

Appendix to “Why Do States Privatize their Prisons? The Unintended Consequences of Inmate Litigation”

Contents

1	Appendix to OLS Model	2
1.1	Alternative Dependent Variables	2
1.2	Alternative Independent Variables	4
1.3	Robustness Checks: Shor and McCarty (2011) Ideology and Percent Public Workforce that is Unionized	8
1.4	Adding Additional Control Variables	10
1.5	Lagged Dependent Variable	11
2	Data Appendix	12
2.1	Data Collection	12
2.2	Maps of Data	14
3	Instrumental Variables Appendix	24
3.1	Alternative Dependent Variables	24
3.2	Alternative Independent Variables	26
3.3	Alternative Operationalizations and Description of Instrumental Variable	29
3.4	Robustness Checks: Adding Population as a Control	30
3.5	Alternative Independent Variables	31
3.6	Weighting the Dependent Variables	32

This appendix details a variety of additional tests and information from “Why Do States Privatize their Prisons? The Unintended Consequences of Inmate Litigation.” First, it estimates additional specifications for the OLS model; second, it includes a data collection description and more maps and other figures of the private prison data; and third, reports additional specifications for the instrumental variables model.

1 Appendix to OLS Model

1.1 Alternative Dependent Variables

In addition to the model presented in the paper, which analyzes how the politics, economics, and unionization variables affect the growth of prison privatization, I estimate an additional two dependent variables: *Proportion in Private Facilities* and *Sum State Facilities*. These two variables come from my original dataset and represent the proportion of all inmates under a state's jurisdiction that is private and the number of private facilities within a state's borders that holds state inmates, respectively. The results are in Tables 1 and 2.

Table 1: OLS Model of Proportion of Corrections System that is Private

	Prop. in Private Facilities
Sum Lawsuits	0.00003*** (0.00001)
Republican Legislature	-0.002 (0.013)
Republican Governor	0.018* (0.010)
Budget Gap Per Capita	-0.015** (0.007)
# Unionized Corrections Officers (Thousands)	-0.005** (0.002)
Incarceration Rate	0.0001 (0.0001)
Violent Crime Rate	0.0001 (0.0001)
Unified Rep. Gov't	-0.007 (0.015)
N	1,417
State Fixed Effects	✓
Year Fixed Effects	✓
R ²	0.570
Adjusted R ²	0.543
Residual Std. Error	0.064 (df = 1332)

*p < .1; **p < .05; ***p < .01
SE's clustered by state.

Table 2: OLS Model of Sum State Private Facilities

	Sum of State Private Facilities
Sum Lawsuits	0.001*** (0.0004)
Republican Legislature	-0.235 (0.169)
Republican Governor	-0.031 (0.103)
Budget Gap Per Capita	0.029 (0.050)
# Unionized Corrections Officers (Thousands)	0.236* (0.137)
Incarceration Rate	0.008*** (0.002)
Violent Crime Rate	-0.002* (0.001)
Unified Rep. Gov't	0.133 (0.193)
N	1,417
State Fixed Effects	✓
Year Fixed Effects	✓
R ²	0.857
Adjusted R ²	0.848
Residual Std. Error	1.006 (df = 1332)

*p < .1; **p < .05; ***p < .01
SE's clustered by state.

1.2 Alternative Independent Variables

In the main body of the paper, I use the sum of *all* lawsuits terminated, regardless of whether or not they were successful. However, as most prisoner lawsuits are unsuccessful (88% by one estimate (Schlanger 2015) and even higher failure rates like 98.4% in others (Ostrom, Hanson and Cheesman 2003)), the question remains as to whether the effect is driven by large or small cases, those that succeed and those that do not. I investigate this possibility in a few ways.

The FJC data does not show consistent information on whether the prisoner (the plaintiff) is victorious. Therefore, it is not possible to create a variable that is just the number of victorious inmate lawsuits. However, there is a relatively straightforward way of roughly estimating this quantity: analyzing the number of days (or years) from the initial filing of the lawsuit to the eventual adjudication of the dispute. Most successful prisoner lawsuits are extremely long litigation processes, like the blockbuster Florida prisoner rights case, *Costello v. Wainwright*, that originated in 1973 and lasted until the state was fully in compliance with the court orders in 1993 (Schoenfeld 2010). The long duration of these processes are driven by negotiations over court orders and the monitoring and checking of states' compliance with these orders. Therefore, we can reasonably proxy for the success of a court order via the length of the litigation, the difference in days (or years) from the initial filing date to the adjudication date. Figure 1 shows this difference, in years, for the dataset.

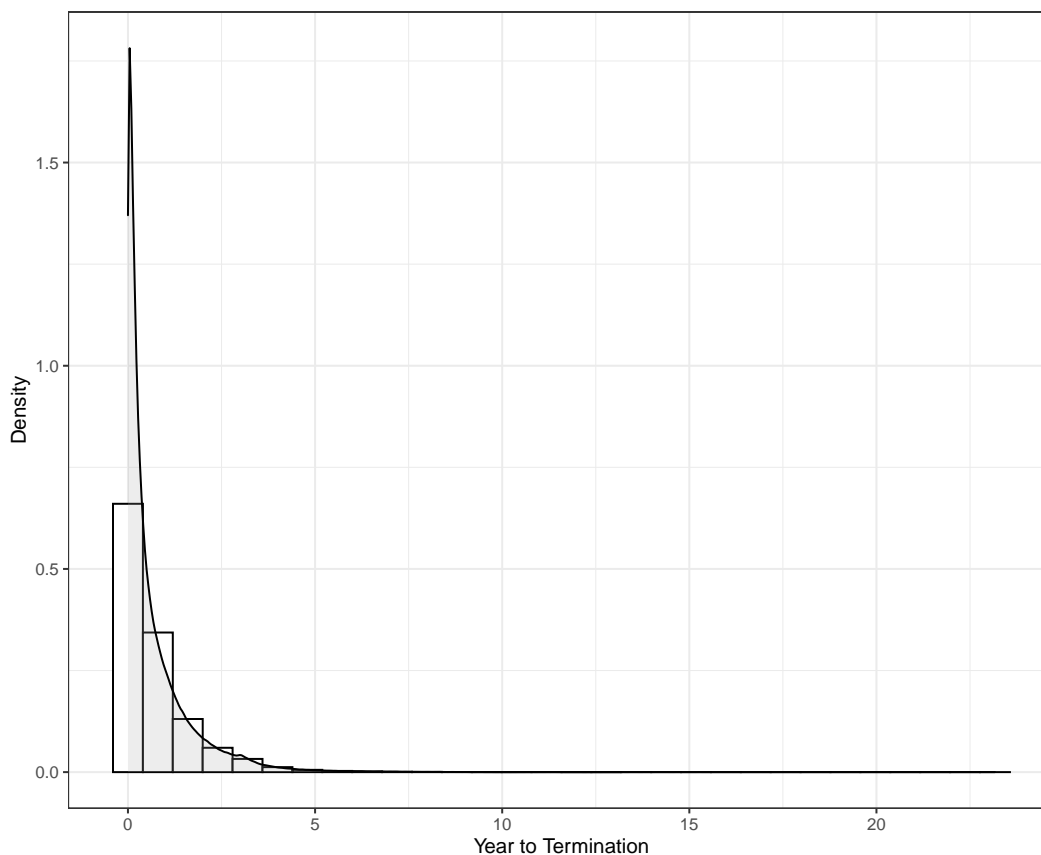


Figure 1: Length of prisoners' cases, in years, from adjudication to termination, 1986 to 2016.

