Market-Based Compensation Reform in K-12 Education: Teacher Retirement Benefits

NCSL National Meeting
San Antonio, TX
August 10, 2011

Michael Podgursky
Department of Economics
University of Missouri – Columbia
Fellow, George W. Bush Institute, SMU
Note: does not include retiree health insurance

Source: Costrell and Podgursky (2009), updated
Labor Market Effects of Teacher Pensions (Final Average Salary DB pensions)

A. Backloading of benefits
B. “Pull” (to an arbitrary age) and “Push” educators out of the workforce at relatively young ages
C. Massive penalties for mobility
D. Distortion in market for administrators
In order to understand incentive effects, we need to understand accrual (accumulation) of pension wealth.
Typical Defined Benefit (DB) teacher pension

Annual Pension = S x FAS x m(S,A)

S = service years
FAS = final average salary
m(S,A) = “multiplier”

Age and /or service criteria for regular retirement
<table>
<thead>
<tr>
<th>Feature</th>
<th>Ohio</th>
<th>Arkansas</th>
<th>California</th>
<th>Massachusetts</th>
<th>Missouri</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Social Security</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Varies by district</td>
</tr>
<tr>
<td>Vesting (years)</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>
| Retirement Eligibility          | "normal": Age=65; or YOS=30  
"early": Age=60; or Age=55 if YOS =25  

"normal": Age = 55; or Age = 50 if YOS = 30  
"early": Service = 20  

"normal": Age=60; or YOS=30; or Age+YOS=80  
"early": Age=55; or YOS=25  

"normal": Age=65; or Age+YOS=80 & Age=60  
"early": Age = 55; or YOS = 30; or Age+YOS=80  

| Contribution Rates              | District 14%  
Teacher 10%  

Employer 14%  
State 4.52%  
Teacher 8%  

State 15.6%  
Teacher 11%  

District 12.5%  
Teacher 12.5%  

State 7.98%  
Teacher 6.9%  

| Multiplier                      | Years 1-30: 2.2%  
Year 31 only: 2.5%  
Year 32 only: 2.6%, ...  
For YOS ≥ 35, add 9% to total  

2.15% + $900  

Linear segments:  
1.1% at age 50  
1.4% at age 55  
2.0% at age 60  
2.4% at age 63  
For YOS ≥ 30, add 0.2% to factor, to max of 2.4%  

Linear:  
0.1% at age 41 to 2.5% at age 65  
For YOS ≥ 30, add 2% (YOS-24)  
Max replacement = 80%  

"normal": or Age=55:  
2.5%, YOS ≤ 30,  
2.55%, YOS > 30  
"early": 2.5%: YOS=30  
2.20%, YOS=25  
rising linearly to 2.4%, YOS=29  

2.3%  

| COLA formula                    | 3%, simple  
3%, simple  
2%, simple, plus floor of 80% initial purchasing power  
3%, simple, on first $12,000  

CPI, compound, up to 1.80 maximum factor  

None in statute  
(periodic, retroactive)  

Note: YOS = "Years of Service." Sources: NASRA (2008), individual state CAFR's and pension handbooks.

1 Includes 1% for retiree health insurance.
2 Contributory members only. Average is 4.80%, including non-contributory.
3 Includes 2.5% for 80% floor on initial purchasing power (see COLA).
4 Includes 2% for a supplemental defined contribution plan (see CALSTRS Member Handbook, 2007-08).
5 Calculated from FY07 state appropriation (Commonwealth Actuarial Valuation Report, January 1, 2007).
6 For all teachers hired since 2000.
7 Includes 1.4% for retiree health insurance
8 Includes 0.5% for retiree health insurance
• **Pension wealth**: Present Value of Stream of Future Benefits

• “cash value” of pension stream

• Market for annuities

• PW takes account of size of annuity *and* expected number of years it is collected

• Note: aggregate PW for educators = total liabilities of plan
Standard Economic Methodology
Illustrative Assumptions

• Female Teacher
• Enters at 25
• Continuous Work
• Salary Schedule of State Capital
• Other assumptions, see
  Costrell & Podgursky (2009)
Pension Wealth Distributed Unequally

