in response to political activity in the same way as do ideologically aligned public-private partnerships (see Figure A4, Appendix A). Indeed, while ExxonMobil has some very large government contracts, less than one percent of its total revenues is due to U.S. government contracts.<sup>31</sup> Tables A8 and A9 in Appendix A support these expectations. Neither election day (2016 or 2018) statistically affects ExxonMobil volume trade or share price. Neither does Rex Tillerson's elevation to Secretary of State,<sup>32</sup> a waiver application for Russian oil exploration,<sup>33</sup> or a deal with the state of Alaska to manage oil exploration.<sup>34</sup> These results are consistent with our theoretical argument and provide added support for our contractor theory of politics.

## **Discussion and Conclusion**

This paper developed a theory of contractor politics with the goal of advancing a framework for understanding why the success of some firms/industries might be more or less susceptible to election outcomes or policy changes relevant to the firm's/industry's economic area. Although scholars have previously investigated various linkages between politics and the economy, and politics and industry stock valuations, little research has theorized why certain industries that contract with government are more or less influenced by political events.

We developed a broad theory to explain why some firms and industries might be more affected by government policy-making and outcomes of elections than might other firms and industries. We argued that ideologically-aligned firms whose income stream and business model rely more on government contracts versus firms/industries that rely more on a mix of government contracts and private sector deals, are more susceptible to certain types of political events – specifically with respect to stock portfolios. The bulk of our empirical tests of the theory focused on private prison

firms' stock portfolios (volume traded, and share value).

Specifically, we investigated whether election outcomes, government policy moves relevant to the prison industry, or issue-relevant exogenous shocks affect short-term and long-term private prison company stock portfolios. We first tested whether the 2016 and 2018 election outcomes differentially influenced stock share values with the expectation the 2016 election results should increase both prison company trading and stock share value (Trump victory), and the 2018 election outcome should increase trading but a drop in share value (Democratic victory). We found broad support for our candidate alignment hypothesis: Trump's victory increased both prison company stock trading and share value whereas Democrat's 2018 victory (winning the House of Representatives) increased both trading and decreased value although the effects are significantly larger for 2016.

We also tested a hypothesis that the 2016 presidential election outcome will drive trading and stock valuations more so than any other recent presidential election. The 2016 election outcome was ripe for massive swings in prison stock valuations: 1) Trump strongly supported the prison industry, 2) Trump campaigned on an extreme anti-immigrant position suggesting his administration's policies would eventually boost the immigration detention side of the business, 3) Trump's victory was unexpected. Using stock trade and share value data across a longer window (1999-2018), we found overwhelming support for this hypothesis.

In addition to our election day expectations, we developed a policy-based hypothesis where we anticipated: 1) Obama's policy announcement phasing out the private prison industry would drive up trading and drive down stock values; 2) Sessions' announcement rescinding Obama's aforementioned order would drive up both trading and stock values. We found overwhelming support for the hypothesis related to Obama's announcement phasing out the prison industry. That move drove up trading and drove down stock value more so than any other in the entire time series. On the related hypothesis, we did not find a shift in trade volume related to Sessions' policy announcement rescinding Obama's order. However, Sessions' announcement is associated with a rise in stock values for both Core Civic and especially Geo Group. Thus, we found broad support



for our policy-based hypotheses.

Finally, we hypothesized that key events related to the prison industry should influence stock profiles. We showed that the child detention crisis and the highly salient death of an undocumented immigrant in a detention center affected prison company stock trading and share value. The child detention crisis increased stock trading significantly for Core Civic but not so much for Geo Group. Similarly, Core Civic's stock values increased a bit as a result of the crisis but Geo Group's remained largest unaffected. Thus, we find mixed results for the events hypothesis as regards the child detention crisis. However, it is important to note that, if anything, the child detention crisis increased trading and values for one company and not for the other. The crisis did not drop stock shares and values as one might possibly envision. This is because, we argue, that the crisis – if anything – should lead to a greater reliance by the federal government on prison companies to detain and control the undocumented immigrant population in the United States.

We did, however, find strong support for our exogenous events hypothesis related to the highly salient death of Jean Jimenez-Joseph. For both Core Civic and Geo Group, trade volume spiked the day following the event and stock shares dropped by about \$3 a share.

While the bulk of our empirical tests focus on the prison industry, we analyzed the stock portfolios of two other companies to test the generalizable bounds of our contractor politics theory: 1) Lockheed Martin; 2) ExxonMobil. The former is one of the largest private public partnerships operating in the United States; whereas less than one percent of the latter's revenue is due to securing government contracts. Lockheed Martin's stock behavior appears to broadly mimic that of the prison industry, whereas ExxonMobil does not respond to the same political dynamics. This provides further evidence in support of our generalizable theory. However, future research should expand the stock analysis to a range of companies classified by their relationship to government.

This work is important both for political and theoretical reasons. Being able to explain prison company stock portfolio fluctuations provides interested parties insights into prison companies' vulnerabilities. Knowing what external events tend to drive investor behavior might direct company executives to develop policies that reduce the likelihood certain events (i.e., immigrant deaths)

occur.

On the other hand, these findings might provide anti-privatization activists insights into the industry's pressure points. The finding that Jean Jimenez-Joseph's death captured extensive media coverage which subsequently dropped prison company stock valuations raises a host of questions as to: 1) Why this death in particular? 2) How do interested parties raise the profile of such deaths? Future research should investigate the degree to which immigrant deaths inside of detention centers gain attention and subsequently influence prison company stock valuations.

In the context where prison companies may not particularly care about public opinion (i.e., their stock portfolios rose during the child detention crisis), prison companies may be more responsive to the almighty dollar. This is an important point to raise to scholars of political science who – when trying to understand how to nudge actors in more pro-social directions – commonly focus on whether certain political communication frames influence reported public attitudes. If it is the case that prison companies generally do not care about public opinion, we argue that political scientists might reconsider how they go about understanding and incentivizing pro-social behavior. Instead, as private companies traded on the New York Stock Exchange, these companies should act like any other company: they want to attain the highest stock value as possible. If certain business moves or events clearly negatively affect their stock portfolios, these companies should seek an alternative path to raise their stock price. If this is the case, then it is necessary to understand how political events might play a role in directing the value of prison company stocks.

Finally, in linking political events to prison company stock profiles, this paper is the first to demonstrate just how vulnerable the prison industry is to election outcomes, relevant policy shifts, crisis events, and immigrant deaths. This is because the industry largely relies on government contracts involving public-private partnerships as its business model, and so is therefore very reliant upon decisions made by the federal government (Collingwood, Morín and El-Khatib, 2018). If the present government decides to grow or end contracts, publicly traded prison stocks should rise or drop in accordance with government policy.

In previous eras, when both Democratic and Republican elites were broadly supportive of neo-

liberal regimes such as prison privatization, and prison companies donated to candidates in both parties, election outcomes apparently played no role in effecting stock prices. However, Obama sought to phase out government contracts with prison companies. In the Trump era, Democratic voters and elites appear to be shifting significantly more to the left on matters of immigration policy and criminal justice (Oskooii, Dreier and Collingwood, 2018; Reny, Collingwood and Valenzuela, 2019). For instance, in July, 2018, in part in response to the child detention crisis, the California Democratic Party announced it would no longer take donations from prison companies.<sup>35</sup> With continued polarization around the issue, prison companies' stock profiles are likely to become even more susceptible to political events and election outcomes that portend security or insecurity for the industry based on which parties and candidates are winning and losing.

Future research should seek to build upon our theory of contractor politics. In total, we evaluated five companies spanning different relations with government – both in terms of ideological alignment and reliance upon securing government contracts as a business model. In total, we found consistent support for our theoretical framework. We argued that prison company stock profiles and other large public-private partnerships are especially susceptible to political and policy-relevant events. We think this framework can be applied beyond the prison industry, and so future work should seek to classify the range of government contractors as either PPP and aligned, PPP not aligned, non-PPP and aligned, and non-PPP and not aligned. We might then anticipate different financial outcomes for classified groups. Ultimately, this model may be important for understanding democratic representativeness (or lack thereof) of government, and provide insights into how to go about pressuring companies into more “pro-social” behavior.