Not surprisingly, the vast majority of cases are adjudicated quickly. The mean length is 0.72 of a year (about 264 days), with the maximum year to completion at more than 23 years (more than 8,400 days). More than 75% of the cases are completed within one year of the filing date and are likely failures for the inmates bringing them.

I use this information to calculate two alternative independent variables, *Sum Small Cases* and *Sum Large Cases*. I rely on the Schlanger (2015) definition that 88% of prisoner lawsuit cases are failures and create a sum of cases above and below that cutpoint: *Sum Small Cases* represents the 88% of cases with the shortest length to termination (in years, with a mean of about 157 days) and *Sum Large Cases* represents the remaining 12% with the longest length to termination (in years, with a mean of more than 2.8 years). I estimate the OLS model using these alternative variables below, in Table 3.

Table 3: OLS Model of Level of Prison Privatization Using Alternative Independent Variables

	Private Design Capacity	
	(1)	(2)
Sum Small Lawsuits	1.616*** (0.359)	
Sum Big Lawsuits		4.861 (4.251)
Republican Legislature	137.087 (268.247)	90.139 (294.506)
Republican Governor	141.031 (131.918)	119.033 (155.307)
Budget Gap Per Capita	5.675 (83.425)	5.388 (85.004)
# Unionized Corrections Officers (Thousands)	200.894 (140.384)	216.739 (164.179)
Incarceration Rate	7.724*** (2.357)	7.704*** (2.527)
Violent Crime Rate	-3.504** (1.633)	-3.417** (1.586)
Unified Rep. Gov't	151.865 (332.781)	210.138 (355.372)
N	1,417	1,417
State Fixed Effects	✓	✓
Year Fixed Effects	✓	✓
R ²	0.755	0.743
Adjusted R ²	0.739	0.726
Residual Std. Error (df = 1332)	1,196.582	1,226.077

*p < .1; **p < .05; ***p < .01

SE's clustered by state.

This result suggests the effect is driven primarily by the so-called 'small' cases, those that have the shortest length from filing to termination. The vast majority (if not all) of these cases are likely failures, indicating that the effect of lawsuits may be primarily driven by the small cases (though,

the coefficient on the big lawsuits variable is positive albeit insignificant and the IV results below indicate both kinds of lawsuits drive this effect).

Next, though inmates in federal and local private facilities are excluded from the calculation of *Private Design Capacity*, it is not straightforward to exclude lawsuits filed by inmates in federal facilities or local jails. The FJC data does not include information on where the inmate is filing the lawsuit from, so it is impossible to tell from the aggregate data whether the inmate is filing a lawsuit against a federal, state, or local entity. There is a way to proxy that, however, using the 1995 Census of State and Federal Adult Correctional Facilities from the Bureau of Justice Statistics.

This dataset includes all correctional facilities in the country in each state (including federal facilities), along with the rated capacity of those facilities. From this, it is straightforward to calculate *the percent of all inmates within a state that are housed in federal facilities* as of 1995. Because I do not expect this quantity to change much from year to year¹, I use this calculation to then multiply the state-year estimates of the sum of all lawsuits, to proxy for the number of lawsuits filed by state inmates (i.e. $(100 - \text{percent federal}) * \text{totallawsuits}$). While this is not a perfect estimate, it provides a rough proxy of the number of lawsuits filed solely by state inmates, assuming that federal and state inmates file at similar rates within each state. I use this variable in place of sum lawsuits, as seen below in Table 4. The results are consistent with those reported in the paper.

¹And, this series is conducted only twice in each decade, so there is not a consistent year-by-year estimate of this percentage.

Table 4: OLS Model of Level of Prison Privatization Using Sum State Lawsuits

	Private Design Capacity
Sum Lawsuits (State Only)	1.508*** (0.407)
Republican Legislature	162.277 (272.578)
Republican Governor	139.545 (136.803)
Budget Gap Per Capita	3.839 (82.658)
# Unionized Corrections Officers (Thousands)	182.832 (139.161)
Incarceration Rate	7.762*** (2.310)
Violent Crime Rate	-3.386** (1.594)
Unified Rep. Gov't	148.558 (341.872)
N	1,417
State Fixed Effects	✓
Year Fixed Effects	✓
R ²	0.756
Adjusted R ²	0.741
Residual Std. Error	1,193.835 (df = 1332)

*p < .1; **p < .05; ***p < .01
SE's clustered by state.

1.3 Robustness Checks: Shor and McCarty (2011) Ideology and Percent Public Workforce that is Unionized

I estimate the OLS model shown in the paper using the Shor and McCarty (2011) measure of legislative ideology to reflect the more fine-grained reality of ideology within state legislatures. I averaged the House and Senate chamber's ideology to calculate *Legislative Ideology*, a holistic measure of the legislature's ideology. The results of this estimation are in Table 5.

Table 5: OLS Model of Level of Prison Privatization Adding Shor and McCarty (2011) Legislative Ideology

	Private Design Capacity
Sum Lawsuits	1.324** (0.559)
Legislative Ideology (Shor and McCarty)	-40.033 (255.892)
Republican Governor	296.863* (148.186)
Budget Gap Per Capita	47.918 (101.053)
# Unionized Corrections Officers (Thousands)	105.464 (173.983)
Incarceration Rate	4.074 (3.341)
Violent Crime Rate	-5.034** (2.194)
Rep. Gov * Leg. Ideology	1.696 (237.110)
N	938
State Fixed Effects	✓
Year Fixed Effects	✓
R ²	0.829
Adjusted R ²	0.814
Residual Std. Error	1,163.037 (df = 859)

*p < .1; **p < .05; ***p < .01
SE's clustered by state.

Finally, I replace the proxy, *Number of Unionized Corrections Officers (Thousands)* with *Percent Public Workforce that are Union Members* in Table 6. This variable, from Hirsch and Macpherson (2003), measures the percent of the entire state's public workforce that is unionized.

Table 6: OLS Model of Level of Prison Privatization Adding State Public Union Membership

	Private Design Capacity
Sum Lawsuits	1.783*** (0.485)
Republican Legislature	264.057 (282.292)
Republican Governor	145.653 (139.969)
Budget Gap Per Capita	-11.377 (78.932)
% Public Workforce that are Union Members	17.516 (20.001)
Incarceration Rate	8.884*** (2.509)
Violent Crime Rate	-3.315** (1.583)
Unified Rep. Gov't	89.730 (323.773)
N	1,417
State Fixed Effects	✓
Year Fixed Effects	✓
R ²	0.750
Adjusted R ²	0.734
Residual Std. Error	1,209.104 (df = 1332)

*p < .1; **p < .05; ***p < .01
SE's clustered by state.

1.4 Adding Additional Control Variables

Table 7 adds several additional variables to the OLS specification in the main text. First, I collected information on the *operational* capacity of state corrections systems in each year to calculate an additional variable, Percent Overcrowded. This measure represents the percent of the state’s operational capacity that is taken up by the then-current prison population (i.e. I divided the state’s prison population in that year by operational capacity and multiplied by 100). Related to that, I also collected a variable called Deaths in Custody, the number of inmates that died in that state-year. Both of these measures represent real strains to the corrections system and could prompt a state to privatize (above and beyond the stress of inmate litigation). Second, though the partisanship variables represent the Democratic-Republican difference, most privatization efforts were bipartisan ones. I would ideally include a measure of neoliberalism to represent this, but to the author’s knowledge, there is no consistent source of this data for all states across all years. However, I also collected additional data from Caughey and Warshaw (2018) to provide a measure of economic policy liberalism in that state-year. This measure estimates economic policy liberalism (for policies like social welfare, taxation, labor, and the environment) using a Bayesian factor-analytic model for mixed data (Caughey and Warshaw 2018). This effectively provides a measure of the liberalism of the state policies (and presumably the views of that state’s leaders) that is not expressly linked to the partisanship of its leaders. Finally, what about firm behavior? I also included the sum of campaign contributions given to candidates running for state office in each state-year from the ‘private prisons and correctional facilities’ industry, collected from Follow the Money.² Unfortunately, this data is only collected consistently from 2000 on, so this variable is included in only some specifications (Columns 2 and 4 below).

