

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 baseline 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);³⁶ and the second quarter of 2017 (release date is August 7, 2017).³⁷

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)