## Notes

<sup>1</sup><https://www.thenation.com/article/obamas-doj-says-it-one-more-time-private-prisons-arent-working/>

<sup>2</sup><https://www.motherjones.com/politics/2018/07/thanks-to-trumps-family-separations-democrats-are-in-the-hot-seat-for-taking-private-prison-cash/>; <https://www.mercurynews.com/2019/02/04/private-prisons-california-gavin-newsom-ab32/>

<sup>3</sup>Price Earning (P/E): The price of a company's share of stock divided by its earnings per share

<sup>4</sup>For example, the Department of Defense identifies three types of public partnerships known as "workshare," "direct sales," and "lease." For more information see [https://www.acq.osd.mil/log/MPP/.policy.html/PPP\\_for\\_Product\\_Support\\_Guidebook\\_OC](https://www.acq.osd.mil/log/MPP/.policy.html/PPP_for_Product_Support_Guidebook_OC)

<sup>5</sup><https://icma.org/documents/public-private-partnerships-p3s-what-local-government-managers-need-know>

<sup>6</sup>ibid

<sup>7</sup>ibid

<sup>8</sup><https://www.lockheedmartin.com/content/dam/lockheed-martin/eo/documents/annual-reports/2017-annual-report.pdf>

<sup>9</sup><https://www.transportation.gov/buildamerica/programs-services/tifia/overview>

<sup>10</sup><http://documents.worldbank.org/curated/en/104841468337289976/pdf/833470NWP0Web000Box304492B00PUBLIC0.pdf>

<sup>11</sup><http://investors.geogroup.com/file/Index?KeyFile=2000088787>

<sup>12</sup><https://www.justice.gov/archives/opa/blog/phasing-out-our-use-private-prisons>

<sup>13</sup>[https://www.washingtonpost.com/politics/with-business-booming-under-trump-private-prison-giant-gathers-at-presidents-resort/2017/10/25/b281d32c-adee-11e7-a908-a3470754bbb9\\_story.html?utm\\_term=.2d39c0a912df](https://www.washingtonpost.com/politics/with-business-booming-under-trump-private-prison-giant-gathers-at-presidents-resort/2017/10/25/b281d32c-adee-11e7-a908-a3470754bbb9_story.html?utm_term=.2d39c0a912df)

<sup>14</sup><https://www.opensecrets.org/news/2018/01/companies-that-funded-trumps-inauguration/>

<sup>15</sup>[https://www.washingtonpost.com/politics/with-business-booming-under-trump-private-prison-giant-gathers-at-presidents-resort/2017/10/25/b281d32c-adee-11e7-a908-a3470754bbb9\\_story.html?utm\\_term=.2d39c0a912df](https://www.washingtonpost.com/politics/with-business-booming-under-trump-private-prison-giant-gathers-at-presidents-resort/2017/10/25/b281d32c-adee-11e7-a908-a3470754bbb9_story.html?utm_term=.2d39c0a912df)

<sup>16</sup>[https://www.bop.gov/resources/news/20170224\\_doj\\_memo.jsp](https://www.bop.gov/resources/news/20170224_doj_memo.jsp)

<sup>17</sup><https://www.usatoday.com/story/news/politics/2017/02/23/private-prisons-back-trump-and-could-see-big-payoffs-new-policies/98300394/>

<sup>18</sup><https://www.npr.org/2016/08/25/491340335/investigation-into-private-prisons-reveals-crowding-under-staffing-and-inmate-de>; <https://www.npr.org/2018/09/19/648748114/investigative-journalist-aims-to-expose-ills-of-privately-run-prisons>

<sup>19</sup><https://www.thedailybeast.com/immigrant-deaths-in-private-prisons-explode-under-trump>

<sup>20</sup><https://www.motherjones.com/politics/2018/11/corecivic-immigration-detention-suicide-investigation/>

<sup>21</sup><https://www.justice.gov/opa/pr/attorney-general-announces-zero-tolerance-policy-criminal-illegal-entry>

<sup>22</sup><https://www.usatoday.com/story/news/2018/06/27/immigrant-children-family-separation-border-timeline/734014002/>

<sup>23</sup><https://www.pewresearch.org/fact-tank/2018/02/08/ice-arrests-went-up-in-2017-with-biggest-increases-in-florida-northern-texas-oklahoma/>

<sup>24</sup><https://www.cnn.com/2018/12/14/politics/immigration-ice-arrests-increase/index.html>

<sup>25</sup>To test hypothesis 4, we extend the time series. This is discussed when we move to the results discussion for that hypothesis.

<sup>26</sup>We investigated other immigrant deaths, but to date this is the only one that garnered enough public media attention to influence private prison stock valuations.

<sup>27</sup>we also estimated models where we set the cut-point the day after the shock. We get very similar results.

<sup>28</sup>[https://www.realclearpolitics.com/epolls/2016/president/us/general\\_election\\_trump\\_vs\\_clinton\\_vs\\_johnson\\_vs\\_stein-5952.html](https://www.realclearpolitics.com/epolls/2016/president/us/general_election_trump_vs_clinton_vs_johnson_vs_stein-5952.html); [https://www.realclearpolitics.com/epolls/other/2018\\_generic\\_congressional\\_vote-6185.html](https://www.realclearpolitics.com/epolls/other/2018_generic_congressional_vote-6185.html)

<sup>29</sup><https://www.lockheedmartin.com/content/dam/lockheed-martin/eo/documents/annual-reports/2017-annual-report.pdf>

<sup>30</sup><https://www.npr.org/sections/thetwo-way/2016/12/12/505288991/trump-lambasts-1-trillion-f-35-jet-in-latest-tweet>

<sup>31</sup><https://www.cnbc.com/2017/01/04/top-government-contractors-52-public-companies-that-make-the-most.html>

<sup>32</sup><https://www.nytimes.com/2017/02/01/us/politics/rex-tillerson-secretary-of-state-confirmed.html>

<sup>33</sup><https://www.nytimes.com/2017/04/19/business/energy-environment/exxon-mobil-russia-sanctions-waiver-oil.html>

<sup>34</sup><https://www.ktva.com/story/39062259/alaska-exxon-mobil-sign-gas-binding-sales-agreement>

<sup>35</sup><http://capitolweekly.net/state-democrats-shun-private-prison-donations/>

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# Figures

Figure 1: Core Civic (CXW) Volume and Share (close) time series, 2016-2018. Top left panel reveals daily volume traded. Top right panel reveals daily differenced volume trade. Bottom left panel reveals daily share value. Bottom right panel reveals daily differenced share value.