Table 7: OLS Model of Level of Prison Privatization, Adding Control Variables

	Private Design Capacity			
	(1)	(2)	(3)	(4)
Sum Lawsuits			1.279*** (0.422)	1.716** (0.728)
Republican Legislature	22.126 (344.282)	209.048 (259.446)	180.111 (343.989)	201.678 (252.635)
Republican Governor	223.335 (140.612)	335.363 (200.187)	238.121* (131.788)	354.003* (195.976)
Budget Gap Per Capita	-89.755 (66.997)	-22.239 (86.777)	-85.542 (69.966)	-12.195 (84.640)
# Unionized Corrections Officers (Thousands)	238.660 (162.076)	322.907 (218.739)	139.410 (125.683)	274.325 (183.402)
Incarceration Rate	5.825*** (1.994)	5.935 (3.652)	6.025*** (1.724)	4.118 (3.823)
Violent Crime Rate	-3.134** (1.438)	-5.660* (2.973)	-2.842** (1.263)	-4.340* (2.448)
Percent Overcrowded	0.833 (5.527)	7.209 (5.668)	0.613 (5.125)	6.603 (5.218)
Deaths in Custody	9.796 (5.991)	-7.894 (7.753)	9.593* (5.428)	-6.918 (7.276)
Economic Policy Liberalism	-592.664 (389.033)	-412.392 (517.406)	-528.480 (350.638)	-416.643 (513.932)
Sum Contributions		0.010*** (0.003)		0.008*** (0.003)
Unified Rep. Gov’t	31.574 (353.887)	-284.220 (300.626)	-47.816 (380.512)	-326.311 (287.439)
N	1,107	573	1,107	573
State Fixed Effects	✓	✓	✓	✓
Year Fixed Effects	✓	✓	✓	✓
R ²	0.778	0.869	0.794	0.881
Adjusted R ²	0.760	0.851	0.777	0.864
Residual Std. Error	1,188.534 (df = 1024)	1,134.835 (df = 503)	1,146.615 (df = 1023)	1,081.452 (df = 502)

*p < .1; **p < .05; ***p < .01

SE’s clustered by state. Columns 2 and 4 use data from 2000 onward only, as campaign contributions data is temporally limited.

²See <https://www.followthemoney.org/>.

1.5 Lagged Dependent Variable

Table 8 adds private design capacity in year $t-1$ to the OLS estimate, effectively a lagged dependent variable model.

Table 8: OLS Model of Level of Prison Privatization, Lagged Dependent Variable Model

	Private Design Capacity	
	(1)	(2)
Sum Lawsuits		1.000*** (0.262)
Republican Legislature	-138.167 (93.043)	-7.138 (91.946)
Republican Governor	-12.114 (74.816)	6.360 (75.112)
Budget Gap Per Capita	-11.311 (65.775)	-16.624 (59.098)
# Unionized Corrections Officers (Thousands)	62.922 (50.998)	-6.442 (32.277)
Incarceration Rate	1.284 (0.946)	1.615** (0.680)
Violent Crime Rate	-0.740 (0.543)	-0.508 (0.431)
Design Capacity in $t - 1$	0.780*** (0.050)	0.755*** (0.044)
Unified Rep. Gov't	57.979 (109.355)	4.059 (121.504)
N	1,417	1,417
State Fixed Effects	✓	✓
Year Fixed Effects	✓	✓
R ²	0.888	0.898
Adjusted R ²	0.881	0.891
Residual Std. Error	808.753 (df = 1332)	774.042 (df = 1331)

*p < .1; **p < .05; ***p < .01

SE's clustered by state.

2 Data Appendix

2.1 Data Collection

All variables gleaned directly from 10-K reports filed by private prison companies. All information is taken from there. Though the reports are fairly consistent over time, I filled in any missing data that occurred using past reports and other sources as a guide³. Additionally, this data encompasses only correctional facilities, like prisons and jails, and not community corrections facilities⁴. I chose to restrict the sample to only prison and jail facilities to measure the practice of private corrections, not private community corrections, which is a commonplace practice across all states. The result is a dataset of private jail or prison facilities, at either the local, state, or federal level, operated by publicly-traded private prison companies in each state-year from 1986 to present.

This dataset includes private facilities operated by both the federal and state government, along with county jails. I do not include community corrections facilities (residential facilities) operated by these companies. I do include juvenile facilities if the purpose is listed as correctional (I.e. they are incarcerated), but do not include those juvenile facilities that are simply treatment centers. Importantly, this choice deviates from the Bureau of Justice Statistics' variable of the number of inmates in private facilities, as the BJS number includes inmates housed in privately-operated correctional facilities including any privately-operated halfway houses, treatment facilities, hospitals, or other special facilities and excludes inmates housed in any publicly-operated facility, even if under contract. BJS data also does not include prisoners under federal jurisdiction. This dataset covers the private jail or prison facilities, at either the local, state, or federal level, in each state-year.

This comprehensive dataset improves on the existing data in several ways. First, this dataset provides information on capacity, customer, and contract length for private prisons for the last three decades. No other dataset contains consistent data on these facilities for that long of a time span. Second, not only does this data contain information on the location of these facilities, but it also lists contract data, information that was previously unavailable to researchers unless they chose to file FOIA requests with the state or federal government. Though this data source, like all others, is not perfect⁵, it substantially improves the data currently available to researchers and helps us examine these facilities in more fine-grained detail than ever before.

The following indicates the coverage of the data.

SEC 10-K's available:

- Corrections Corporation of America (now CoreCivic): 1986 - Present
- Cornell Companies: 1997 - 2010
 - Cornell acquired by GEO Group in 2010
- Correctional Services Corporation (also known as Esmor Correctional Corporation): 1998-

³More details on the data collection in the Appendix.

⁴This choice deviates from the Bureau of Justice Statistics' variable because BJS' figure also includes inmates in privately-operated halfway houses, treatment facilities, or hospitals. My data only reflects those privately incarcerated, in prisons or jails.

⁵For example, this data only includes companies publicly traded on the stock market. This is likely not a significant concern. The businesses that are included represent the vast majority of the private prison market in the United States. In 1998, for example, these four companies together comprised more than 85% of the private prison market (Austin and Coventry 2001). In 2014, after the GEO Group acquired the two smaller companies in my dataset, GEO and CoreCivic comprised approximately 85% of the market share by themselves (Mumford, Schanzenbach and Nunn 2016).

