Public Employee Pensions and Collective Bargaining Rights: Evidence from State and Local Government Finances
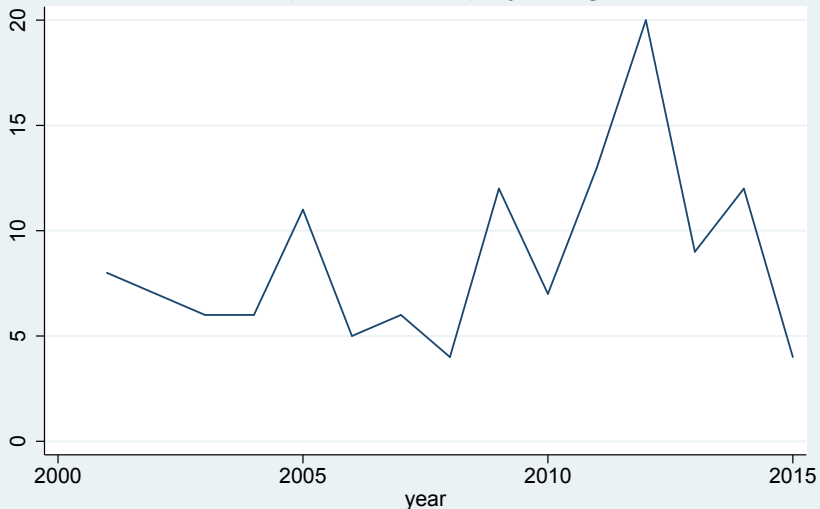
Brookings Municipal Finance Conference

Brigham R. Frandsen   Michael Webb
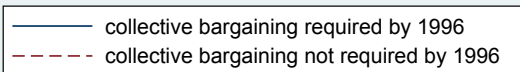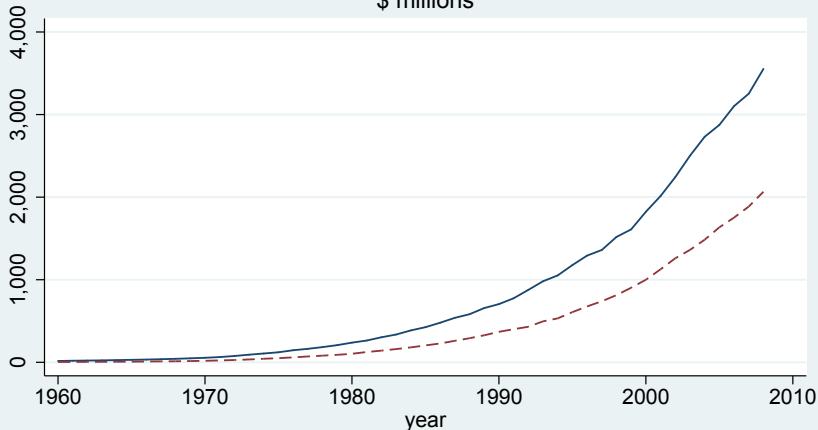
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July 18, 2017

Chapter 9 Bankruptcy Filings

Source: U.S. Courts (2016) Bankruptcy Filings, table F2

Public Employee Pension Benefit Payouts
$ millions

collective bargaining required by 1996
collective bargaining not required by 1996

