Public sector unionization and the size of state government payrolls

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Abstract

[The abstract will go here. The abstract is a 150-200 word summary of the paper aimed at potential readers. Its goal is to convince them to read the paper.]

1 Introduction

Some academics and politicians have argued that public sector unions can be a powerful political force in increasing the size of government. Public sector employees have a clear financial interest in a larger government, and unions may enable them to organize politically to pursue this interest. This paper uses U.S. state-level data on public sector unionization and per-capita public sector payroll to evaluate whether this hypothesis is consistent with the data.

[In this section, we describe what we have done, what our results were, and why the results might be interesting.]

1.1 Related literature

[In this section, we would identify and summarize important previous research on this question. Unfortunately we don't have time to do that, so what we will do is simply mention three papers. Say something like "Important previous research on this subject includes Rogers and Hammerstein (1943), Hall and Oates (1982), and Jones (2007)"]

2 Data and institutional background

2.1 Institutional background

[In this section, we might talk about the institutional context of our data. For example, we might say something about the history of public sector unionization in the U.S., or we might talk about how fiscal responsibilities are divided up between federal, state, and local government. We might leave this section out entirely if that kind of information is not needed to understand what we are doing.]

2.2 Data

Our analysis is based on linked 2003 state-level data from multiple sources. [Describe our data sources, including proper citations. Also describe (if it isn't obvious) how any additional variables were constructed. The idea here is to give sufficient information that a reader could reproduce your results exactly.]

3 Methodology

[In this section you will describe the regressions you are running, and what the data allow you to identify. This is the place to talk candidly and clearly about any identification problems, data problems, etc.]

4 Results

4.1 Descriptive statistics

Table 1 provides summary statistics for the main variables in our study. [Discuss these results.]

Figure 1 shows a histogram of the cross-sectional distribution of public sector union membership rates across states. [Discuss these results.]

Figure 2 shows a scatter plot of per-capita public sector payroll versus public sector union membership rates. [Discuss these results.]

4.2 OLS regression results

Table 2 provides the regression results for per-capita employment. The first panel of results in the table uses per capita full-time employment as the dependent variable, while the second panel of results uses per-capita FTE employment as the dependent variable. Unionization rates are measured by the membership rate in specification (1), and by the coverage rate in specification (2). In specification (3) we use the membership rate, and we also control for the natural logarithm of population.

[Discuss the results and their interpretation here.]

Table 3 provides the regression results for March 2003 payroll expenditure. The first panel of results uses payroll expenditure per capita as the dependent variable, while the second panel of results uses payroll expenditure per FTE public sector worker. As in Table 2, specification (1) uses the union membership rate, specification (2) uses the union coverage rate, and specification (3) controls for log population.

[Discuss the results and their interpretation here.]

Figure 3 provides some evidence on the validity of assuming a linear relationship between unionization and per-capita public sector payroll. The dotted line shows the linear regression curve as

estimated in column [fill in the correct answer] of Table [fill in the correct answer]. The solid line shows the nonparametric regression curve, estimated by a kernel smoother.

[Discuss the results and their interpretation here.]

4.3 Panel regression results

We also estimate our model using a panel of states covering the years 2000-2008, and allow for state and year fixed effects. The results from this estimation procedure are reported in Table 4.

[Discuss the results and their interpretation here.]

4.4 IV regression results

In addition to the OLS results reported in Section 4.2, we also estimate the effect of unionization using an instrumental variables strategy similar to that employed by Hoxby (1996). Specifically, we use Hoxby's measures of state level labor law as instruments for the union membership rate. The labor law instruments are indicators for (1) whether teachers' unions have the explicit right to meet with school administration or the explicit right to engage in collective bargaining; (2) whether teachers' unions can have "agency shops", i.e., workplaces where the union can collect dues from nonmembers as well as members; and (3) whether teachers' unions can have "closed shops", i.e., workplaces in which union membership is mandatory for employment. Of the 50 states in our data [fill in the correct number] give an explicit right to meeting and/or collective bargaining, [fill in the correct number] give the right to agency shops, and [fill in the correct number] give the right to closed shops. While Hoxby's instruments relate specifically to the power of teachers' unions, we are using them to indicate the power of public sector unions in general.

Table 5 reports the estimated effect of union membership rates on size of government using these instruments.

[Discuss the results and their interpretation here]

5 Conclusion

[We will add this at the end.]

References

[Here we will fill in complete bibliographic information on all data sources and all articles, books, etc. cited in the text. See http://www.aeaweb.org/sample_references.pdf for examples of how to cite.]

Tables

Table 1: Summary statistics, 2003 data.

Variable	Mean	Median	Std. Dev.	Minimum	Maximum
Public sector unionization:					
Membership rate, %	32.9	27.4	17.4	6.8	68.0
Coverage rate, %	37.5	33.2	17.0	10.5	70.6
Size of public sector:					
Full time employment (per 100,000 residents)	1565	1449	601	899	4170
FTE employment (per 100,000 residents)	1802	1690	658	1062	4640
Per-capita March payroll	61.2	56.2	22.7	35.7	151.0
Per-FTE March payroll	3430	3280	482	2765	4691
Population:					
Total population, millions	5.8	4.1	6.4	0.5	35.3
ln(population)	15.1	15.2	1.0	13.1	17.4

Table 2: Regression results on relationship between unionization and public sector employment per 100,000 residents, 2003 data.

Explanatory Variable	Full-time Employment			FTE Employment		
	(1)	(2)	(3)	(1)	(2)	(3)
Union membership, %						
Union coverage, %						
ln(population)						
Constant						
R^2						
# observations						

Standard errors are in parentheses (* = p < 0.10; ** = p < 0.05; *** = p < 0.01).