2005

- CSC acquired by GEO Group in 2005
- GEO Group (formerly Wackenhut Corrections): 1996-2016
 - 10-K's available for Wackenhut prior to 1996, but there is no capacity data, only location data available

Data availability:

- Corrections Corporation of America
 - Facility names and capacity: 1986 - Present
 - The SEC data contains the locations of the facilities. Though the early 10-K's do not list the names of those facilities, I used their later properties to label the facilities with their probable names.
 - Primary customer explicitly listed: 1996 - Present
- Cornell Companies
 - Names of facilities, capacity, and primary customer: 1996-2009
 - Correctional Services Corporation (also known as Esmor Correctional Corporation)
 - Names of facilities, capacity, and primary customer: 1997-2004
- GEO Group (formerly Wackenhut Corrections)
 - Facility names: 1989 - Present
 - Like Corrections Corporation of America, the SEC data for Wackenhut only contained the locations of the facilities they operated. Using the names and locations of the properties they operate at later dates, I labeled the properties with their probable names.
 - Capacity: 1996 - Present
 - Primary customer explicitly listed: 1996 - Present

Missing data (as of February 2018)

- Corrections Corporation of America 10-K for fiscal year ending 1993
- CSC 10-K for fiscal years ending 1994-1997

While waiting for the missing data, I inputted the following information:

- CCA 1993 is inputted from the CCA 1992 variables
- Wackenhut 1991 is inputted from Wackenhut 1990
- Because so many years are missing from CSC, I simply omitted the years I was missing

Note: For Cornell Companies and the Correctional Services Corporation, I only listed the Adult Secure Services Facilities: Residential Facilities, not community corrections facilities.

Note: The data for Corrections Corporation of America in 1999 is spotty given its conversion to Prison Realty Trust, an attempt to change the company into a real estate investment trust (REIT). The data in that year lists capacity and other variables as normal, but does not list the primary customer of the facility. As such, I inputted the primary customer as according to previous and future years: if the facility had one operator in 1998 and 2000, I inputted that operator for 1999 as well. If the facility was opened in 1999, I listed the 2000 operator as the primary customer for 1999. If the facility does not exist past 2000, I listed the 1998 customer for 1999. If there was disagreement in the customers in 1998 and 2000, I only listed the customers that were in both years. If there was complete disagreement in the customers in 1998 and 2000, I left the primary customer blank. If the facility listed no customer for 1998 but one for 2000, I listed the customer from 2000 for the 1999 value.

Finally, some facilities CCA owned and operated in both 1998 and 2001 are missing for some reason in the 1999 filing. Because it is highly unlikely the operation of the facility changed back and forth from some other private contractor or the state in a span of one year, I inputted the 1998 data for 1999, providing the design capacity number was the same.

2.2 Maps of Data

The maps in Figures 2 and 3 below convey the distribution of alternative variables that measure prison privatization: the proportion of inmates held in private facilities and the logged number of state and federal private facilities.

Proportion of Private Prison Inmates, 1986 – 2016

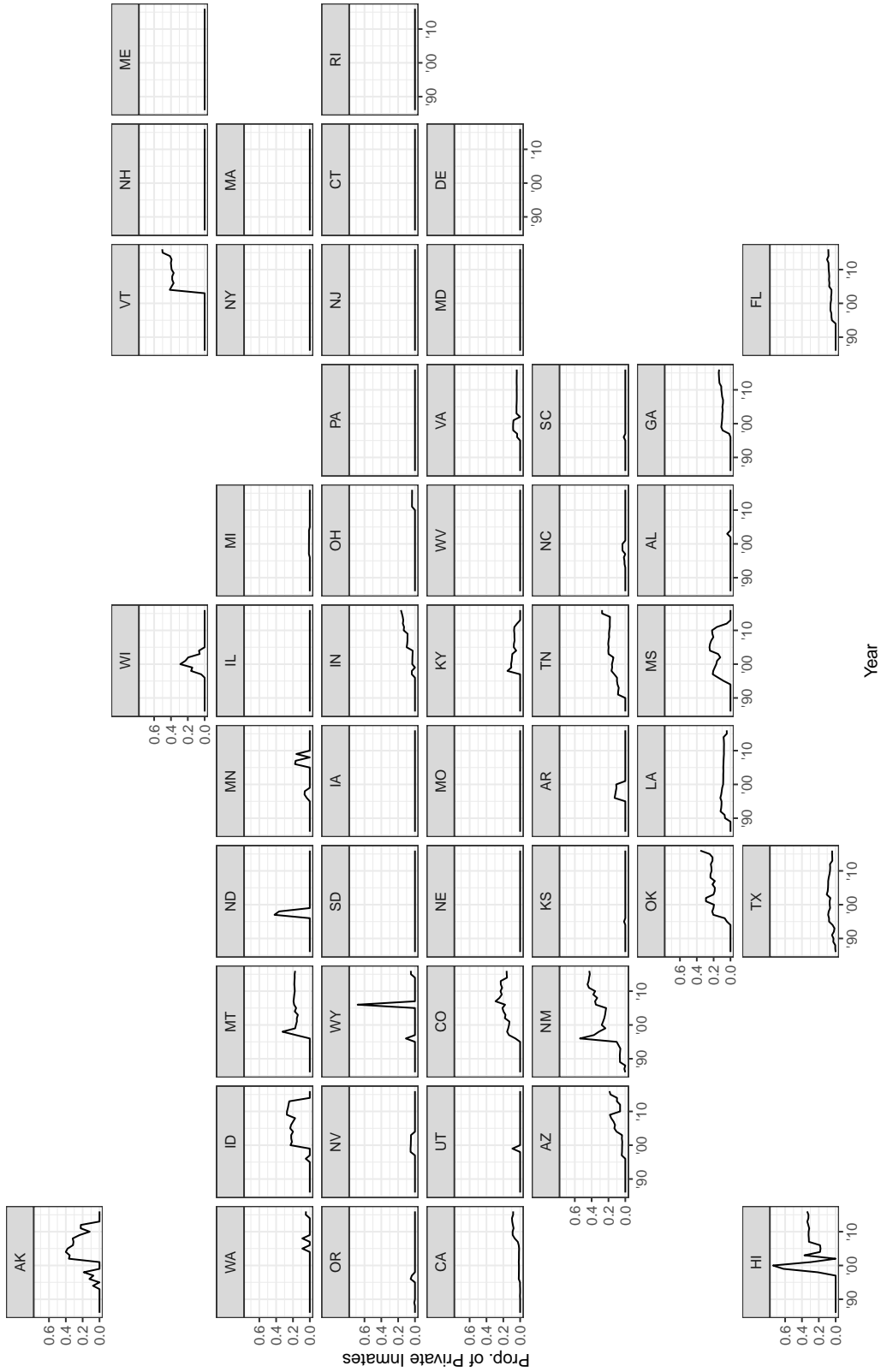


Figure 2: Proportion of inmates held in private facilities, 1986 to 2016.