Government Contributions to Public Employee Pensions
$ millions
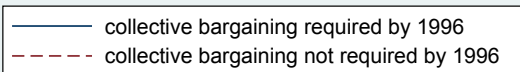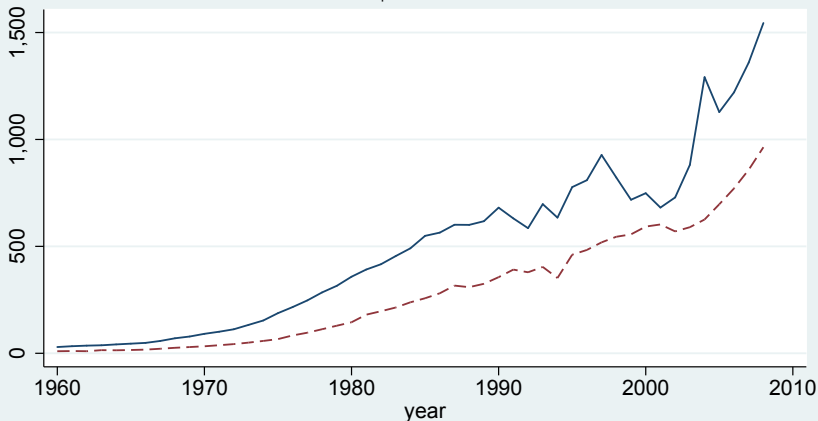
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Institutional Background

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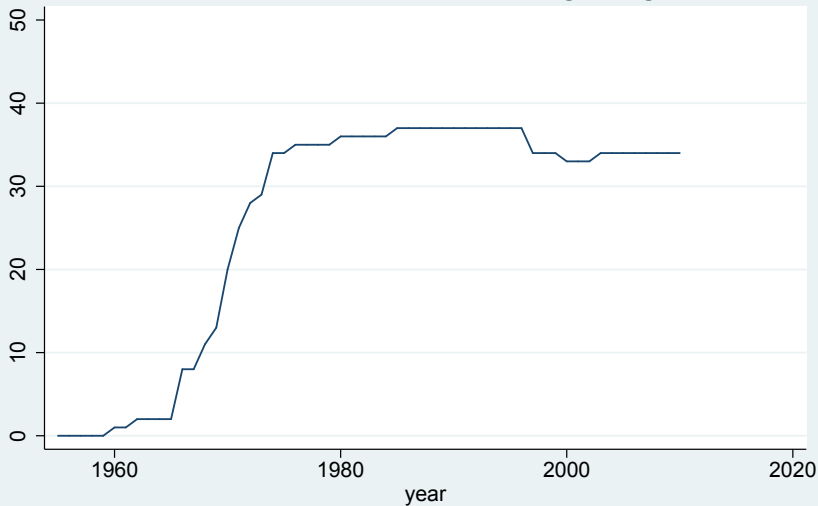
- Before 1950s: public sector collective bargaining prohibited
- 1961: AFT organized NYC teachers
- 1962: JFK signs Executive Order 10988
- Starting early 1960s: States begin to allow public sector collective bargaining

Number of States Requiring
Public Sector Collective Bargaining

Data

- Collective bargaining rights status for each state and year (Freeman and Valletta + Frandsen)

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- State covariates (population growth, employment, etc.)

Table: Sample Means by Public Employee Collective Bargaining Law Status

| | | CB law | |
	All	Required for >50% of Public Employees	Not required for >50% of Public Employees
N (number of state-years)	1,383	629	754
Fraction of public employees covered by collective bargaining requirement	0.46	0.97	0.03
Population	5,016,064	5,429,966	4,670,779
Total public employee retirement benefit expenditures ($1,000)	340,446	506,887	201,598
Total public employee retirement benefit expenditures / population ($1,000)	0.064	0.087	0.045
Total contributions to public employee retirement system ($1,000)	484,425	672,156	327,608
Employer contributions ($1,000)	330,435	481,261	204,613
Employee contributions ($1,000)	153,990	190,895	122,995
Fraction of contributions made by employees	0.36	0.32	0.40