Table 3: Regression results on relationship between unionization and monthly public sector payroll, 2003 data

Explanatory Variable	Per-capita payroll			Per-FTE payroll		
	(1)	(2)	(3)	(1)	(2)	(3)
Union membership, %						
Union coverage, %						
ln(population)						
Constant						
R^2						
# observations						

Standard errors are in parentheses (* = p < 0.10; ** = p < 0.05; *** = p < 0.01).

Table 4: Panel regression results for effect of unionization on size of public sector, 2000-2008 data.

Explanatory Variable	Dependent Variable			
	Full-time Employment	FTE Employment	Per-capita Payroll	Per-FTE Payroll
Union membership, %				
# states				
# observations				

All regressions include state and year fixed effects. Standard errors are in parentheses (* = p < 0.10; ** = p < 0.05; *** = p < 0.01).

Table 5: IV Regression results for effect of unionization on size of public sector, 2003 data.

Explanatory Variable	Dependent Variable			
	Full-time Employment	FTE Employment	Per-capita Payroll	Per-FTE Payroll
Union membership, %				
ln(population)				
Constant				
First-stage F statistic				
p-value				
# observations				

Standard errors are in parentheses (* = p < 0.10; ** = p < 0.05; *** = p < 0.01).

Figures

Figure 1: Histogram of public sector union membership rates.

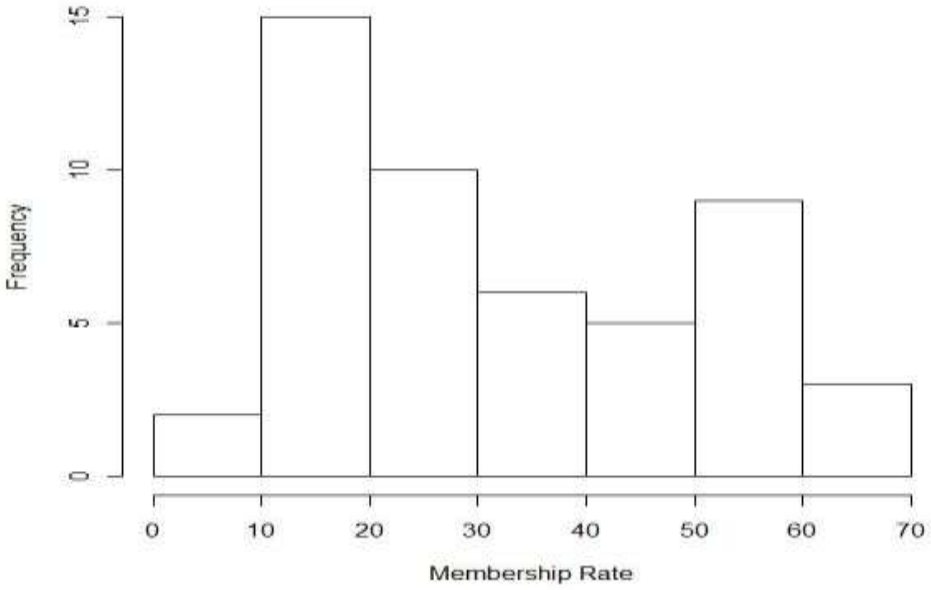

Figure 2: Scatter plot of per-capita public sector payroll versus public sector union membership rates.

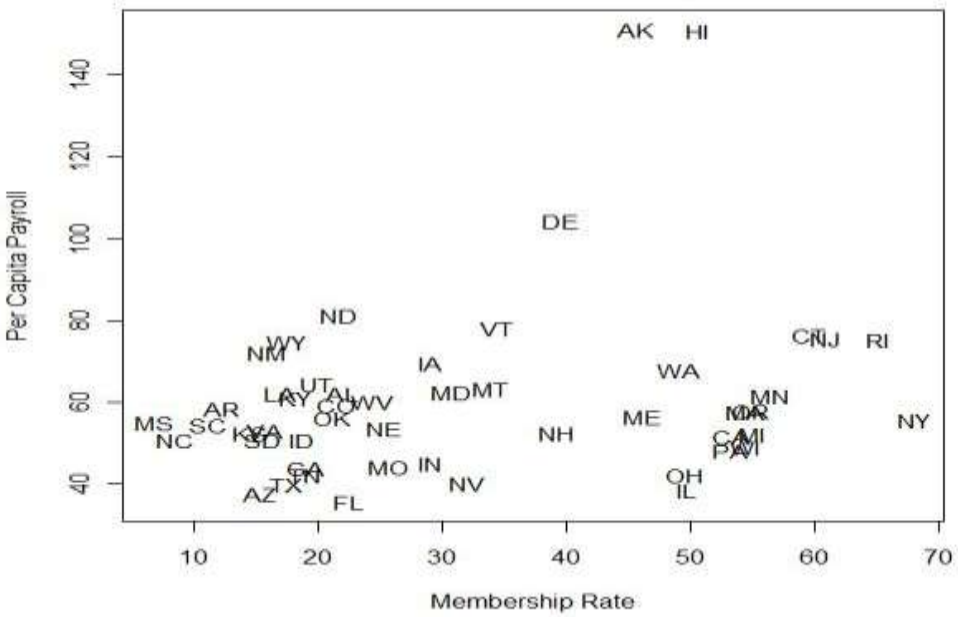

Figure 3: Nonparametric and linear regression curves of per-capita public sector payroll versus public sector union membership rates.

INSERT FIGURE 3 HERE.

Appendix

[Here is where you put any material that needs to be somewhere, but you don't actually want to ask your readers to read. You may or may not find it useful to have an appendix in your paper.]