Number of Private Facilities, 1986 – 2016

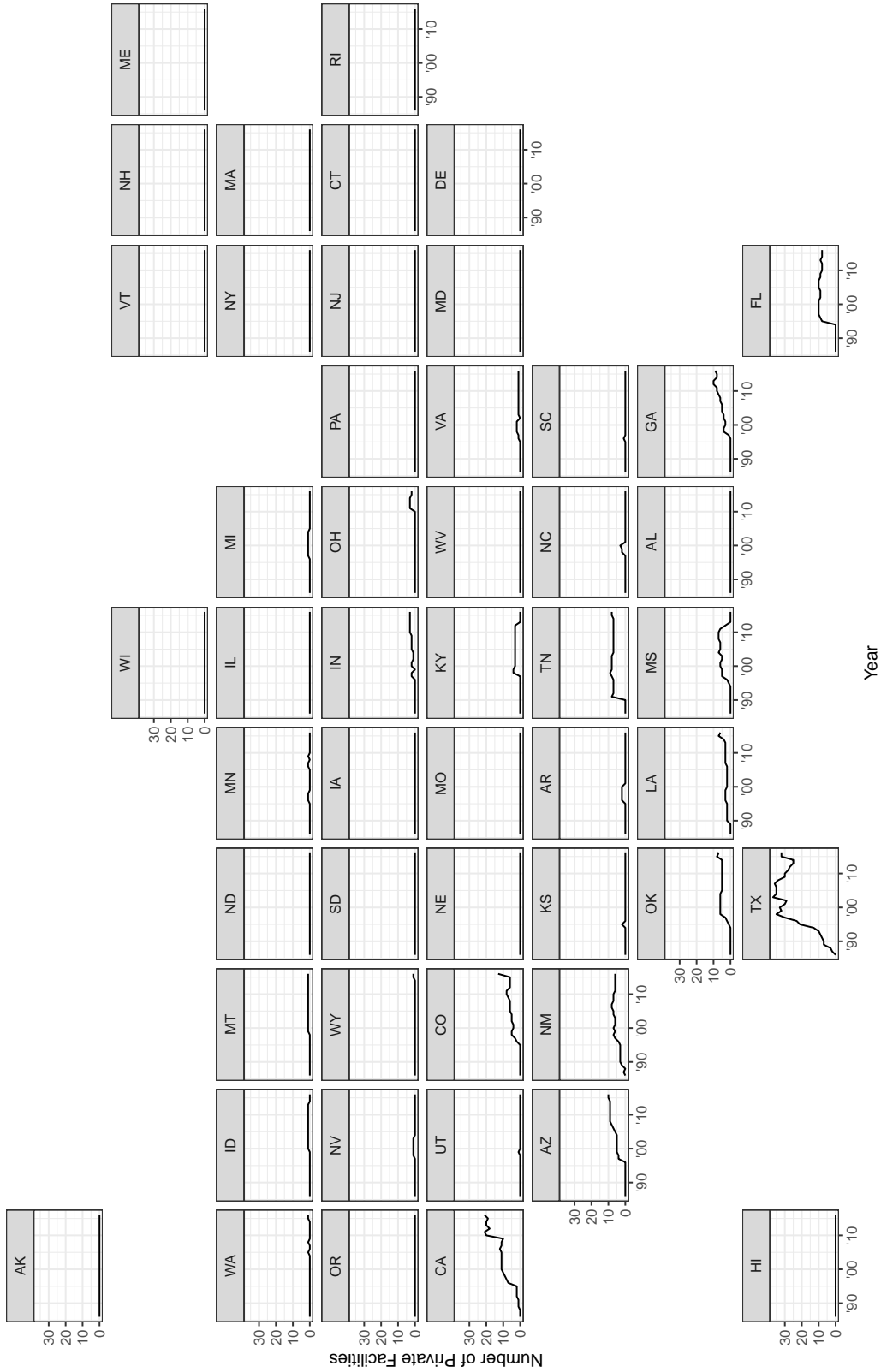


Figure 3: Number of private facilities in each state (including federal and local facilities), 1986 to 2016.

I also investigate the degree of litigiousness across states: are inmates in some states more likely to sue than others? Figure 4 shows this map from 1986 to 2016. All states follow roughly the same pattern, with more lawsuits filed in the 1980s and 1990s, and fewer going forward. This provides at least initial reassurance that inmates across the country are filing lawsuits, and that this activity is not concentrated in a few states.

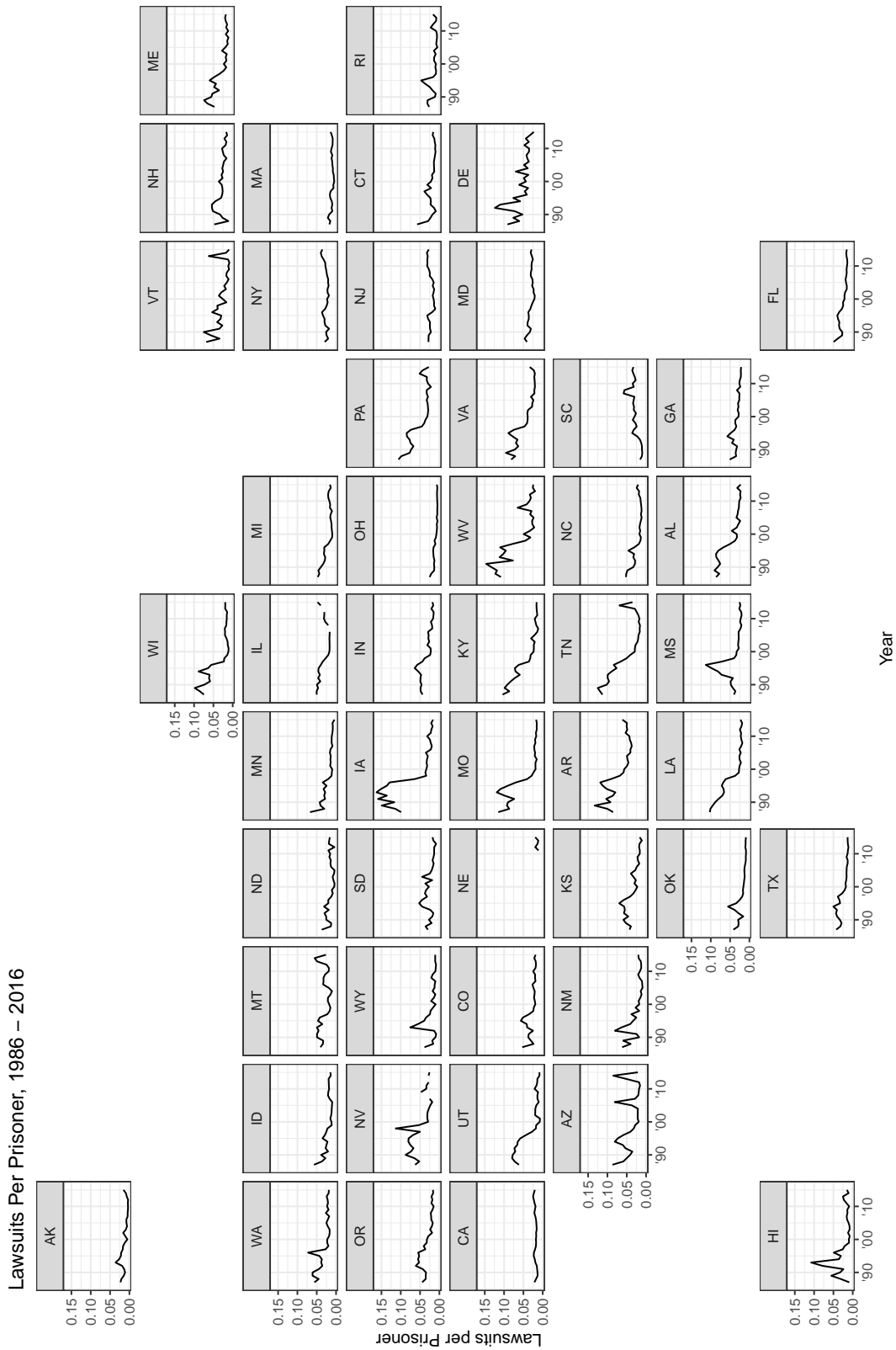


Figure 4: The number of lawsuits filed per prisoner by state, 1986 to 2016.

Finally, it is helpful to visualize the physical locations of these private prisons over time. Figures 5 and 6 show this variation over four even slices of my time period: 1986, 1996, 2006, and 2016.



(a) Private Facilities in 1986



(b) Private Facilities in 1996

Figure 5: Location of private facilities in 1986, (a), and 1996, (b). The point size reflects the number of private facilities in each city. This map includes all private facilities that held local, state, or federal inmates.