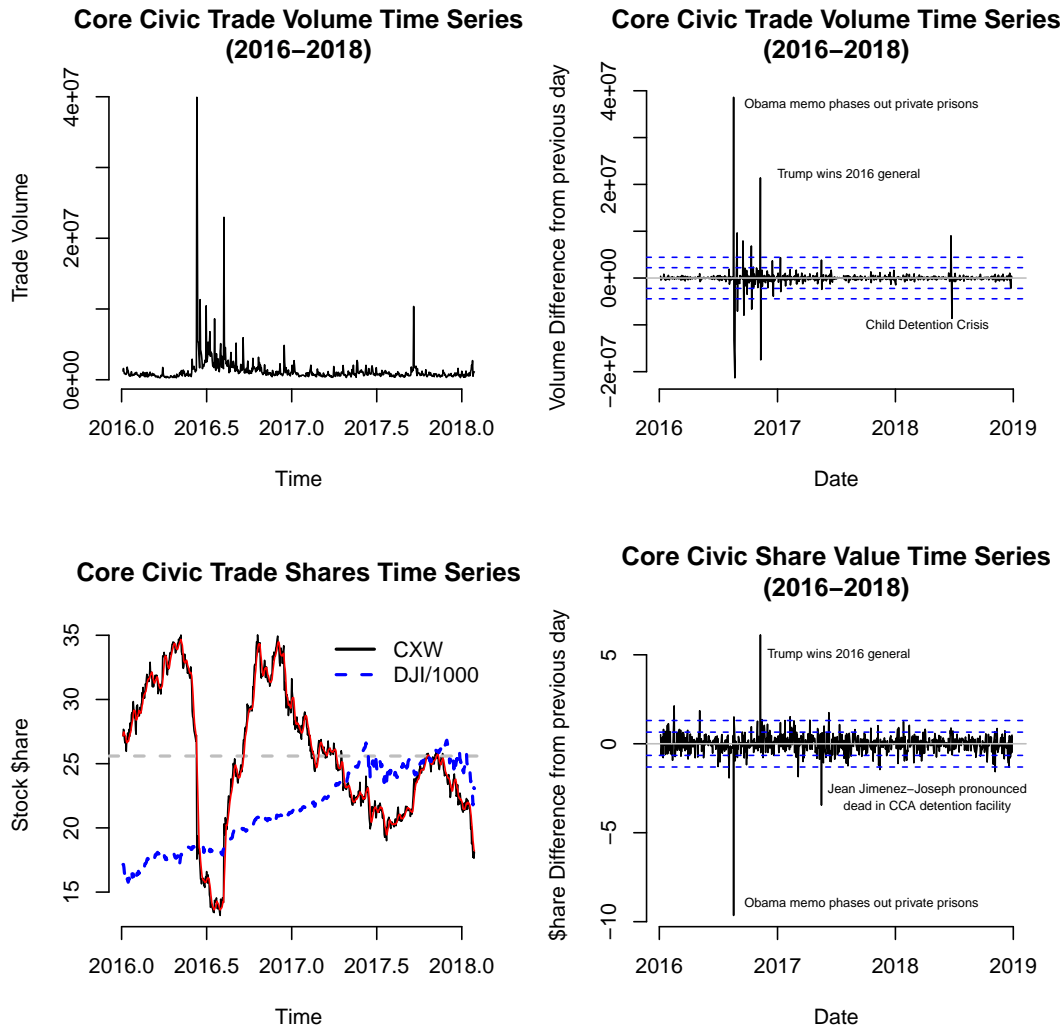
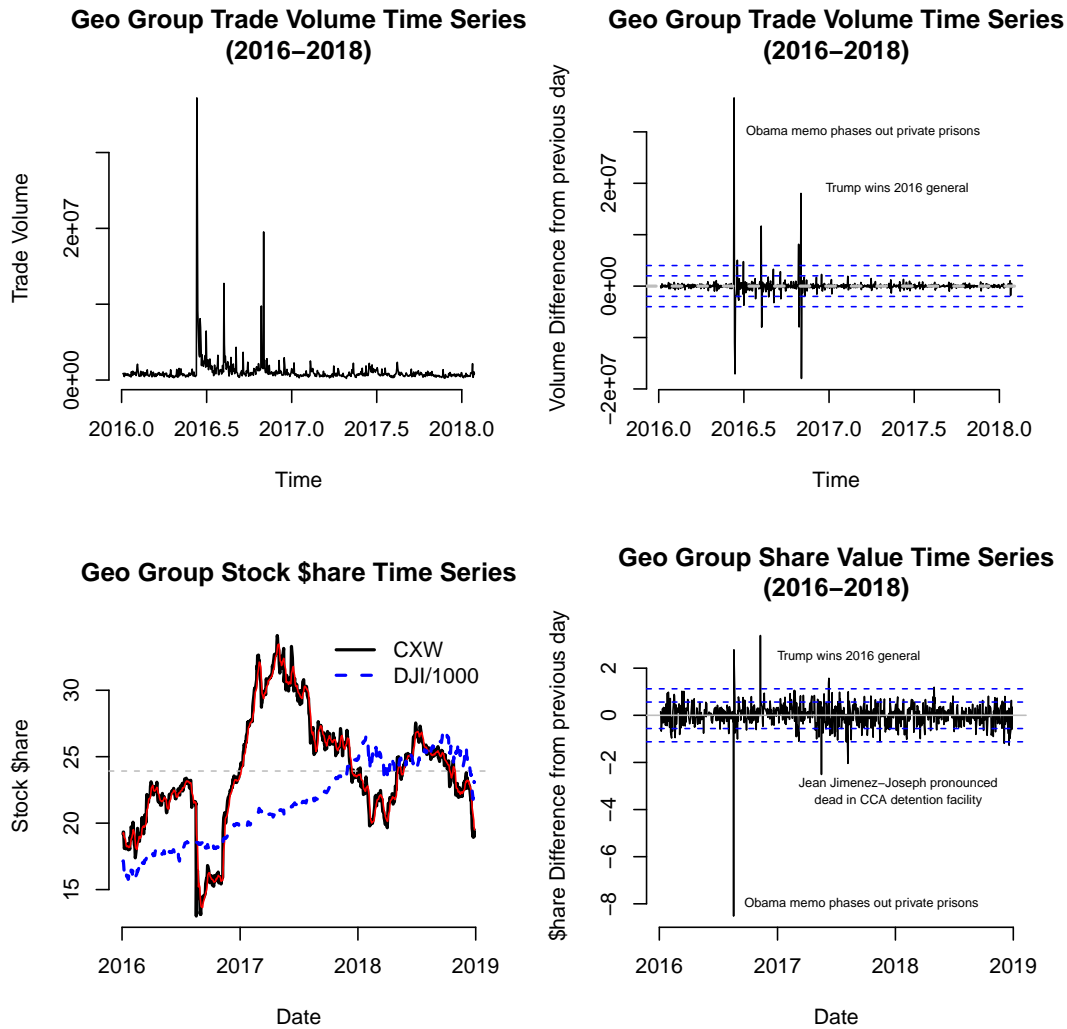


Figure 2: GEO Group (GEO) Volume and Share (close) time series, 2016-2018. Top left panel reveals daily volume traded. Top right panel reveals daily differenced volume trade. Bottom left panel reveals daily share value. Bottom right panel reveals daily differenced share value.



# Appendix A

Figure A1: Timeline of relevant events implemented as exogenous shocks: Obama 2016 memo phasing out private prisons; 2016 election outcome; 2017 Sessions order rescinding Obama's memo; Jean Jimenez-Joseph death, child detention crisis; 2018 election outcome.

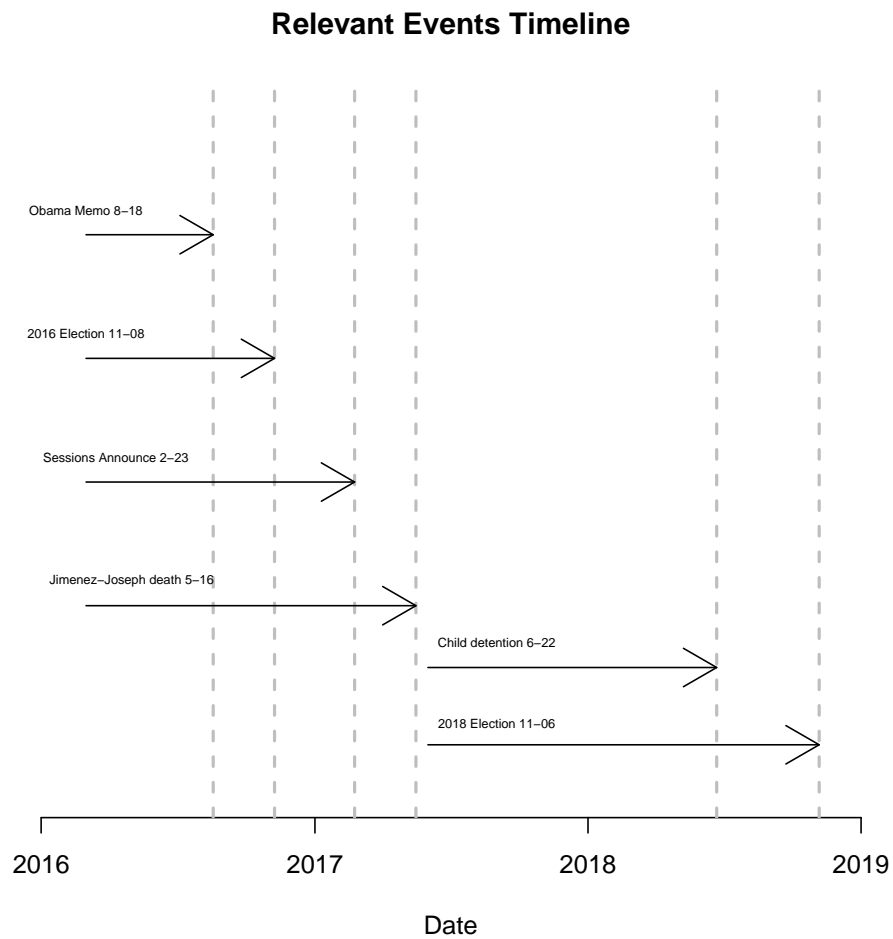


Figure A2: Google analytics search time series for “Jean Jimenez-Joseph,” an undocumented Panamanian national who allegedly killed himself while in detention at Stewart Detention Center in Lumpkin, Georgia. The series reveals dramatic spikes in public interest during the week(s) immediately following Jimenez-Joseph’s death.

