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Evolution of Public Pension Plans



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Pensions in the US



- **Federal Pensions – including Military plans**
- **Municipal Plans**
- **Private Sector Pension Plans**
- **State Plans**

Historical Background



- Britain's North American Colonies created "disability" pensions for members of the militia
- Continental Congress established separate army and navy disability plans at the beginning of the Revolution
- U.S. government eventually converted these plans to old-age pensions for veterans (Clark et al. 2003)

Municipal Employee Retirement Plans



- U.S. cities began offering plans for teachers, firemen, and police officers in the mid-nineteenth century
- Plans become more common with the introduction of civil service reforms – i.e. the conversion of public employment from patronage to merit

Private Sector Plans

- In the late nineteenth century, a few large companies begin offering retirement plans
- However, plans spread slowly in the private sector until the end of World War II

State Pension Plans



- At the beginning of the 20th century, no state had established a retirement plan for their employees
- Some states did have old-age *welfare* plans
- The first *retirement* plan established by Massachusetts in 1911

Today's Presentation Will Focus on:



- The development of retirement plans offered by the states to their employees
- Historical relationship of state plans to Social Security
- Increasing generosity of plans
- Determinants of variation in plans across states

State Plans Before 1935



- **State plans established prior to 1916: Massachusetts, Illinois, New Jersey, and Pennsylvania**
- **By 1934, only nine states had established retirement plans for their general state employees**
- **“General” here means non-teacher, civil servants**

Social Security and the Spread of State Retirement Plans



- **1935 passage of Social Security**
- **The act specifically excludes public sector employees**
- **In response, many states consider the need for retirement plans for their employees**
- **By 1961, all states have such plans except: Idaho, Nebraska, North Dakota, Oklahoma, and South Dakota**

Creation of State Retirement Plans

- It is worth noting that there is considerable disagreement over when exactly certain state plans were “created”
- Dates in the literature often refer to the creation of the *current* plan
- Also, states (as well as the federal govt.) granted pensions to particular employees on a case-by-case basis, before a *plan* was created

Social Security Coverage for Public Employees



- SS amendments in the 1950s extended coverage to public sector employees
- 1950 public sector employees not covered by a pension *could* be covered by SS
- 1954 public sector employees who were covered by pension *could* be included in SS
- Thus SS coverage was voluntary, and governmental units could enter and withdraw

Social Security Coverage for Public Employees



- **1983 - The right to withdraw from SS is eliminated**
- **1991 - SS coverage is made mandatory if there is no employer-provided pension**

Social Security Coverage for Public Employees



- The employees of seven states remain outside of SS: Alaska, Colorado, Louisiana, Maine, Massachusetts, Nevada, and Ohio
- In other states, some local govt. employees remain outside of SS: California, Connecticut, Illinois, Kentucky, Missouri, and Texas
- Most SS reform proposals advocate universal SS coverage

Impact of SS Coverage on State Retirement Plans



- **As reported in Monthly Labor Review, 1961:**
 - 8 states did not change benefits upon entering SS
 - 15 states lowered benefits slightly
 - 8 states integrated their plans with SS resulting in sharp declines in benefits

Survey of State Plan Administrators



- Recent survey of state plan administrators in conjunction with NASRA.
- 31 states responded.
- Question: When was plan established?
 - Responses indicate slow spread of state plans across the country during middle of 20th century
 - Also indicated confusion of establishment of first plan with mergers with and revisions of existing plans

Survey of State Plan Administrators



- **20 states had pension plans prior to adopting SS**
 - 18 of these entered SS
 - 11 of the 18 did not reduce benefits, 7 modified benefits
- **9 states created a pension plan after employees were included in SS**
 - One could argue that these states considered SS when establishing their plan

Evolution of State Plans



- First 75 years of 20th century can be associated with the establishment of state plans, consolidation of plans for various types of public sector employees, and establishment (or not) of a relationship with SS
- Last three decades show substantial improvements in retirement benefits

State Plans vs Private Sector



- **State plans still predominately DB, private sector plans have rapidly transitioned to DC plans**
 - Alaska & Michigan, DC
 - Indiana and Oregon combination DB and DC
 - Nebraska cash balance
- **Reasons include: lack of federal regulation, greater unionization, lower turnover, no shifts in economic sectors**