(a) Private Facilities in 2006



(b) Private Facilities in 2016

Figure 6: Location of private facilities in 2006, (a), and 2016, (b). The point size reflects the number of private facilities in each city. This map includes all private facilities that held local, state, or federal inmates.

In addition to the number of facilities by state, another useful piece of information found in my dataset considers the mix of intergovernmental agreements to share correctional facilities. In the data, less than ten percent of the prisons or jails have more than one customer (see Figure 7).

When the facilities have more than one customer, though, the customer type is nearly always different. These prisons or jails often house federal prisoners alongside state or local ones or can house customers from multiple of the same type of customer: federal inmates from both the U.S. Marshal’s Service (USMS) and Immigration and Customs Enforcement (ICE). Either way, it seems that these companies utilize the most of these facilities as they can to ensure capacity is reached and the company makes the most money as possible.

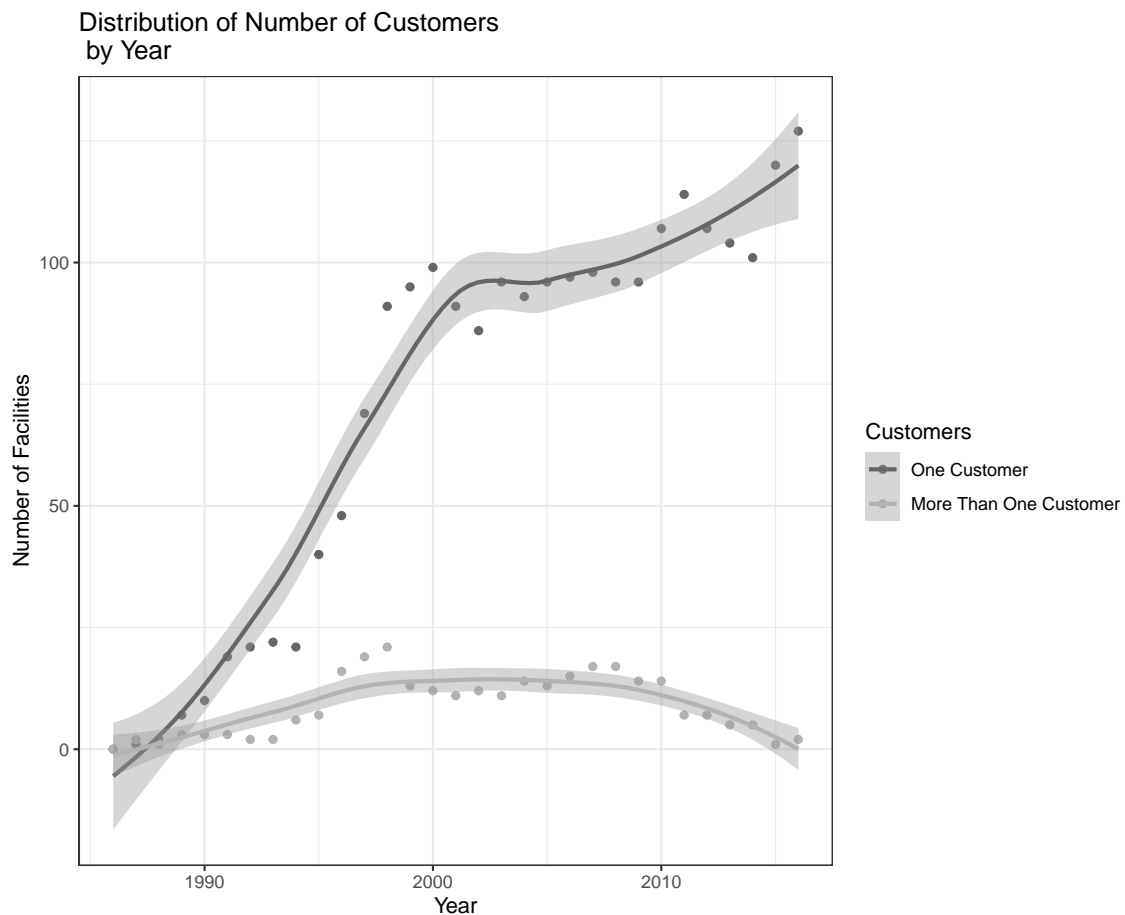


Figure 7: Sum of all facilities that have either one or more than one customer, 1986 to 2016.

Finally, it is worth considering how the dataset developed here corresponds to existing measures. By far the most comprehensive, and the one that provides the highest amount of longitudinal and spacial detail is the annual BJS data on the number of private prisoners per state. That data is only available consistently after 1999, so this section will only consider the correspondence between the BJS data and the original dataset from 1999 to 2015. Figure 8 offers visual evidence of the high correlation between these measures.

The two lines of the figure are nearly identical - and the correlation between them is extremely high at 0.8436206. Moreover, the divergence in the lines is easily explained by the variation in coding schemes that the BJS uses versus what I used. While my original dataset only considers those privately incarcerated in prisons or jails, the BJS data also includes those in privately operated

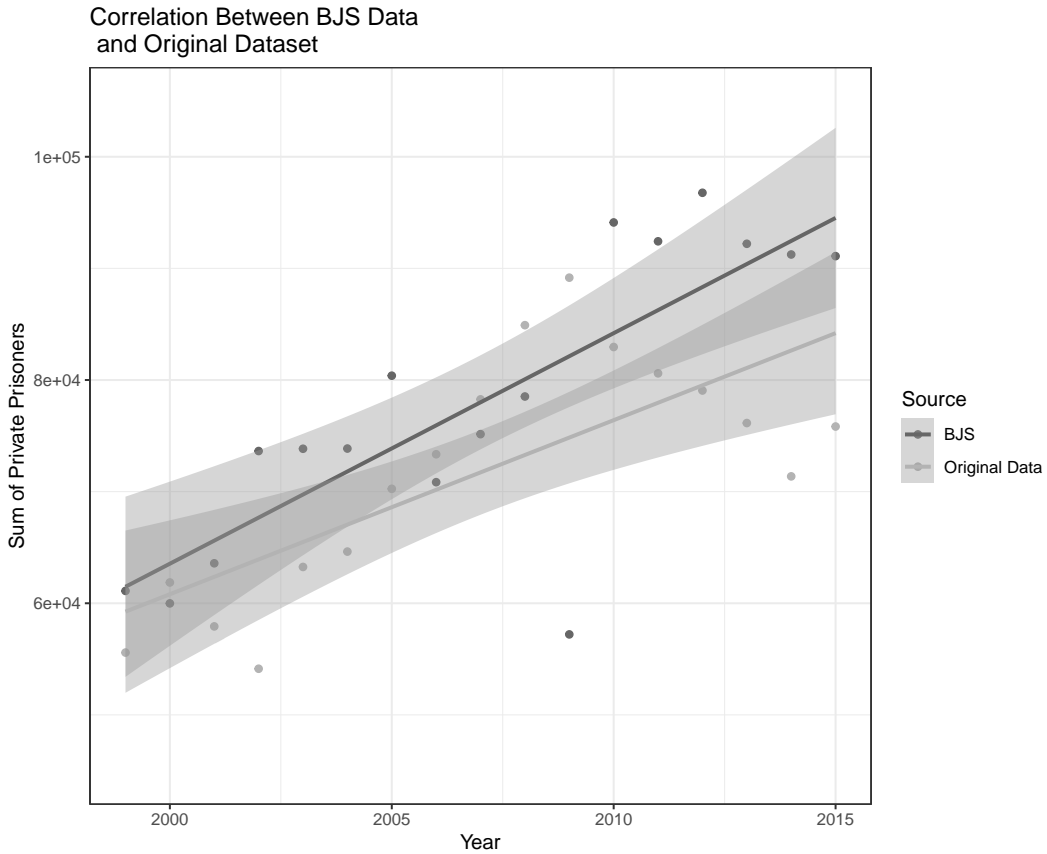


Figure 8: Comparison of BJS and the original dataset data on prisoners in private facilities, 1999 to 2015. This represents the sum of all state prisoners in each year that are housed privately.