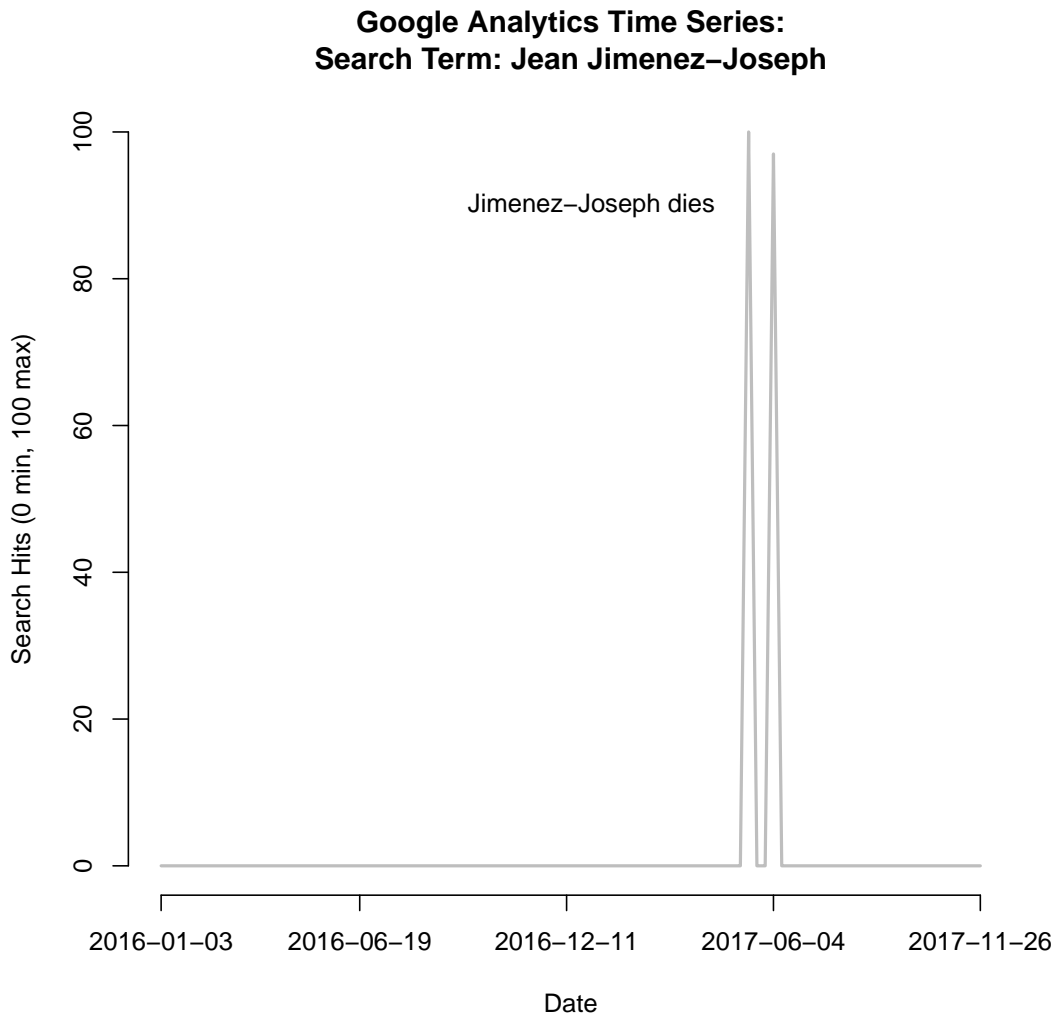


Table A1: ARIMA models estimating interruption effects on Core Civic (CXW) stock volume.

	<i>Dependent variable:</i>		
	CXW Stock Volume		
	Volume	Volume Logged	W/O Fixed Effects
	(1)	(2)	(3)
AR1	0.433*** (0.044)	1.336*** (0.048)	0.446*** (0.043)
AR2	0.101** (0.042)	-0.300*** (0.062)	0.120*** (0.042)
AR3		-0.045 (0.042)	
MA1		-0.870*** (0.031)	
(Intercept)	1,455,724.000*** (238,664.600)	13.830*** (0.346)	1,616,062.000*** (199,616.400)
Time	-1,561.824*** (450.294)	-0.0002 (0.001)	-1,191.541*** (459.168)
Obama begins phasing out private prisons	29,959,883.000*** (1,332,578.000)	2.275*** (0.346)	29,954,728.000*** (1,324,343.000)
Election Day 2016	20,003,789.000*** (1,088,635.000)	2.141*** (0.343)	20,010,189.000*** (1,081,848.000)
Sessions reinstates private prisons	83,787.450 (1,088,726.000)	0.124 (0.344)	208,520.100 (1,088,741.000)
Child detention crisis	8,824,610.000*** (1,090,623.000)	1.949*** (0.343)	8,912,389.000*** (1,085,448.000)
Jimenez-Joseph death	3,408,582.000*** (1,086,645.000)	1.285*** (0.344)	3,308,127.000*** (1,088,752.000)
Election Day 2018	827,084.800 (1,080,910.000)	0.771** (0.343)	860,205.000 (1,106,724.000)
Quarter 2	-154,031.000 (250,573.500)	-0.020 (0.138)	
Quarter 3	527,370.900** (258,711.600)	-0.034 (0.162)	
Quarter 4	518,557.900** (261,627.300)	-0.153 (0.157)	
Tuesday	47,935.130 (112,225.200)	0.051 (0.036)	
Wednesday	33,924.570 (123,528.100)	0.038 (0.040)	
Thursday	59,846.610 (123,783.300)	0.025 (0.040)	
Friday	232,239.200** (113,292.100)	0.091** (0.036)	

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A2: ARIMA models estimating interruption effects on Core Civic (CXW) share values.

	<i>Dependent variable:</i>	
	CXW Stock Share	
	(1)	(2)
AR1	1.005*** (0.037)	0.989*** (0.005)
AR2	-0.016 (0.037)	
MA1		0.015 (0.039)
(Intercept)	30.462*** (2.588)	30.424*** (2.589)
Time	-0.003 (0.006)	-0.003 (0.006)
Obama begins phasing out private prisons	-9.673*** (0.486)	-9.662*** (0.487)
Election Day 2016	6.185*** (0.482)	6.178*** (0.483)
Sessions re-institutes private prisons	1.085** (0.484)	1.094** (0.485)
Child detention crisis	0.847* (0.481)	0.863* (0.482)
Jimenez-Joseph death	-3.435*** (0.481)	-3.453*** (0.481)
Election Day 2018	-1.568*** (0.481)	-1.610*** (0.482)
Quarter 2	-0.103 (0.245)	
Quarter 3	-0.483* (0.293)	
Quarter 4	-0.549** (0.278)	
Tuesday	-0.048 (0.035)	
Wednesday	-0.056 (0.043)	
Thursday	-0.047 (0.043)	
Friday	-0.037 (0.035)	

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01



Table A3: ARIMA models estimating interruption effects on Geo Group (GEO) stock volume.

	<i>Dependent variable:</i>		
	GEO Group Stock Volume		
	Volume	Volume Logged	W/O Fixed Effects
	(1)	(2)	(3)
AR1	0.406*** (0.041)	0.092* (0.053)	0.408*** (0.041)
AR2	0.095** (0.038)	0.823*** (0.048)	0.105*** (0.038)
MA1		0.389*** (0.063)	
MA2		-0.563*** (0.053)	
MA3		-0.149*** (0.048)	
MA4		-0.116*** (0.042)	
(Intercept)	1,387,448.000*** (237,554.700)	13.863*** (0.195)	1,431,825.000*** (189,155.300)
Time	-1,101.016** (453.513)	-0.0004 (0.0004)	-1,026.966** (436.242)
Obama begins phasing out private prisons	27,831,005.000*** (1,302,578.000)	2,499*** (0.348)	27,782,716.000*** (1,318,478.000)
Election Day 2016	10,261,668.000*** (1,214,888.000)	1.941*** (0.355)	10,348,717.000*** (1,175,912.000)
Sessions reinstates private prisons	69,204.600 (1,195,534.000)	0.271 (0.361)	260,073.000 (1,172,530.000)
Child detention crisis	325,741.500 (1,182,056.000)	0.381 (0.346)	464,675.300 (1,180,082.000)
Jimenez-Joseph death	1,671,039.000 (1,167,829.000)	1.008*** (0.348)	1,706,991.000 (1,170,389.000)
Election Day 2018	121,107.200 (1,182,253.000)	0.153 (0.347)	86,159.770 (1,185,836.000)
Quarter 2	-296,580.000 (251,814.100)	-0.196 (0.139)	
Quarter 3	221,518.100 (258,347.400)	-0.207 (0.163)	
Quarter 4	-32,114.870 (260,696.900)	-0.282* (0.161)	
Tuesday	63,666.370 (122,845.600)	0.078** (0.040)	
Wednesday	155,539.100 (134,690.500)	0.062 (0.043)	
Thursday	26,988.790 (134,645.300)	0.036 (0.043)	
Friday	245,582.400** (123,550.200)	0.124*** (0.040)	

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A4: ARIMA models estimating interruption effects on Geo Group (GEO) share values.