Net Pension Wealth, 25-year-old MO entrant
net of employee contributions; adjusted for inflation

age at separation (entry age = 25)
Pension Wealth Distributed Unequally

Net Pension Wealth, 25-year-old MO entrant
net of employee contributions; adjusted for inflation

fiscally equivalent cash balance plan:
benefits tied to contributions

LOSERS

WINNERS
• Annual accrual of pension wealth
• “If I work another year, how much does my pension wealth go up?”
Figure 5. Deferred Income per Year, as Percent of Salary: Missouri. Net Addition to Pension Wealth from an Additional Year of Teaching (age of first pension draw indicated)
Costrell and Podgursky (2008)
Arkansas

Costrell and Podgursky (2008)
Do these spikes affect teacher retirement decisions?

– Yes

• Furgeson, Strauss, Vogt (2006) - PA
• Brown (2008) - CA
• Ni and Podgursky (2011) – MO
• Costrell and McGee (2010)- AR
Experience and Age of Teacher Retirees: 1993, 2002, and 2007 (Missouri)

<table>
<thead>
<tr>
<th></th>
<th>1993</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Experience</td>
<td>27.1</td>
<td>27.6</td>
<td>26.4</td>
</tr>
<tr>
<td>Median Experience</td>
<td>28</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>Mean Age</td>
<td>58.7</td>
<td>55.7</td>
<td>56.5</td>
</tr>
<tr>
<td>Median Age</td>
<td>59</td>
<td>55</td>
<td>56</td>
</tr>
<tr>
<td>N</td>
<td>875</td>
<td>1612</td>
<td>1648</td>
</tr>
</tbody>
</table>


Source: Ni, Podgursky, Ehlert, 2009
It Pays to Stay (Figure 1)

In Missouri, as in other states, teachers who leave early, or move elsewhere, fare poorly in pension benefits compared to those who stay.

Costrell and Podgursky (2010)
Missouri

65 percent loss in PW at age 55

Figure 7. Net Pension Wealth, MO: Movers vs. Stayers, DB and CB. 65% Loss from Mobility for Age 55 Separator: $407K
Explaining Losses from Mobility (Figure 2)

Service-based eligibility rules and the use of final average salary to calculate benefits contribute to pension losses for teachers who move to other states.

Costrell and Podgursky (2010)
Markets for Principals/Administrators

• Mobility costs restrict leader applicant pools
• Median teaching age at transition (MO) 38 years, median teaching experience = 12

Koedel, Grissom, Ni, Podgursky (2011)
Principles for Reform

1. Transparency
   a) Report individual pension wealth
      • Current and projected
   b) Report cumulative contributions
   c) Allow educators to compare a) and b)
Doubling Up (Figure 1)

While under 1975 rules a typical Missouri teacher entering at age 25 would have accrued just under $400,000 in pension wealth by age 55, under current rules the same teacher would accrue nearly $900,000.

Costrell and Podgursky (2011)
Principles for Reform

2. Tie benefits to contributions
   a) Smooth accrual of benefits, no “push” or “pull” PW never declines.
   b) No penalties for mobility
   c) No redistribution
   d) No gaming
Reform Options

• Goal
  • Portable Benefit
  • Transparent
  • Smooth accrual
  • Equitable

• DC is only one, and may not be best

• Cash Balance Plans
  o risk and asset management stays with employer

• Hybrids
3. Universal Social Security Coverage

- Roughly 30% of teachers not covered
- Portable benefit
- All new teachers in
Bad options
IL Two-Tier System

The Wrong Way (Figure 2)

The ‘reformed’ pension plan in Illinois widens the gaps between benefits and contributions.

Net pension wealth ($)

Age at separation (entry age = 25)

Hired by 12/31/2010
Hired after 1/1/2011

Note: Pension wealth is net of employee contributions and adjusted for inflation.

SOURCE: Authors’ calculations
4. Retiree Health Insurance
   – Rationalizing pension retirement incentives will help
References


  – Updated data: http://www.uark.edu/ua/der/People/Costrell/Employer_Contributions_Update.pdf

References


http://www.caldercenter.org/PDF/1001071_Teacher_Pensions.pdf

• Special issue of Education Finance and Policy: “Rethinking Teacher Retirement Benefits Systems”
http://www.mitpressjournals.org/toc/edfp/5/4