halfway houses, treatment centers, and hospitals. It is likely, then, that some (or most) of the divergence found in this graph is because of that slight difference in coding. As states experiment more with privately operated halfway houses in lieu of incarceration, the gap between the BJS data and mine should get larger (and it does, in the 2010s) since I do not include those kinds of facilities in my counts. Additionally, my dataset only considers the four companies that were traded publicly on the stock market. The BJS data makes no such distinction, so part of the divergence is additionally explained by the inclusion of smaller companies that are not in my dataset. Finally, though the lines themselves diverge somewhat over the time period, the confidence intervals are nearly identical, which helps assure that the small discrepancies between the two datasets are not massively significant. Overall, though, the extremely high correlation is encouraging evidence that my data collection is mostly accurate in its representation of private prisons in the United States.

3 Instrumental Variables Appendix

3.1 Alternative Dependent Variables

Tables 9, 10, and 11 below show the same analyses as those in the paper, using proportion of inmates in private facilities, the sum of state-only private facilities, and the sum of all private facilities (operated by local, federal, or state authorities) as alternative dependent variables for Hypothesis 1.

Table 9: The Effect of Terminated Prisoner Lawsuits on Lagged Proportion of Inmates in Private Facilities

	<i>Dependent variable:</i>		
	Lagged Prop. in Private - <i>OLS</i>	Sum Lawsuits <i>First Stage IV</i>	Lagged Prop. in Private - <i>IV</i>
	(1)	(2)	(3)
Sum Lawsuits	-0.00002* (0.00001)		-0.00002 (0.0001)
Weight per Judge Serving		1.075** (0.441)	
Constant	-0.046*** (0.013)	-511.302*** (180.161)	-0.045*** (0.015)
N	1,500	1,400	1,400
Residual Std. Error	0.082 (df = 1459)	519.576 (df = 1361)	0.080 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		19.323	

*p < .1; **p < .05; ***p < .01
SE's clustered by circuit.

Table 10: The Effect of Terminated Prisoner Lawsuits on Lagged Sum State Private Facilities

	<i>Dependent variable:</i>		
	Lagged Sum Facilities <i>OLS</i> (1)	First Stage IV <i>First Stage IV</i> (2)	Lagged Sum State Facilities <i>IV</i> (3)
Sum Lawsuits	0.002** (0.001)		0.003** (0.001)
Weight per Judge Serving		1.075** (0.441)	
Constant	-0.560*** (0.173)	-511.302*** (180.161)	-0.384*** (0.137)
N	1,550	1,400	1,400
Residual Std. Error	1.701 (df = 1508)	519.576 (df = 1361)	1.820 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		19.32	

*p < .1; **p < .05; ***p < .01
SE's clustered by circuit.

Table 11: The Effect of Terminated Prisoner Lawsuits on Lagged Sum Private Facilities (All Included)

	Lagged Sum Facilities <i>OLS</i> (1)	First Stage IV <i>First Stage IV</i> (2)	Lagged Sum Facilities <i>IV</i> (3)
	Sum Lawsuits	0.004*** (0.001)	
Weight per Judge Serving		1.075** (0.441)	
Constant	-0.906*** (0.292)	-511.302*** (180.161)	-0.516** (0.226)
N	1,501	1,400	1,400
Residual Std. Error	3.061 (df = 1459)	519.576 (df = 1361)	3.207 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		19.32	

*p < .1; **p < .05; ***p < .01
SE's clustered by circuit.

3.2 Alternative Independent Variables

As above in Table 3, I consider the small versus large case issue with the IV models. Tables 12 and 13 consider these two variables separately. Both specifications are significant and positive and indicate that all kinds of lawsuits, those that are successful and those that are not, drive this effect.

Table 12: The Effect of Terminated Prisoner Lawsuits (Small) on Lagged Private Design Capacity

	Lagged Private DC <i>OLS</i>	Sum Lawsuits <i>First Stage IV</i>	Lagged Private DC <i>IV</i>
	(1)	(2)	(3)
Sum Small Lawsuits	2.075*** (0.552)		2.477*** (0.848)
Weight per Judge Serving		0.909** (0.360)	
Constant	-758.191*** (208.228)	-401.680*** (146.219)	-681.229*** (171.886)
N	1,501	1,400	1,400
Residual Std. Error	1,636.996 (df = 1459)	447.254 (df = 1361)	1,603.704 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		18.967	

*p < .1; **p < .05; ***p < .01

SE's clustered by circuit.

Table 13: The Effect of Terminated Prisoner Lawsuits (Big) on Lagged Private Design Capacity

	Lagged Private DC <i>OLS</i> (1)	Sum Lawsuits <i>First Stage IV</i> (2)	Lagged Private DC <i>IV</i> (3)
Sum Big Lawsuits	7.544** (3.825)		13.514** (6.179)
Weight per Judge Serving		0.167** (0.084)	
Constant	-558.110** (229.428)	-109.622*** (37.280)	-194.823 (161.572)
N	1,501	1,400	1,400
Residual Std. Error	1,768.830 (df = 1459)	90.541 (df = 1361)	1,795.791 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		19.842	

*p < .1; **p < .05; ***p < .01

SE's clustered by circuit.

I also include my proxy of the number of lawsuits filed by state inmates only, as described previously in the appendix. Table 14 shows the results of this estimation in the IV estimation. The results are consistent with those reported in the paper, providing assurance that the results are not driven by the lawsuits of federal inmates.

Table 14: The Effect of Terminated Prisoner Lawsuits (State Only) on Lagged Private Design Capacity

	Lagged Private DC <i>OLS</i>	Sum Lawsuits <i>First Stage IV</i>	Lagged Private DC <i>IV</i>
	(1)	(2)	(3)
Sum Lawsuits (State Only)	1.861*** (0.518)		2.201*** (0.813)
Weight per Judge Serving		1.023** (0.416)	
Constant	-706.387*** (198.788)	-478.514*** (171.183)	-622.878*** (153.628)
N	1,450	1,400	1,400
Residual Std. Error	1,646.337 (df = 1459)	490.387 (df = 1361)	1,610.072 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		19.646	

*p < .1; **p < .05; ***p < .01
SE's clustered by circuit.

3.3 Alternative Operationalizations and Description of Instrumental Variable

Habel and Scott (2014) provide a wealth of data on the number of judges serving, both active and senior status, and the number of case filings each district sees. In the paper, the main variable I use is *Weight per Judge Serving*, which divides weighted case filings by the number of active and senior judges in each district-year. Weighted case filings are calculated by the Federal Judicial Center and account for the varying lengths of time different categories of cases take to adjudicate. Additionally, Habel and Scott (2014) scour judge biographies and histories to gather a count of judges serving in each district-year, with active, regular judges counting as 1 (provided they served the whole year) and senior judges counting as 0.25 due to their decreased caseload. This calculation is particularly important as vacancies on districts are extremely common, whether due to a not-yet filled nomination, illness, or other, so the total number of judgeships a district has may not be close in reality to the number of judges who actually hear cases.