	<i>Dependent variable:</i>	
	GEO Group Stock Share	
	(1)	(2)
MA1	1.241*** (0.048)	1.304*** (0.048)
MA2	1.280*** (0.074)	1.374*** (0.074)
MA3	1.065*** (0.065)	1.144*** (0.064)
MA4	0.723*** (0.047)	0.773*** (0.045)
MA5	0.362*** (0.035)	0.373*** (0.035)
(Intercept)	21.880*** (0.362)	22.384*** (0.345)
Time	-0.004** (0.002)	-0.003 (0.002)
Obama begins phasing out private prisons	-5.244*** (0.470)	-5.615*** (0.472)
Election Day 2016	8.615*** (0.506)	8.128*** (0.495)
Sessions reinstates private prisons	4.909*** (0.482)	5.032*** (0.490)
Child detention crisis	0.188 (0.475)	0.052 (0.471)
Jimenez-Joseph death	-3.066*** (0.462)	-3.046*** (0.469)
Election Day 2018	-1.123** (0.498)	-1.513*** (0.501)
Quarter 2	0.933*** (0.271)	
Quarter 3	0.888*** (0.309)	
Quarter 4	-0.246 (0.293)	
Tuesday	-0.034 (0.041)	
Wednesday	-0.072 (0.046)	
Thursday	-0.066 (0.046)	
Friday	-0.051 (0.042)	

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A5: ARIMA models estimating presidential Election Day interruption effects on Core Civic and Geo Group trading volume AND value.

<i>Dependent variable:</i>				
CXW and GEO Stock Volume; Value				
	CXW Volume	GEO Volume	CXW Value	GEO Value
	(1)	(2)	(3)	(4)
MA1				1.658*** (0.016)
MA2				1.982*** (0.024)
MA3				1.786*** (0.021)
MA4				1.180*** (0.016)
MA5				0.498*** (0.012)
(Intercept)	252,625.500*** (49,790.390)	92,785.180** (44,041.350)		-0.282* (0.146)
Time	205.236*** (9.978)	212.725*** (8.983)	-0.012 (0.008)	0.005*** (0.00005)
Election Day 2000	-73,966.610 (1,082,881.000)	-94,058.290 (961,531.400)	0.010 (0.413)	0.020 (0.269)
Election Day 2004	68,002.270 (1,111,489.000)	-275,670.900 (991,422.400)	0.091 (0.413)	0.035 (0.269)
Election Day 2008	-26,481.220 (1,121,109.000)	118,989.100 (1,000,483.000)	1.030** (0.413)	0.301 (0.270)
Election Day 2012	225,440.500 (1,113,808.000)	-14,338.030 (1,016,831.000)	-0.605 (0.413)	-0.362 (0.270)
Election Day 2016	21,852,457.000*** (1,088,462.000)	11,747,822.000*** (972,850.900)	3.320*** (0.413)	1.448*** (0.269)
Quarter 2	2,267.577 (41,446.350)	-65,059.060* (37,413.700)	0.023 (0.113)	-0.003 (0.081)
Quarter 3	9,121.379 (41,850.410)	3,774.455 (37,320.680)	-0.078 (0.132)	-0.075 (0.092)
Quarter 4	-66,498.410 (41,734.370)	-78,885.920** (37,770.840)	-0.209* (0.115)	-0.301*** (0.082)
Tuesday	18,207.080 (46,648.190)	19,155.180 (41,727.810)	-0.023 (0.017)	-0.008 (0.012)
Wednesday	-216.326 (45,914.520)	23,590.830 (41,568.960)	-0.026 (0.020)	-0.001 (0.016)
Thursday	91,623.480* (47,157.260)	72,919.660* (41,957.000)	-0.009 (0.020)	-0.002 (0.016)
Friday	66,918.820 (46,896.240)	93,615.820** (41,896.380)	0.020 (0.017)	0.011 (0.013)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Figure A3: Lockheed Martin Volume and Share (close) time series, 2016-2018. Top left panel reveals daily volume traded. Top right panel reveals daily differenced volume trade. Bottom left panel reveals daily share value. Bottom right panel reveals daily differenced share value.

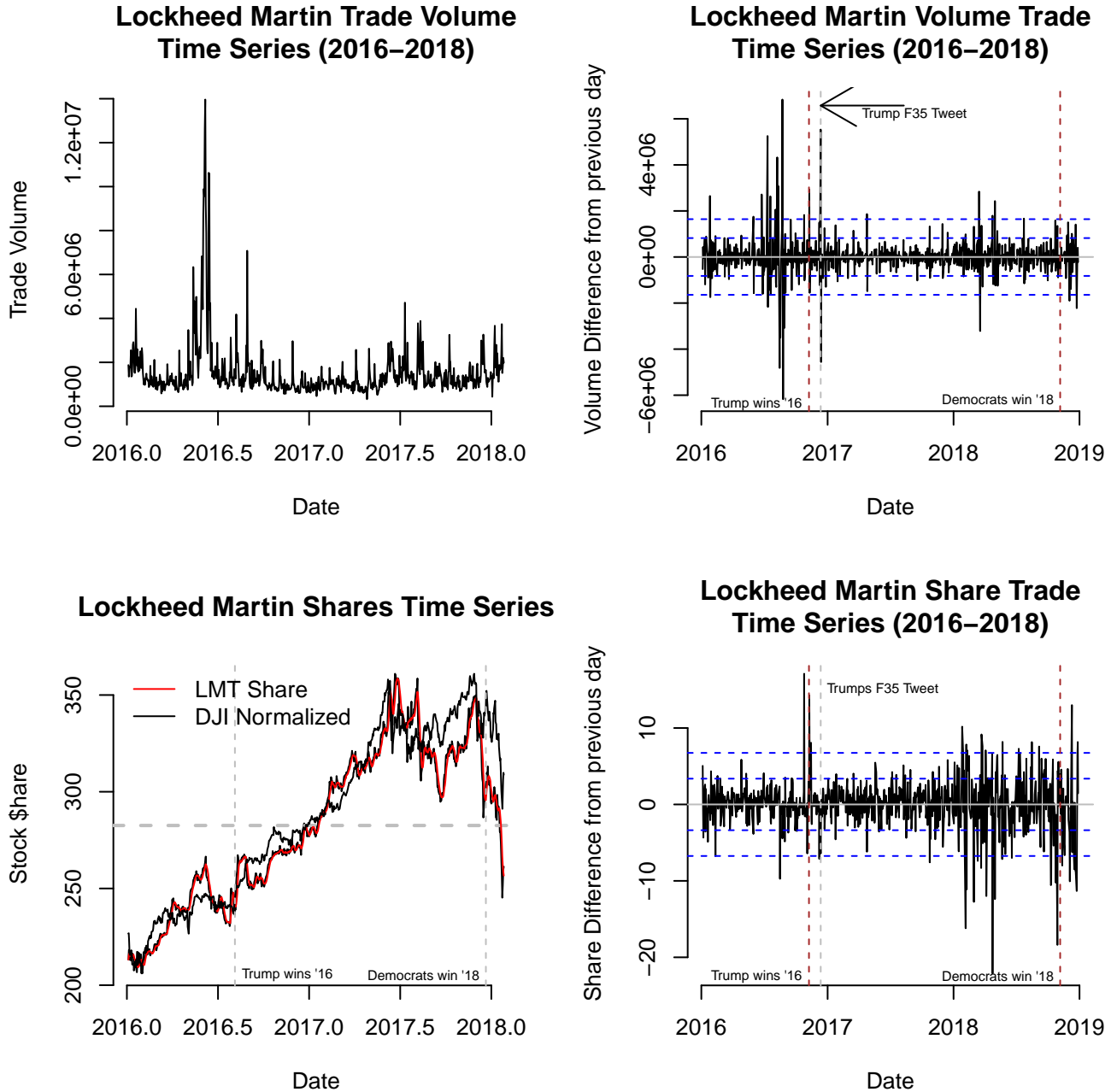


Figure A4: ExxonMobil Volume and Share (close) time series, 2016-2018. Top left panel reveals daily volume traded. Top right panel reveals daily differenced volume trade. Bottom left panel reveals daily share value. Bottom right panel reveals daily differenced share value.