Notes: number of state-year observations and means for the variables listed in the left-hand column. Data are from Valletta and Freeman (1988) and the Census Bureau's Historical Database on Individual Government Finances.
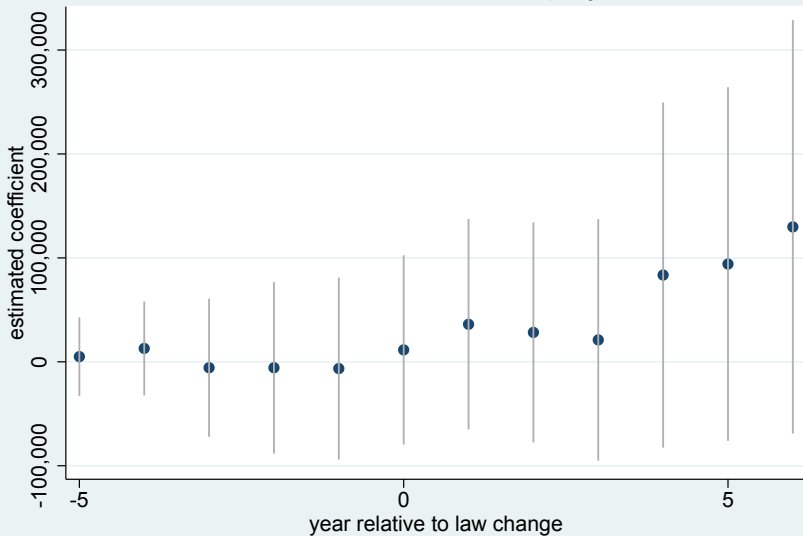
Identification strategy