Then, I aggregate this variable to the state level, so for a state like Alabama with three district courts, I add up all the weighted case filings for those courts and divide by the total number of judges serving.

Now, I try out one alternative variables to *Weighted Cases per Judge Serving*. I divide weighted case filings by the number of authorized judgeships only. These results are in Table 15. Additionally, results remain the same and are available (but not shown here) that use an additional alternative variable: the number of judges serving but excluding senior status judges. The results are consistent, though note the F-statistic is stronger with the instrumental variable used in the main body of the paper (*Weighted Cases per Judge Serving*) rather than this alternative, *Weighted Cases per Authorized Judge Serving*.

Table 15: The Effect of Terminated Prisoner Lawsuits on Lagged Private Design Capacity, Alternative Instrumental Variable

	Lagged Private DC <i>OLS</i> (1)	Sum Court Orders <i>First Stage IV</i> (2)	Lagged Private DC <i>IV</i> (3)
Sum Lawsuits	1.761*** (0.494)		2.013*** (0.755)
Weight per Authorized Judge Serving		1.041** (0.471)	
Constant	-693.311*** (194.627)	-477.080*** (173.652)	-618.720*** (163.030)
N	1,501	1,400	1,400
Residual Std. Error	1,644.977 (df = 1459)	521.145 (df = 1361)	1,603.212 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		15.950	

*p < .1; **p < .05; ***p < .01

SE's clustered by circuit.

3.4 Robustness Checks: Adding Population as a Control

Table 16 below is the estimation used in the paper with population added as a control variable.

In an IV analysis, any covariates included must be exogenous, otherwise they will lead to bias. However, factors that may contribute to both the independent and dependent variable that are also exogenous are difficult to find: incarceration rate and any measure of state budgetary health, for example, are endogenous to both the measure of lawsuits and the extent of prison privatization in each state. The one plausibly exogenous variable that gets at the number of lawsuits that is not incarceration rate is population. When I include this exogenous control variable, the direction of the variables largely do not change, but some coefficients lose their statistical significance. It is likely, though, that some of the variation captured by circuit fixed effects already counts variation in factors like population, hence why the main empirical strategy does not include any exogenous covariates.

Table 16: The Effect of Terminated Prisoner Lawsuits on Lagged Private Design Capacity, Adding Population

	Lagged Private DC <i>OLS</i> (1)	Sum Lawsuits <i>First Stage IV</i> (2)	Lagged Private DC <i>IV</i> (3)
Sum Lawsuits	1.405** (0.602)		3.113 (2.388)
Population	0.00004 (0.00005)	0.0001*** (0.00000)	-0.0001 (0.0002)
Weight per Judge Serving		0.227* (0.135)	
Constant	-821.644*** (253.654)	-365.863*** (63.847)	-272.453 (560.942)
N	1,501	1,400	1,400
Residual Std. Error	1,639.586 (df = 1458)	308.141 (df = 1360)	1,676.640 (df = 1360)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		19.32	

*p < .1; **p < .05; ***p < .01
SE's clustered by circuit.

3.5 Alternative Independent Variables

Table 17 uses the logged sum of all prisoners' lawsuits as the main independent variable in place of the sum of all lawsuits.

Table 17: The Effect of Logged Terminated Prisoner Lawsuits on Lagged Private Design Capacity

	Lagged Private DC <i>OLS</i> (1)	Logged Sum Lawsuits <i>First Stage IV</i> (2)	Lagged Private DC <i>IV</i> (3)
Log Sum Lawsuits	475.771** (215.510)		742.399** (373.385)
Weight per Judge Serving		0.003** (0.001)	
Constant	-2,656.470*** (1,015.977)	2.535*** (0.417)	-3,558.479** (1,576.859)
N	1,501	1,400	1,400
Residual Std. Error	1,837.160 (df = 1459)	1.001 (df = 1361)	1,810.546 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		21.352	

*p < .1; **p < .05; ***p < .01
SE's clustered by circuit.

3.6 Weighting the Dependent Variables

One may be concerned about the way I constructed the design capacity variable. Regarding facilities with prisoners from multiple states' correctional systems, I merely averaged the design capacity between the customers. However, it is likely possible that is not an accurate depiction of the distribution of inmates across jurisdictions. North Lake Correctional Facility, for example, has Vermont and Washington as its customers, but it is likely Vermont houses fewer inmates overall than Washington does, simply because the prison population of the former is smaller than the latter. To counteract this, I weighted the capacity variable via the following strategy: I found the total number of inmates under federal, state, or jail (i.e. local) jurisdiction for each year. Then, if a facility had multiple customers, I multiplied the total capacity by this share to get a more realistic representation of what proportion of the facility each jurisdiction would hold. If there were multiple customers of the same level (i.e. two cities or two states), I used a similar weighting scheme with their total prison or jail populations. I then recalculated *Private Design Capacity* according to this measure. The substantive results from the main paper do not change.

Table 18 uses the weighted versions of the design capacity variables. I estimated the following equation to weight these variables: $\gamma_{ja,t,c} = \frac{PrisonPop_{ja,t}}{PrisonPop_{ja,t} + PrisonPop_{jb,t}} * DesignCapacity_{t,c}$, where $\gamma_{ja,t,c}$ represents the design capacity of facility c for jurisdiction ja in time t , $PrisonPop_{ja,t}$ represents the prison population of jurisdiction a in time t , and $PrisonPop_{jb,t}$ represents the prison population of jurisdiction b in time t .

Table 18: The Effect of Terminated Prisoner Lawsuits on Lagged Private Design Capacity (Weighted)

	Lagged Private DC Weighted - OLS (1)	Sum Lawsuits <i>First Stage IV</i> (2)	Lagged Private DC Weighted - IV (3)
Sum Lawsuits	1.786*** (0.508)		2.177*** (0.787)
Weight per Judge Serving		1.075** (0.441)	
Constant	-696.138*** (194.716)	-511.302*** (180.161)	-600.192*** (149.771)
N	1,501	1,400	1,400
Residual Std. Error	1,656.637 (df = 1459)	519.576 (df = 1361)	1,626.179 (df = 1361)
Circuit FE	✓	✓	✓
Year FE	✓	✓	✓
F-Statistic		19.323	

*p < .1; **p < .05; ***p < .01
SE's clustered by circuit.

References

- Austin, James and Garry Coventry. 2001. "Emerging Issues on Privatized Prisons." <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=181249>.
- Caughey, Devin and Christopher Warshaw. 2018. "Policy Preferences and Policy Change: Dynamic Responsiveness in the American States, 1936-2014." *American Political Science Review* 112(2):249–266.
- Mumford, Megan, Diane Whitmore Schanzenbach and Ryan Nunn. 2016. *The Economics of Private Prisons*. The Brookings Institution. <https://www.brookings.edu/research/the-economics-of-private-prisons/>.
- Ostrom, Brian J., Roger A. Hanson and Fred L. Cheesman. 2003. "Congress, Courts and Corrections: An Empirical Perspective on the Prison Litigation Reform Act." *Notre Dame Law Review* 78(5):1525–1560.
- Schlanger, Margo. 2015. "Trends in Prisoner Litigation, as the PLRA Enters Adulthood." *UC Irvine Law Review* 5:153–178.
- Schoenfeld, Heather. 2010. "Mass Incarceration and the Paradox of Prison Conditions Litigation." *Law & Society Review* 44(3-4):731–768.
- Shor, Boris and Nolan McCarty. 2011. "The Ideological Mapping of American Legislatures." *American Political Science Review* 3:530–551.