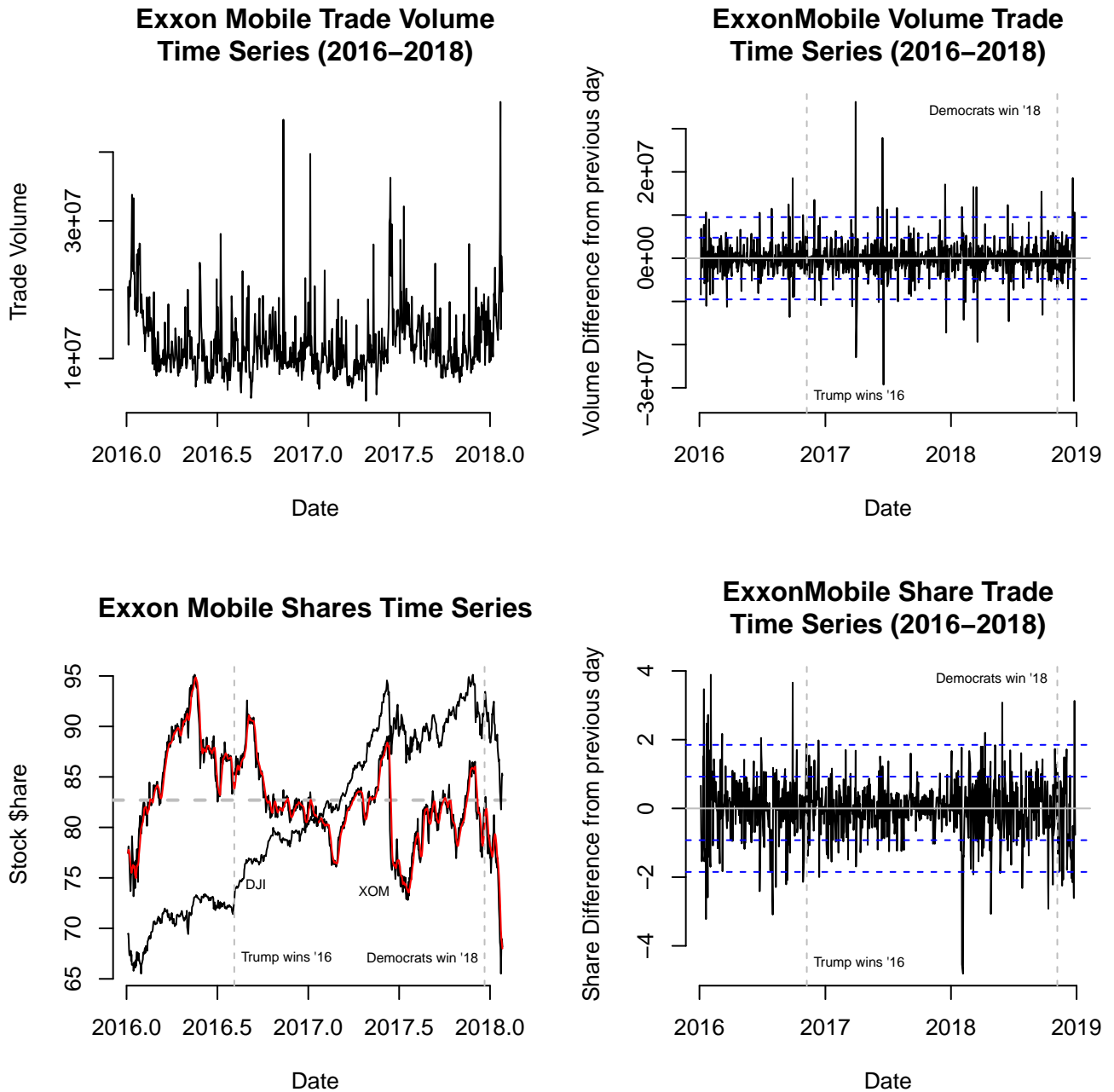


Table A6: ARIMA models estimating interruption effects on Lockheed Martin (LMT) stock volume

	<i>Dependent variable:</i>
	Volume
	Volume
MA1	0.772*** (0.036)
MA2	0.360*** (0.029)
(Intercept)	5,301,243.000*** (1,335,285.000)
Time	-904.894*** (307.461)
Election Day 2016	2,252,368.000*** (623,933.600)
Election Day 2018	-279,967.700 (623,987.600)
Quarter 2	-192,981.300 (171,080.400)
Quarter 3	553,247.500*** (177,890.400)
Quarter 4	21,824.150 (180,903.800)
Tuesday	177,968.000** (75,123.880)
Wednesday	84,954.640 (106,205.100)
Thursday	15,449.190 (106,120.900)
Friday	91,104.540 (75,267.130)
Initial Pentagon Contract	-332,783.000 (623,080.900)
Trump Tweet Criticizing Lockheed	5,250,326.000*** (630,461.900)
Lockheed Reduce Contract Cost	668,285.000 (625,468.000)
Final Pentagon Contract	468,909.600 (630,868.300)
Trump Tweet Syria Pullout	-55,151.360 (628,705.200)

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A7: ARIMA models estimating interruption effects on Lockheed Martin (LMT) stock share

	<i>Dependent variable:</i>
	Share Value Share
MA1	1.263*** (0.036)
MA2	1.292*** (0.051)
MA3	1.150*** (0.051)
MA4	0.811*** (0.044)
MA5	0.389*** (0.029)
(Intercept)	-412.163*** (34.516)
Time	0.157*** (0.008)
Election Day 2016	8.490** (3.479)
Election Day 2018	-21.164*** (3.363)
Quarter 2	-2.794* (1.631)
Quarter 3	-1.800 (1.855)
Quarter 4	-1.776 (1.836)
Tuesday	0.060 (0.242)
Wednesday	0.074 (0.252)
Thursday	-0.062 (0.254)
Friday	-0.016 (0.244)
Initial Pentagon Contract	2.052 (3.431)
Trump Tweet Criticizing Lockheed	-6.893** (3.260)
Lockheed Reduce Contract Cost	9.622*** (2.993)
Final Pentagon Contract	-17.008*** (3.071)
Trump Tweet Syria Pullout	-13.307*** (3.907)

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A8: ARIMA models estimating interruption effects on ExxonMobil (XOM) stock volume

	<i>Dependent variable:</i>
	Volume
	Volume
Time	3,354.528*** (114.685)
Election Day 2016	5,135,280.000 (4,776,906.000)
Election Day 2018	-2,611,993.000 (5,197,291.000)
Quarter 2	-3,798,693.000*** (476,111.700)
Quarter 3	-5,266,550.000*** (488,939.500)
Quarter 4	-4,383,344.000*** (500,723.400)
Tuesday	148,010.100 (554,131.500)
Wednesday	919,455.500* (553,108.700)
Thursday	1,225,681.000** (539,761.000)
Friday	2,299,920.000*** (551,095.800)
Tillerson Becomes Secretary of State	-225,417.500 (4,229,600.000)
Russian Oil Deal	-951,914.300 (4,962,160.000)
Alaska Oil Exploration Deal	311,458.400 (5,097,096.000)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01



Table A9: ARIMA models estimating interruption effects on ExxonMobil (XOM) stock share

	<i>Dependent variable:</i>
	Share Value Share
AR1	0.980*** (0.008)
MA1	0.005 (0.037)
(Intercept)	121.375*** (30.792)
Time	-0.009 (0.007)
Election Day 2016	0.917 (0.915)
Election Day 2018	0.155 (0.923)
Quarter 2	-0.662 (0.471)
Quarter 3	-0.591 (0.564)
Quarter 4	-0.723 (0.534)
Tuesday	-0.005 (0.068)
Wednesday	0.049 (0.083)
Thursday	0.103 (0.083)
Friday	-0.027 (0.068)
Tillerson Becomes Secretary of State	-1.045 (0.917)
Russian Oil Deal	-0.635 (0.917)
Alaska Oil Exploration Deal	-0.276 (0.921)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

## Appendix B. Robustness Checks

In this section we conduct several robustness checks in order to add to the validity of our findings. First, we gathered stock data from a green energy company –Pattern Energy Group (PEGI) –to test stock market reactions to ideologically opposed corporations. One might think a green energy company’s stock would do better under a Democratic administration because Democrats actively support policies to counter climate change whereas the GOP does not.

Table A10 and A11 present ARIMA models for the Pattern Energy Group’s stock volume and stock value, respectively. We include the same covariates as with our prison company models. Turning to Table A10, the only covariate associated with a change in PEGI energy trading is election day 2016. Furthermore, Table A11 shows PEGI’s stock value dropping as a result of the 2016 election. That is, PEGI’s trading went up but Trump’s victory is associated with a drop in the actual value of the stock. This supports the ideological component to our argument. No other covariates in either model have an effect on stock trading or value.