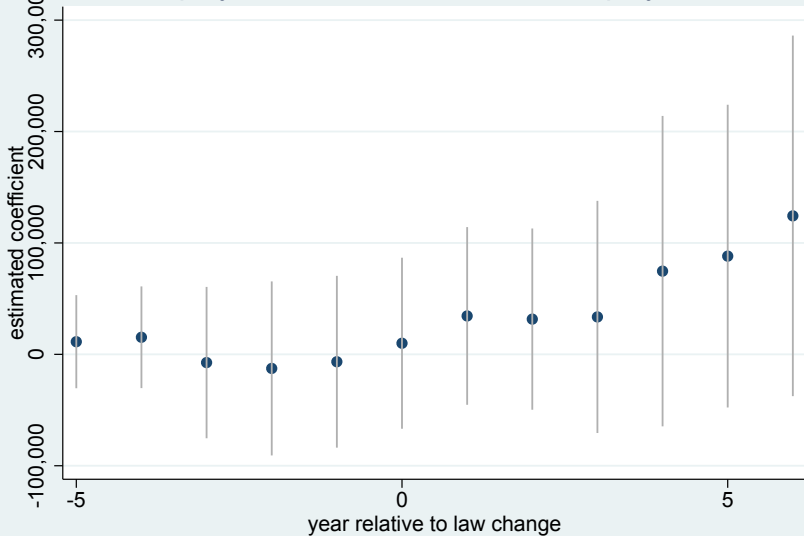Employee Contribution Fraction by Year

Iowa
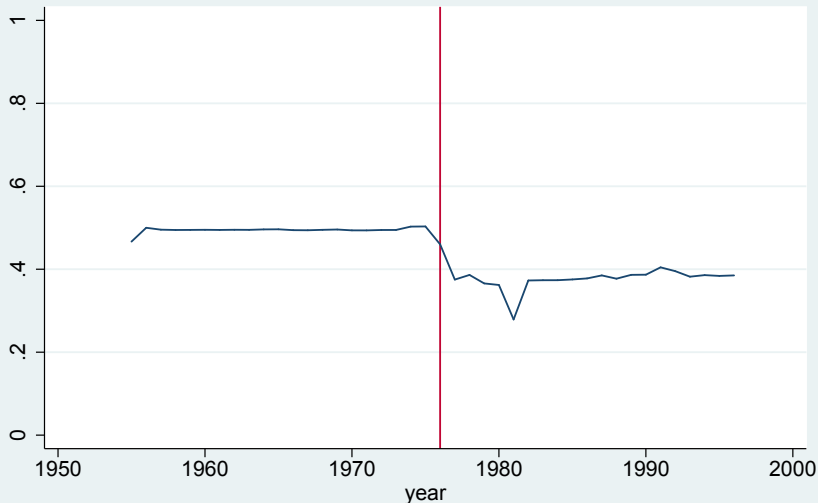
$$Y_{st} = \delta CB_{st} + X'_{st}\beta + \alpha_{0s} + \gamma_t + f(s, t) + \varepsilon_{st}$$
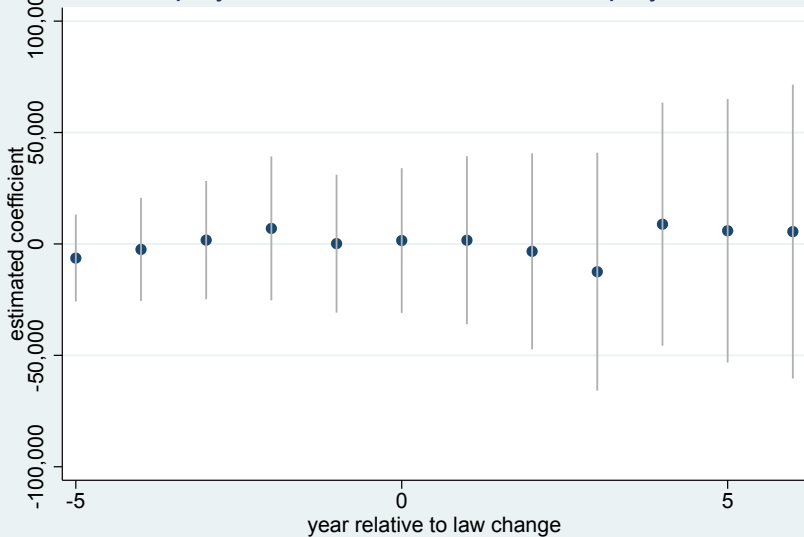
Total Contributions to Public Employee Pension

Total Employer Contribution to Public Employee Pension

Total Employee Contribution to Public Employee Pension

Total Public Employee Pension Benefit Expenditure

Results

Table: Estimated Effects of Collective Bargaining Requirements on Public Employee Pensions

Dependent variable	X-section (1)	Difference-in-differences (2)	(3)	(4)
ln(retirement contributions)	0.198**	0.125*	0.172*	0.160*
	(0.0746)	(0.0732)	(0.0864)	(0.0844)
ln(employer contributions)	0.287***	0.230***	0.290***	0.278***
	(0.0919)	(0.0817)	(0.0912)	(0.0905)
ln(employee contributions)	-0.169	-0.157	-0.0921	-0.0987
	(0.197)	(0.131)	(0.139)	(0.137)
Fraction contributed by employee	-0.0630**	-0.0685***	-0.0751***	-0.0742***
	(0.0308)	(0.0213)	(0.0218)	(0.0221)
ln(retirement benefits)	0.330***	0.0947	0.138*	0.134*
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Table: Estimated Effects of Collective Bargaining Requirements on Public Employment and Payroll

Dependent variable	X-section (1)	Difference-in-differences		
		(2)	(3)	(4)
ln(state government payroll)	0.0841 (0.0550)	0.0293 (0.0211)	0.0169 (0.0227)	0.0131 (0.0216)
ln(other government payroll)	0.0793 (0.0682)	-0.0221 (0.0188)	-0.0106 (0.0200)	-0.0106 (0.0204)
ln(total government payroll)	0.0972* (0.0496)	-0.0209 (0.0191)	-0.00938 (0.0250)	-0.0171 (0.0237)
ln(state government FTE employment)	-0.0659 (0.0507)	-0.0122 (0.0205)	-0.0272 (0.0174)	-0.0312* (0.0184)
ln(other government FTE employment)	-0.0905* (0.0489)	-0.0240 (0.0204)	-0.0154 (0.0223)	-0.0143 (0.0227)

What do these results mean?

Dollar impact of collective bargaining rights:

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- $2517 additional compensation per worker (no evidence of crowd out of wages)