Trends in Replacement Ratio: Employee with 30 years service



Employees Covered by SS

- Mid-1970s 45.0%
- 1987 48.6%
- 1996 51.0%
- 2006 55.5%

Not Covered by SS

- Mid-1970s 57.0%
- 1987 61.6%
- 1996 62.6%
- 2006 66.0%

Trends in Replacement Ratio: Employee with 30 years service



Employees Covered by SS

- 1982 48.2%
- 2006 58.6%

Source: Author
calculations from data
provided by Wisconsin
Legislative Council

Not covered by SS

- 1982 65.5%
- 2006 73.0%

Source: Author
calculations from data
provided by Wisconsin
Legislative Council

Trends in Plan Characteristics



- **39 states increased replacement rates for employees with 30 years of service, only one state decreased its replacement rate**
 - Change in generosity parameter
 - Reductions in years included in averaging period
 - Earlier retirement ages
 - 20 states increased employee contribution rates, 8 states reduced employee contribution rates

Explaining Variation Across States



- **We estimate 20 year replacement rates as function of**
 - Population growth
 - Funding ratio
 - Unionization
 - SS coverage
 - Employees covered by plan

Summary of Key Results:

- **Assumptions:**
- **Employee retires at age 65 with 20 years of service**
- **\$50,000 salary, increases at 3% per annum over the last five years of employment**

Summary of Key Results:

- **1982 Results:**
- **A 1.0 percentage point increase in population growth rate yields a 2.5 percentage point increase in the replacement rate**
- **A one-year reduction in the funding ratio yields a 0.22 percentage point increase in the replacement rate**
- **A 10 percentage point increase in the union share yields a 0.90 percentage point increase in the replacement rate**

Summary of Key Results:

- **2006 Results:**
- **Qualitatively the same as the 1982 results; however...**
- **The union variable changes signs**
- **A 10 percentage point increase in the union share yields a 1.10 percentage point decrease in the replacement rate**

Summary of Key Results:

Social Security variable:


- **As expected, in both 1982 and 2006, the Social Security variable is negative and significant**
- **With an impact ranging from 8.33 to 10.40 percentage points.**

Estimated Replacement Ratio: 20 Years of Service



Independent Variable	1982	2006	w/ 2006 interactions	
INTERCEPT	39.28*** (4.41)	50.59*** (5.78)	44.14*** (3.60)	
POPULATION GROWTH	2.48*** (0.85)	1.66 (1.18)	2.05** (0.88)	
PENSION FUNDING RATIO	-0.22** (0.11)	-0.15 (0.21)	-0.27** (0.12)	
% OF GOVT LABOR FORCE UNIONIZED		0.09* (0.05)	-0.11* (0.06)	0.05 (0.05)

Estimated Replacement Ratio 20 Years of Service




Independent Variable	1982	2006	w/ 2006 interactions	
<u>SOCIAL SECURITY</u>	-8.33*** (2.42)	(2.68)	-10.40*** (0.02)	-9.65***
STATE WORKERS	-1.69 (2.36)	(2.61)	4.53* (2.48)	-2.65
STATE & TEACHER	-1.85 (3.62)	0.49 (3.94)	-2.38 (3.91)	
STATE & LOCAL	0.58 (2.11)	(2.38)	4.60* (2.22)	-0.25

Estimated Replacement Ratio 20 Years of Service



<u>Independent Variable</u>	<u>w/ 2006 interactions</u>
POP GROWTH X 2006	-0.38 (1.41)
FUNDING RATIO X 2006	0.32* (0.19)
% GOVT LF UNION X 2006 (0.06)	-0.13**
SOCIAL SECURITY X 2006	0.49 (3.28)
STATE DUMMY X 2006 (3.40)	7.61**
STATE & TEACHER X 2006	2.93 (5.39)
STATE & LOCAL X 2006 DUMMY	5.25* (3.06)

Change in Replacement Ratio: 1982-2006



INTERCEPT	10.00** (4.68)	
POPULATION GROWTH	-0.08 (0.97)	
PENSION FUNDING RATIO	-0.10 (0.17)	
% OF GOVT LABOR FORCE UNIONIZED	-0.17***	(0.05)
SOCIAL SECURITY DUMMY	-0.17 (2.17)	
STATE WORKERS DUMMY	6.26*** (2.12)	
STATE & TEACHER DUMMY	0.23 (3.20)	
STATE & LOCAL DUMMY	3.31* (1.94)	

Conclusions



- 1. State plans are generous relative to private-sector plans**
- 2. State plans have become more generous over time**
- 3. State-level demographic, economic, and funding variables influence plan generosity**
- 4. Currently, state employees covered by Social Security have replacement rates reduced by 10 percent points relative to non-covered employees**

Future Research



- 1. Expand discussion of the development of state retirement plans**
- 2. Compare and contrast municipal and other local plans that have been taken over by the state**
- 3. Estimate and explain the compensating differential identified in the plans for workers covered by Social Security**
- 4. Consider impact of mandating SS coverage for all public sector employees**