[INSERT TABLE A10 ABOUT HERE]

[INSERT TABLE A11 ABOUT HERE]

We also investigate the validity of the one-shot dates we selected for our volume analyses. Table A12 estimates Core Civic and Geo Group ARIMA models, respectively, with the date selected to represent each independent variable bumped back in time one day. So if a date effect of some shock begins on March 3, we would now select March 2. Because trading is theorized to respond to these critical moments in time beginning on the date as specified, we would not anticipate the same effects by moving the interruption back one day. If we do, that would mean our cut-point as initially specified is problematic.

Table A12 reports our results and supports our argument. All of the key values are negative, meaning that the day before these critical cut points in the series are associated with less trading. This makes intuitive sense because the series is so affected by the real cut-points in terms of trade volume.

[INSERT TABLE A12 ABOUT HERE]

There is a possibility that our findings are due to general trends in the stock market. For instance, maybe all stocks increased after election day 2016 in response to Trump's victory. That is, investors might anticipate Trump will grease the wheels of capitalism by deregulating industry in general. We evaluate this possible validity threat by incorporating the Dow Jones Industrial Average time series into our analysis.

For our Core Civic and Geo Group models, we include concurrent and lagged covariates that measure general stock market fluctuation. Specifically, we incorporate an additional Dow Jones Industrial average (logged) covariate in our main Core Civic and Geo Group volume and share models. Tables A13, A14, A15, and A16 report our ARIMA time series results for Core Civic and Geo Group volume traded and share value. Even when we incorporate both concurrent (logged) and lagged (logged) Dow Jones Industrial average covariates, our core findings for both companies remain unchanged.

[INSERT TABLE A13 ABOUT HERE]

[INSERT TABLE A14 ABOUT HERE]

[INSERT TABLE A15 ABOUT HERE]

[INSERT TABLE A16 ABOUT HERE]

Finally, there is a possibility that our estimates of the relationship between our model covariates and outcome variables may suffer from omitted variable bias. Omitted variable bias is a limitation of most observational research designs. Specifically, our main models do not control for firm-level activity unrelated to our key model covariates. It could be that positive or negative news about prison firms' financial performance might associate with fluctuations in share value, and that our specified political and policy events happen to correlate with financial quarterly reports or other news reports about the firm.

While we think this is a minimal possibility, we nevertheless investigated this possibility of omitted variable bias by gathering publicly available investor news from one of the firms' websites, Geo Group. We built a web-scraping tool that extracted news headline, text of the article, and date from this base link: <http://investors.geogroup.com/News#subcollapse175>. This produced a dataset of n=142 observations ranging from 2013-2018. We then had a research assistant read the headlines and texts of the reports to determine whether each news release might match our analytical criteria. Specifically, we isolate to contract/quarterly financial reports because we think news of these events are the most likely to influence the company's stock portfolio. For instance, if a firm signed a new mega contract with a government agency we might anticipate the firm's share value to increase the following day. Likewise, if a firm reports weak quarterly financial status, its share value might drop the following day.

We subset the firm data to the 2016-2018 time frame to match the same time frame as our base-level analysis. We next created dummy date covariates for each unique date by following the same procedure as specified in the data and methods section above. We next estimated both volume and share ARIMA models, with only these news release covariates as predictors. Finally, we selected only predictors that produced statistically significant relationships between contract or quarterly financial reports and stock volume and shares, respectively. These new variables were then added to our baseline volume and share models to see if our original associational relationships remain.

For the volume models, neither contract announcements nor quarterly financial report announcements affected trading, but we do find effects for the share models. Thus, we only analyze and report our augmented share analysis here. First, for quarter financial reports, we include the two quarter reports associated with a change in share value: the second quarter of 2016 (release date is August 2, 2016);<sup>36</sup> and the second quarter of 2017 (release date is August 7, 2017).<sup>37</sup>

We conducted a similar filtering process for contracts, resulting in two key contracts that at least appear temporally associated with stock value change: 1) On April 13, 2017, Geo Group announced it had signed a new contract with the headline, "The GEO Group Awarded Contract for the Development and Operation of a New Company-Owned 1,000-Bed Detention Facility in

Texas.” 2) On August 19, 2016, Geo Group announced: “The GEO Group Announces Contract Renewal by the Federal Bureau of Prisons for the D. Ray James Correctional Facility.” We code each additional variable such that the day following the news release and all other subsequent days receive a 1, and anything else before a receives a 0. We then re-estimated our Geo Group share value model incorporating these additional covariates. Table A17 presents our findings. Our initial substantive findings for Geo Group share values remains unchanged with the inclusion of these additional covariates.

[INSERT TABLE A17 ABOUT HERE]

Table A10: ARIMA models estimating interruption effects on Pattern Energy Group (PEGI) stock volume.

	<i>Dependent variable:</i>
	PEGI Green Energy Stock Volume
	Volume
AR1	0.435*** (0.090)
MA1	-0.042 (0.102)
(Intercept)	762,638.000*** (89,582.520)
Time	373.973** (162.403)
Obama begins phasing out private prisons	-292,991.300 (509,079.100)
Election Day 2016	2,071,009.000*** (504,779.300)
Sessions reinstates private prisons	-94,395.550 (506,220.200)
Child detention crisis	611,178.700 (507,080.900)
Jimenez-Joseph death	12,929.110 (505,595.700)
Election Day 2018	708,722.400 (510,242.000)
Quarter 2	-92,736.180 (92,604.340)
Quarter 3	-16,944.300 (95,345.540)
Quarter 4	38,193.820 (97,299.780)
Tuesday	73,760.430 (53,317.950)
Wednesday	-3,434.378 (60,623.790)
Thursday	53,633.450 (60,660.830)
Friday	99,001.530* (53,529.670)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A11: ARIMA models estimating interruption effects on Pattern Energy Group (PEGI) stock share value.

	<i>Dependent variable:</i>
	PEGI Green Energy Stock Share Share
AR1	0.989*** (0.005)
MA1	0.020 (0.038)
(Intercept)	21.802*** (1.848)
Time	-0.00000 (0.004)
Obama begins phasing out private prisons	0.215 (0.353)
Election Day 2016	-2.003*** (0.353)
Sessions reinstates private prisons	0.215 (0.353)
Child detention crisis	0.174 (0.352)
Jimenez-Joseph death	-0.329 (0.352)
Election Day 2018	0.511 (0.358)
Quarter 2	-0.257 (0.180)
Quarter 3	-0.059 (0.215)
Quarter 4	-0.164 (0.204)
Tuesday	-0.010 (0.026)
Wednesday	-0.020 (0.032)
Thursday	-0.029 (0.032)
Friday	-0.017 (0.026)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A12: ARIMA models estimating interruption effects day minus 1 on Core Civic and Geo Group trading volume. A day is subtracted from each covariate.

	<i>Dependent variable:</i>	
	CXW and GEO Stock Volume	
	CXW Volume	GEO Volume
	(1)	(2)
AR1	0.428*** (0.044)	0.512*** (0.048)
MA1	0.449*** (0.041)	0.233*** (0.054)
(Intercept)	1,462,547.000*** (379,286.000)	1,457,138.000*** (360,731.900)
Time	-2,039.302*** (727.471)	-1,570.117** (680.817)
Obama begins phasing out private prisons	-18,759,822.000*** (1,216,699.000)	-17,554,026.000*** (1,260,653.000)
Election Day 2016	-13,388,869.000*** (1,226,615.000)	-6,172,723.000*** (1,230,121.000)
Sessions re-institutes private prisons	-581,218.800 (1,162,390.000)	-188,684.000 (1,229,042.000)
Child detention crisis	-5,793,930.000*** (1,184,128.000)	-175,037.200 (1,230,992.000)
Jimenez-Joseph death	-2,230,135.000* (1,163,775.000)	-1,075,832.000 (1,235,890.000)
Election Day 2018	-318,205.300 (1,160,831.000)	9,795.069 (1,230,873.000)
Quarter 2	-34,149.800 (388,914.600)	-255,039.200 (372,441.000)
Quarter 3	852,118.600** (407,515.200)	451,610.300 (392,000.900)
Quarter 4	722,944.900* (413,918.500)	124,561.600 (395,405.300)
Tuesday	176,405.800 (144,033.300)	124,852.400 (136,107.200)
Wednesday	337,158.300* (203,293.300)	355,139.900** (177,621.200)
Thursday	301,951.700 (204,340.200)	205,618.400 (177,692.100)
Friday	290,159.900** (144,835.200)	237,782.100* (136,364.800)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01



Table A13: ARIMA models estimating interruption effects on Core Civic (CXW) stock volume, including Dow Jones Industrial Average covariates.

	<i>Dependent variable:</i>	
	Core Civic Volume	
	Volume w DJI log	Volume w DJI log and lag
	(1)	(2)
(Intercept)		6,316,220.000*** (2,323,685.000)
Time	-1,720.565*** (244.804)	-817.254* (418.953)
Obama begins phasing out private prisons	38,218,989.000*** (1,317,389.000)	38,097,595.000*** (1,322,326.000)
Election Day 2016	21,281,363.000*** (1,327,235.000)	21,176,359.000*** (1,335,798.000)
Sessions re-institutes private prisons	542,958.200 (1,320,920.000)	610,932.800 (1,291,542.000)
Child detention crisis	9,857,209.000*** (1,327,397.000)	9,794,492.000*** (1,327,748.000)
Jimenez-Joseph death	4,059,004.000*** (1,351,717.000)	4,257,555.000*** (1,295,299.000)
Election Day 2018	722,712.800 (1,384,726.000)	614,110.800 (1,352,519.000)
Quarter 2	-172,831.100 (137,375.500)	-303,888.000** (144,528.100)
Quarter 3	575,896.000*** (138,093.900)	329,814.500** (165,408.800)
Quarter 4	565,429.700*** (143,150.900)	374,075.200** (158,877.800)
Tuesday	39,249.780 (156,970.700)	2,735.021 (156,092.800)
Wednesday	5,746.980 (156,802.700)	-15,624.950 (156,683.200)
Thursday	-62.799 (156,662.900)	-11,987.090 (155,469.300)
Friday	210,229.500 (156,273.600)	197,945.000 (156,169.300)
DJI Volume logged	79,121.830*** (8,608.015)	
DJI Volume logged and lagged		-262,683.100** (125,645.500)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A14: ARIMA models estimating interruption effects on Core Civic (CXW) stock share, including Dow Jones Industrial Average covariates.

	<i>Dependent variable:</i>	
	Core Civic Share	
	Share w DJI log	Share w DJI log and lag
	(1)	(2)
AR1	1.017*** (0.037)	0.989*** (0.005)
AR2	-0.027 (0.038)	
MA1		0.033 (0.042)
(Intercept)	-136.660*** (19.864)	53.971** (22.116)
Time	-0.012** (0.006)	-0.002 (0.006)
Obama begins phasing out private prisons	-9.720*** (0.465)	-9.705*** (0.486)
Election Day 2016	5.965*** (0.461)	6.204*** (0.482)
Sessions reinstates private prisons	1.078** (0.462)	1.107** (0.484)
Child detention crisis	0.761* (0.461)	0.813* (0.482)
Jimenez-Joseph death	-3.132*** (0.460)	-3.435*** (0.480)
Election Day 2018	-1.642*** (0.459)	-1.563*** (0.481)
Quarter 2	0.003 (0.235)	-0.099 (0.245)
Quarter 3	-0.402 (0.280)	-0.475 (0.293)
Quarter 4	-0.501* (0.266)	-0.536* (0.278)
Tuesday	-0.054 (0.034)	-0.051 (0.035)
Wednesday	-0.069* (0.041)	-0.058 (0.043)
Thursday	-0.058 (0.041)	-0.048 (0.043)
Friday	-0.042 (0.034)	-0.038 (0.035)
DJI Share logged	17.142*** (2.021)	
DJI Share logged and lagged		-2.378 (2.252)

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A15: ARIMA models estimating interruption effects on Geo Group (GEO) stock volume, including Dow Jones Industrial Average covariates.

	<i>Dependent variable:</i>	
	GEO Group Volume	
	Volume w DJI log	Volume w DJI log and lag
	(1)	(2)
(Intercept)		4,232,858.000* (2,379,913.000)
Time	-1,248.187*** (259.459)	-642.948 (434.965)
Obama begins phasing out private prisons	35,825,678.000*** (1,385,480.000)	35,742,286.000*** (1,418,823.000)
Election Day 2016	11,484,911.000*** (1,440,342.000)	11,431,581.000*** (1,417,330.000)
Sessions reinstates private prisons	316,121.600 (1,380,087.000)	359,306.500 (1,326,083.000)
Child detention crisis	435,555.500 (1,366,144.000)	391,261.800 (1,405,998.000)
Jimenez-Joseph death	2,054,032.000 (1,406,608.000)	2,192,861.000 (1,466,027.000)
Election Day 2018	191,949.700 (1,370,801.000)	112,867.300 (1,420,949.000)
Quarter 2	-290,731.700** (144,277.100)	-378,912.700** (154,271.000)
Quarter 3	274,616.300* (145,706.500)	109,309.000 (178,070.400)
Quarter 4	-9,342.426 (150,851.700)	-137,755.300 (170,204.100)
Tuesday	39,180.930 (163,924.800)	18,009.730 (163,801.000)
Wednesday	117,678.200 (164,628.600)	106,072.200 (163,625.100)
Thursday	-41,047.860 (164,755.500)	-47,092.090 (165,030.500)
Friday	223,985.100 (164,717.800)	218,670.800 (165,181.100)
DJI Volume logged	75,777.920*** (9,018.119)	
DJI Volume logged and lagged		-153,382.000 (128,820.000)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A16: ARIMA models estimating interruption effects on Geo Group (GEO) stock share, including Dow Jones Industrial Average covariates.

	<i>Dependent variable:</i>	
	GEO Group Share	
	Share w DJI log	Share w DJI log and lag
	(1)	(2)
MA1	1.289*** (0.054)	1.246*** (0.049)
MA2	1.354*** (0.085)	1.284*** (0.074)
MA3	1.131*** (0.074)	1.069*** (0.066)
MA4	0.760*** (0.048)	0.726*** (0.047)
MA5	0.372*** (0.037)	0.363*** (0.035)
(Intercept)	-115.024*** (23.237)	39.751 (24.376)
Time	-0.012*** (0.002)	-0.003 (0.003)
Obama begins phasing out private prisons	-5.332*** (0.478)	-5.275*** (0.470)
Election Day 2016	8.123*** (0.509)	8.620*** (0.507)
Sessions re-institutes private prisons	4.527*** (0.484)	4.931*** (0.482)
Child detention crisis	0.386 (0.476)	0.125 (0.486)
Jimenez-Joseph death	-3.115*** (0.453)	-3.035*** (0.463)
Election Day 2018	-0.476 (0.502)	-1.197** (0.510)
Quarter 2	1.010*** (0.271)	0.903*** (0.272)
Quarter 3	0.927*** (0.307)	0.863*** (0.309)
Quarter 4	-0.149 (0.291)	-0.266 (0.294)
Tuesday	-0.044 (0.040)	-0.037 (0.042)
Wednesday	-0.080* (0.044)	-0.073 (0.046)
Thursday	-0.074* (0.044)	-0.067 (0.046)
Friday	-0.051 (0.040)	-0.051 (0.041)
DJI Share logged	14.088*** (2.391)	
DJI Share logged and lagged		-1.835 (2.507)

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table A17: ARIMA models estimating interruption effects on Geo Group (GEO) share values (Contract and Quarterly covariates included)

	<i>Dependent variable:</i>
	GEO Group Stock Share Share
MA1	1.153*** (0.048)
MA2	1.163*** (0.070)
MA3	0.953*** (0.059)
MA4	0.653*** (0.045)
MA5	0.359*** (0.037)
(Intercept)	21.296*** (0.342)
Time	-0.004** (0.002)
Obama begins phasing out private prisons	-7.224*** (0.528)
Election Day 2016	7.984*** (0.479)
Sessions reinstitutes private prisons	4.573*** (0.463)
Child detention crisis	0.603 (0.453)
Jimenez-Joseph death	-2.918*** (0.482)
Election Day 2018	-1.167** (0.474)
Quarter 2	0.789*** (0.252)
Quarter 3	0.697** (0.289)
Quarter 4	-0.361 (0.279)
Tuesday	-0.021 (0.043)
Wednesday	-0.057 (0.046)
Thursday	-0.037 (0.047)
Friday	-0.029 (0.043)
Second Quarter Financial Report Release 2017	-2.363*** (0.479)
Contract with 1000 bed facility in Texas	1.880*** (0.488)
Renewed contract with Bureau of Prisons	2.250*** (0.512)
Second Quarter Financial Report Release 2017	1.236** (0.526)

Note: