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

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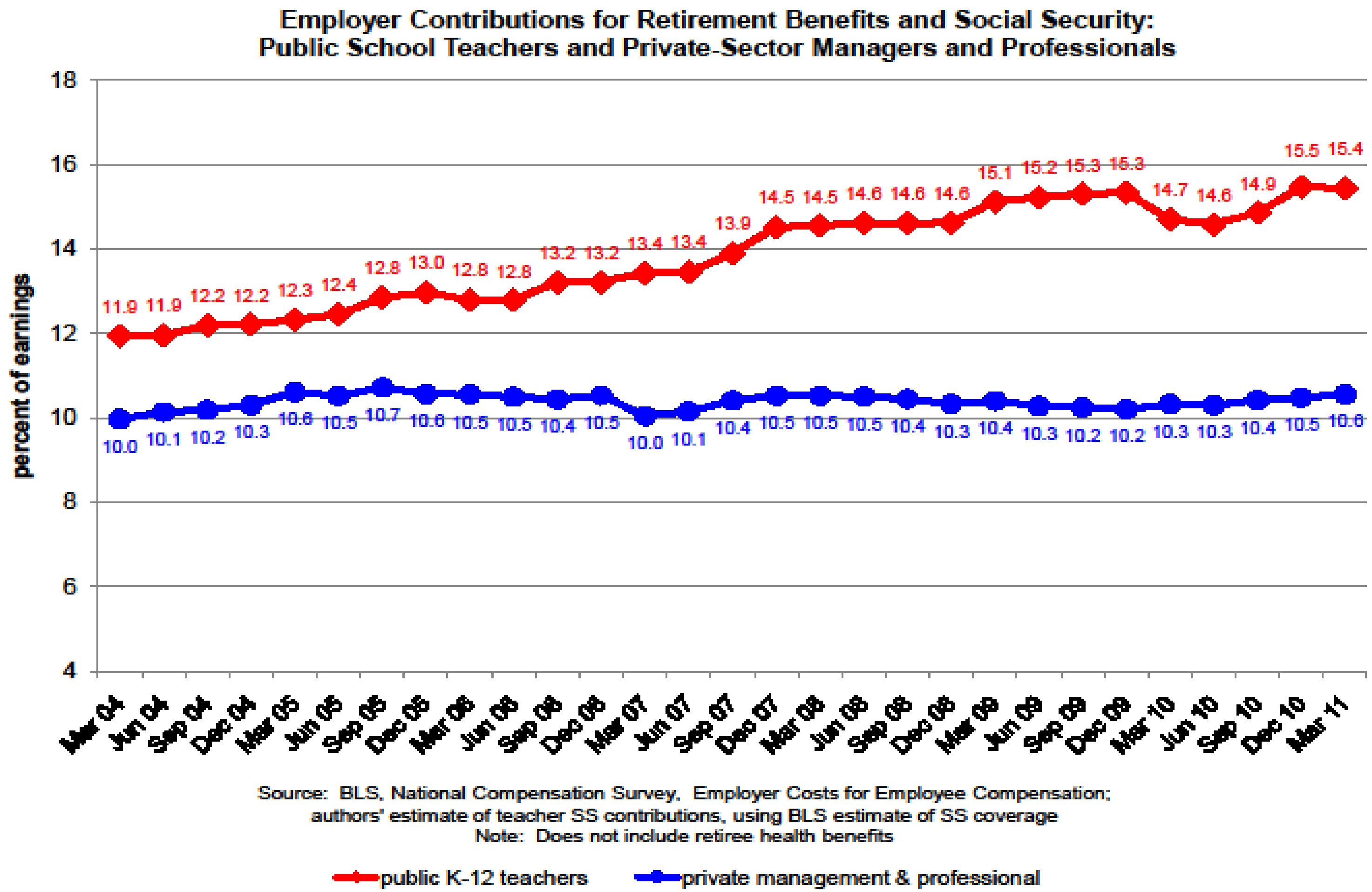


Note: does not include retiree health insurance

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 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

Lots of moving parts …

Table 1: Key Features of Selected State Defined Benefit Teacher Pension Plans

	Ohio	Arkansas	California	Massachusetts	Missouri	Texas
In Social Security	No	Yes	No	No	No	Varies by district
Vesting (years)	5	5	5	10	5	5
Retirement Eligibility ("normal" or "early")	"normal": Age=65; or YOS=30 "early": Age=60; or Age=55 if YOS =25	"normal": Age = 60; or YOS= 28 "early": YOS=25	Age = 55; or Age = 50 if YOS = 30	Age = 55; or 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%[1] Teacher 10%	Employer 14% Teacher 6%[2]	Employer 8.25% State 4.52%[3] Teacher 8%[4]	State 15.6%[5] Teacher 11%[6]	District 12.5% Teacher 12.5%	State 7.98%[7] Teacher 6.9%[8]
Multiplier (percent per year of service)	Years 1-30: 2.2% Year 31 only: 2.5% Year 32 only: 2.6%, … For YOS $\geq$ 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 $\geq$ 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 $\geq$ 30, add 2% (YOS-24) Max replacement = 80%	"normal", or Age=55: 2.5%, YOS $\leq$ 30, 2.55%, YOS > 30 "early": 25<YOS<30: 2.20%, YOS=25 rising linearly to 2.40%, 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).

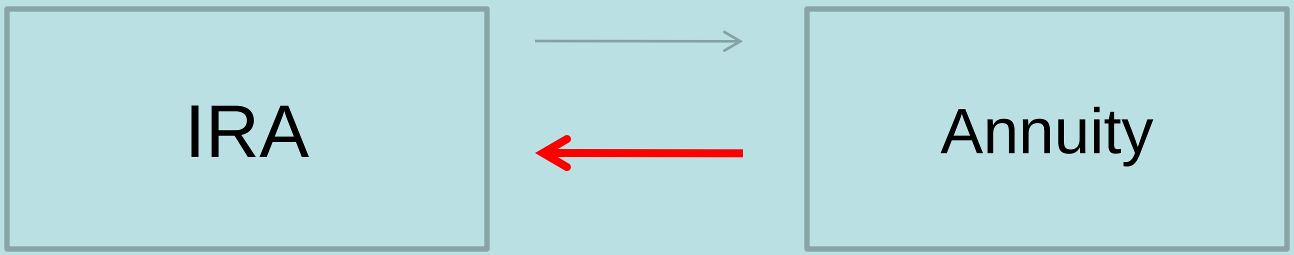
[5] Calculated from FY07 state appropriation (Commonwealth Actuarial Valuation Report, January 1, 2007).

[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



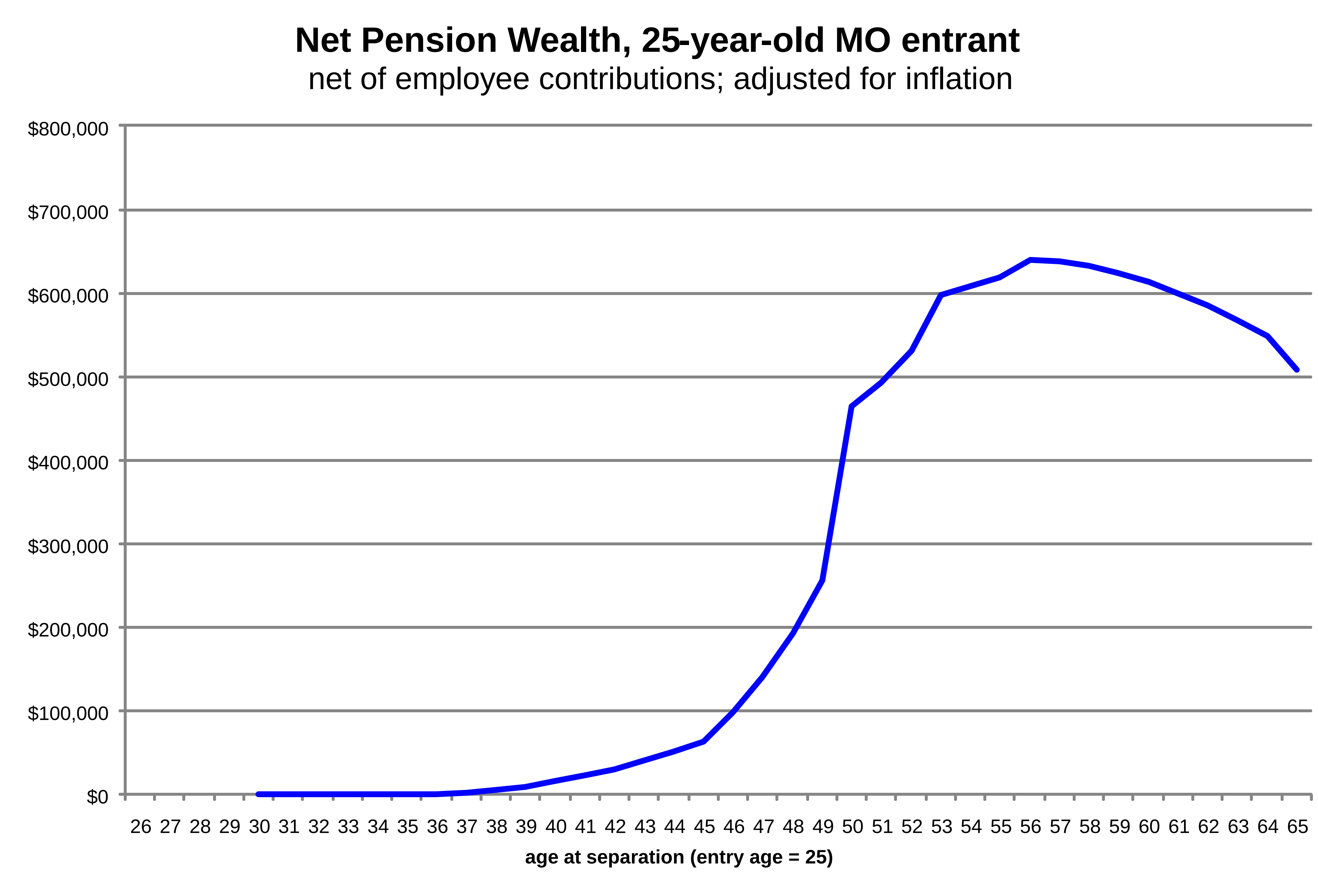
- PW takes account of size of annuity ***and*** expected number of years it is collected
- Note: aggregate PW for educators = total liabilities of plan

Standard Economic Methodology

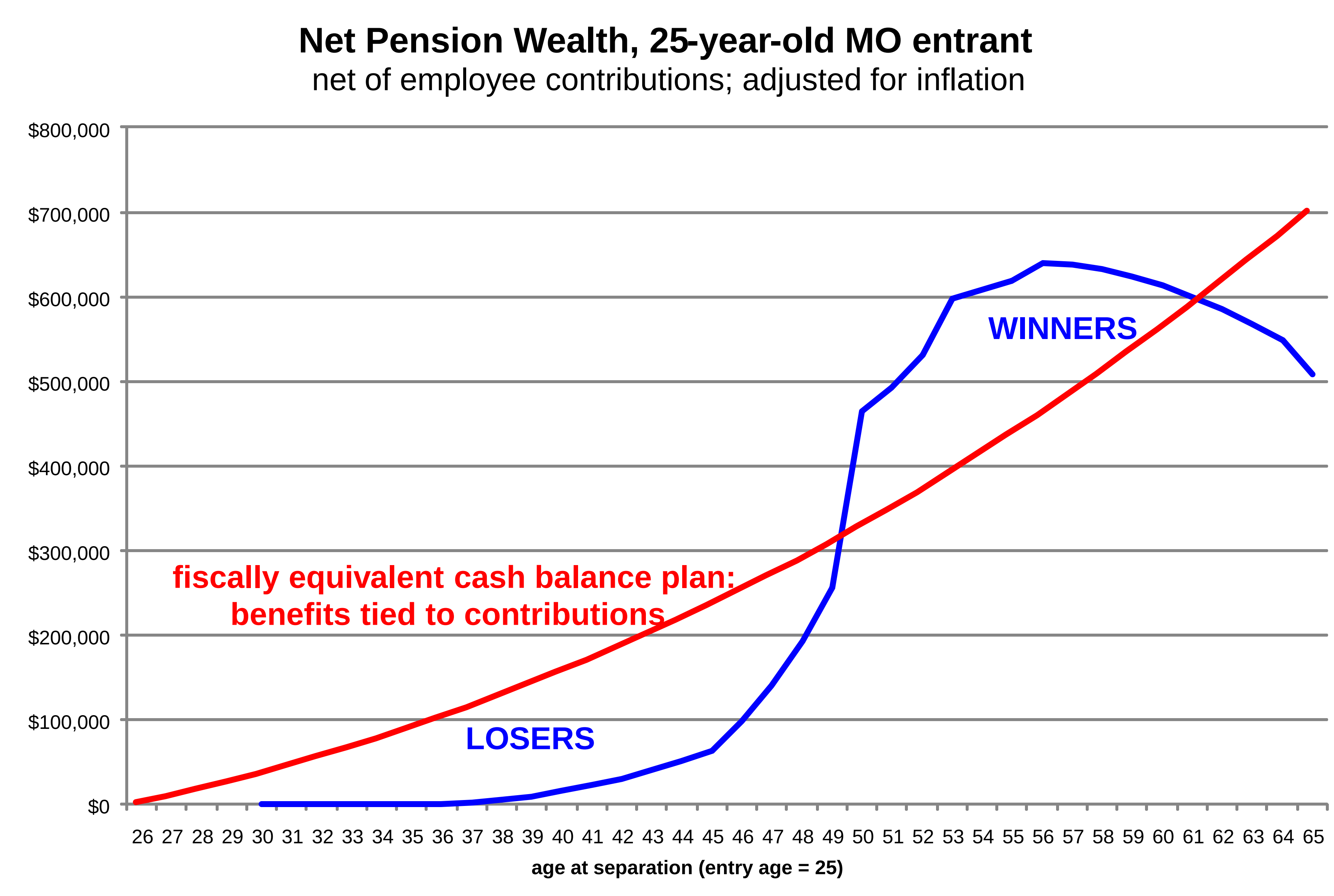
Illustrative Assumptions

- Female Teacher
- Enters at 25
- Continuous Work
- Salary Schedule of State Capital
- Other assumptions, see
- Costrell & Podgursky (2009)

Pension Wealth Distributed Unequally



Pension Wealth Distributed Unequally



- Annual accrual of pension wealth
- “If I work another year, how much does my pension wealth go up?”

Missouri

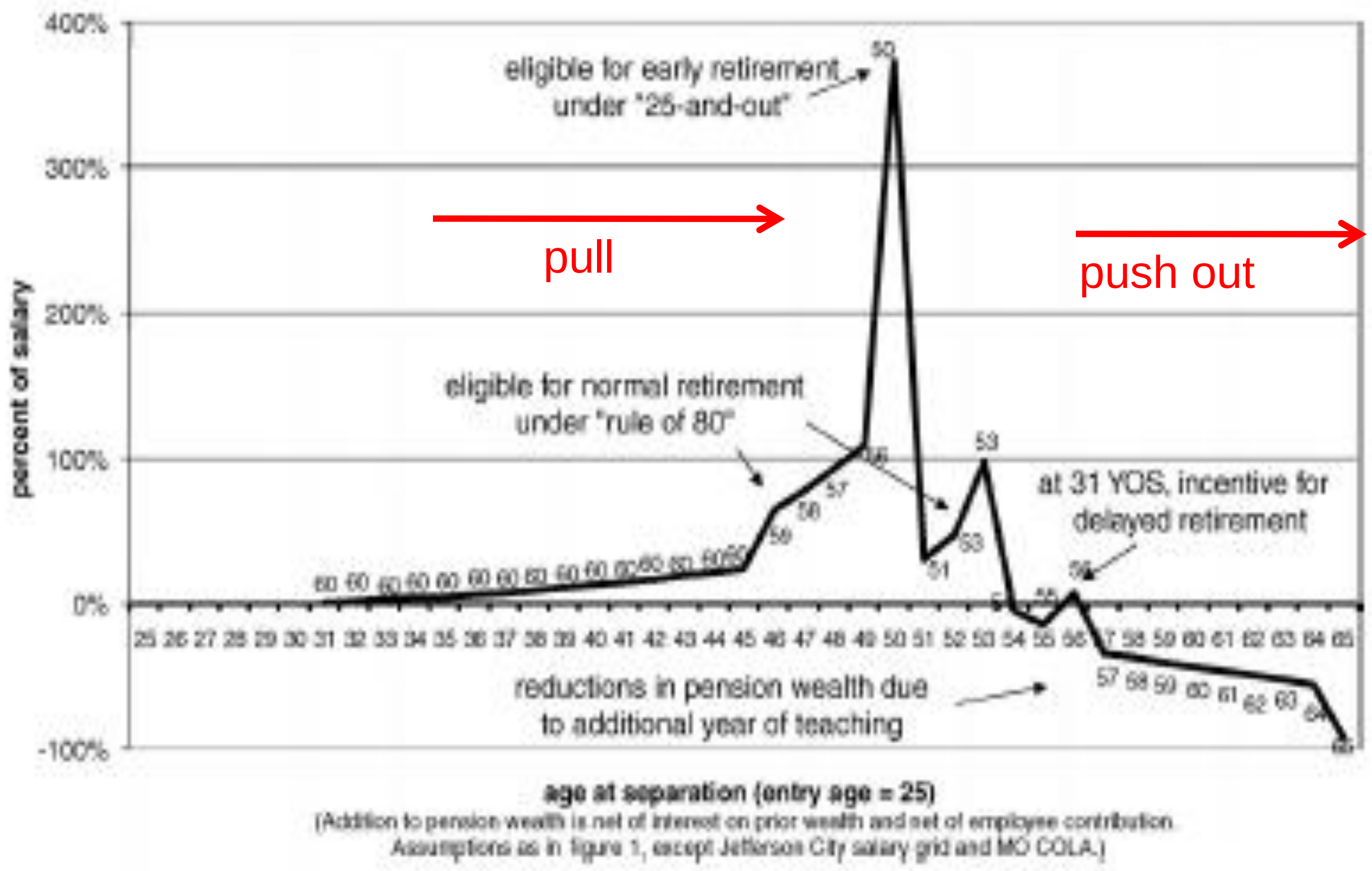


Figure 5. Deferred Income per Year, as Percent of Salary: Missouri. Net Addition to Pension Wealth from an Additional Year of Teaching (age of first pension draw indicated)

Costrell and Podgursky (2008)

Ohio

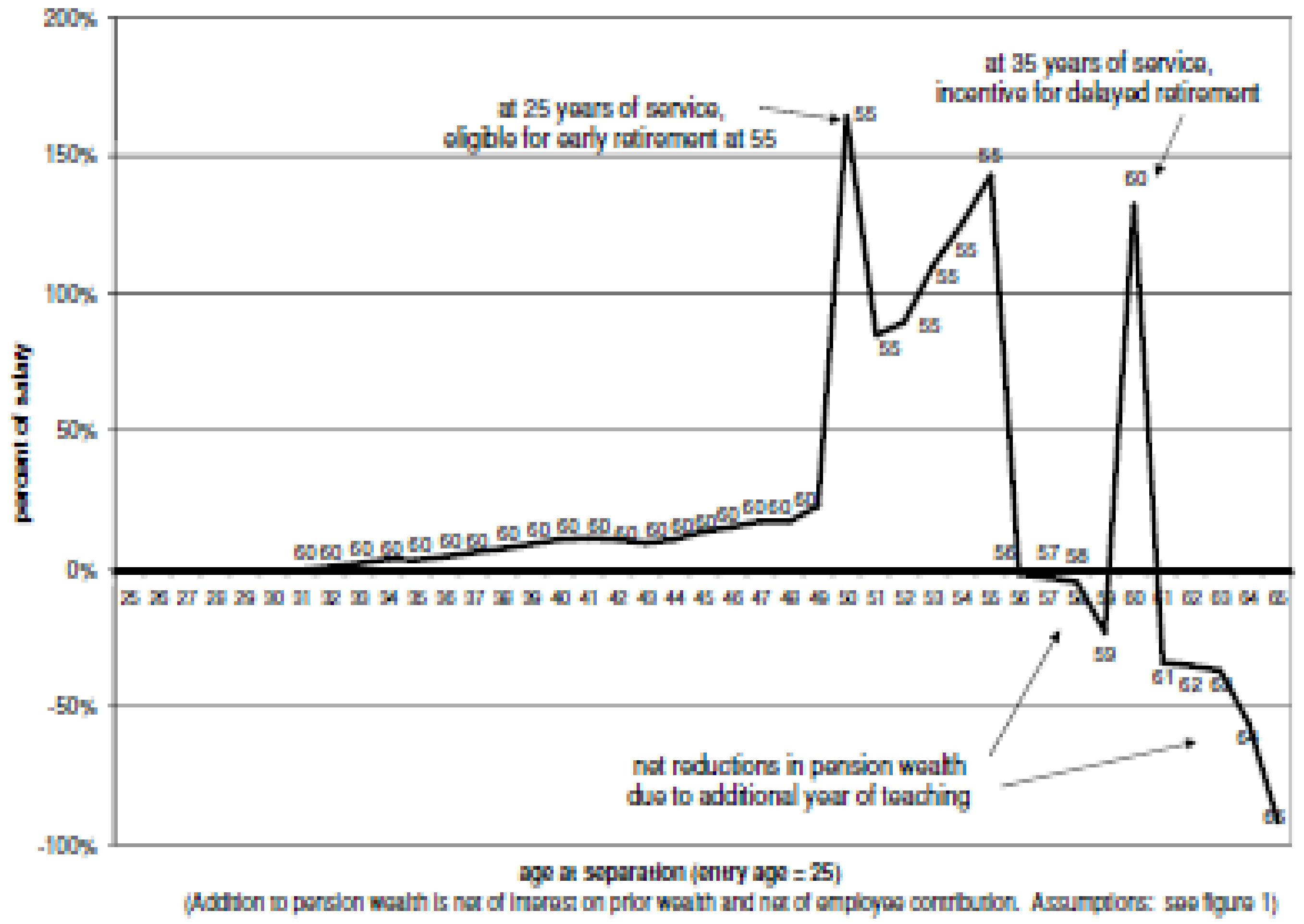
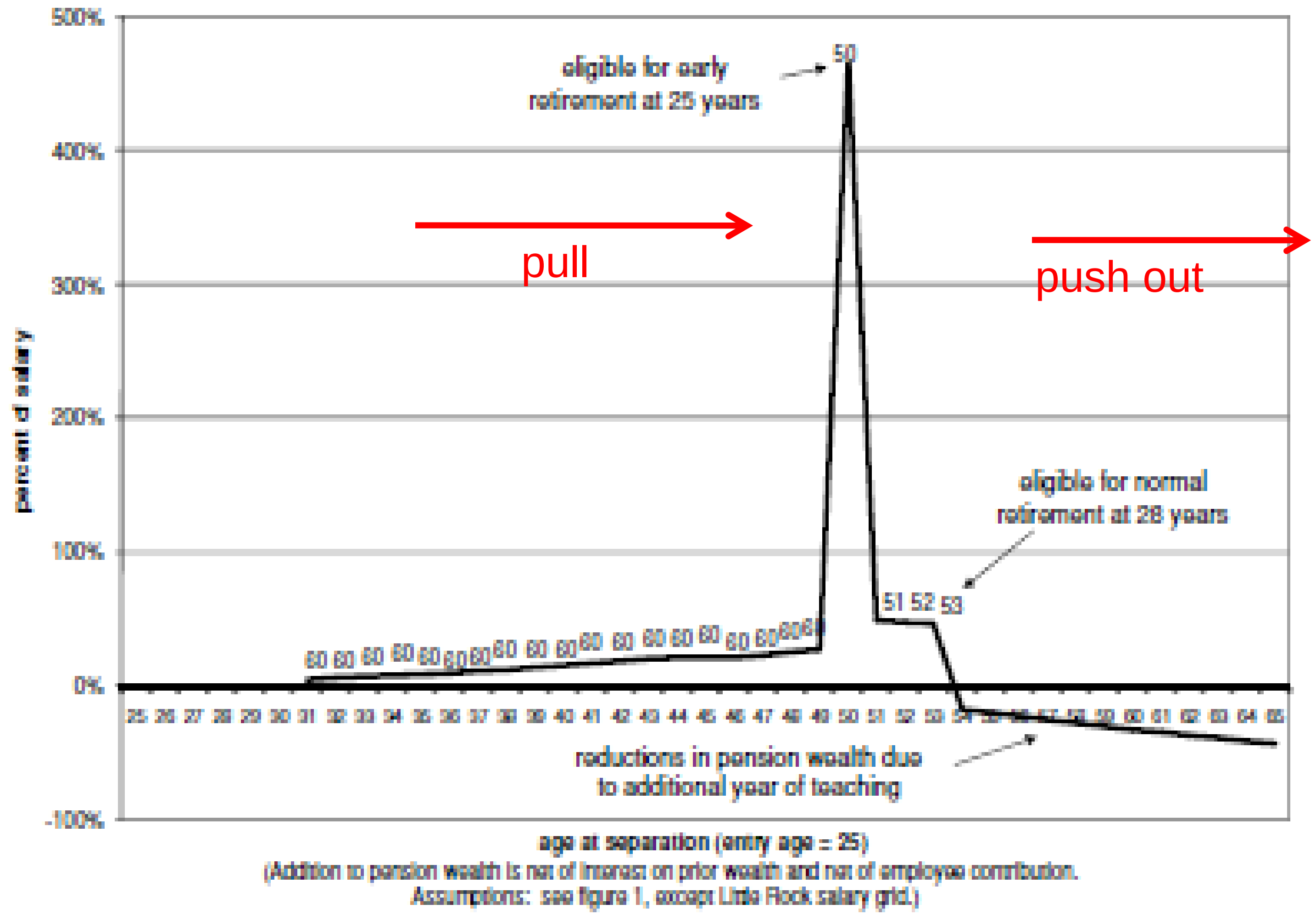


Figure 3. Deferred Income per Year, as Percent of Salary: Ohio. Net Addition to Pension Wealth from an Additional Year of Teaching (age of first pension draw indicated)

Costrell and Podgursky (2008)

Arkansas



Costrell and Podgursky (2008)

Do these spikes affect teacher retirement decisions?

– Yes

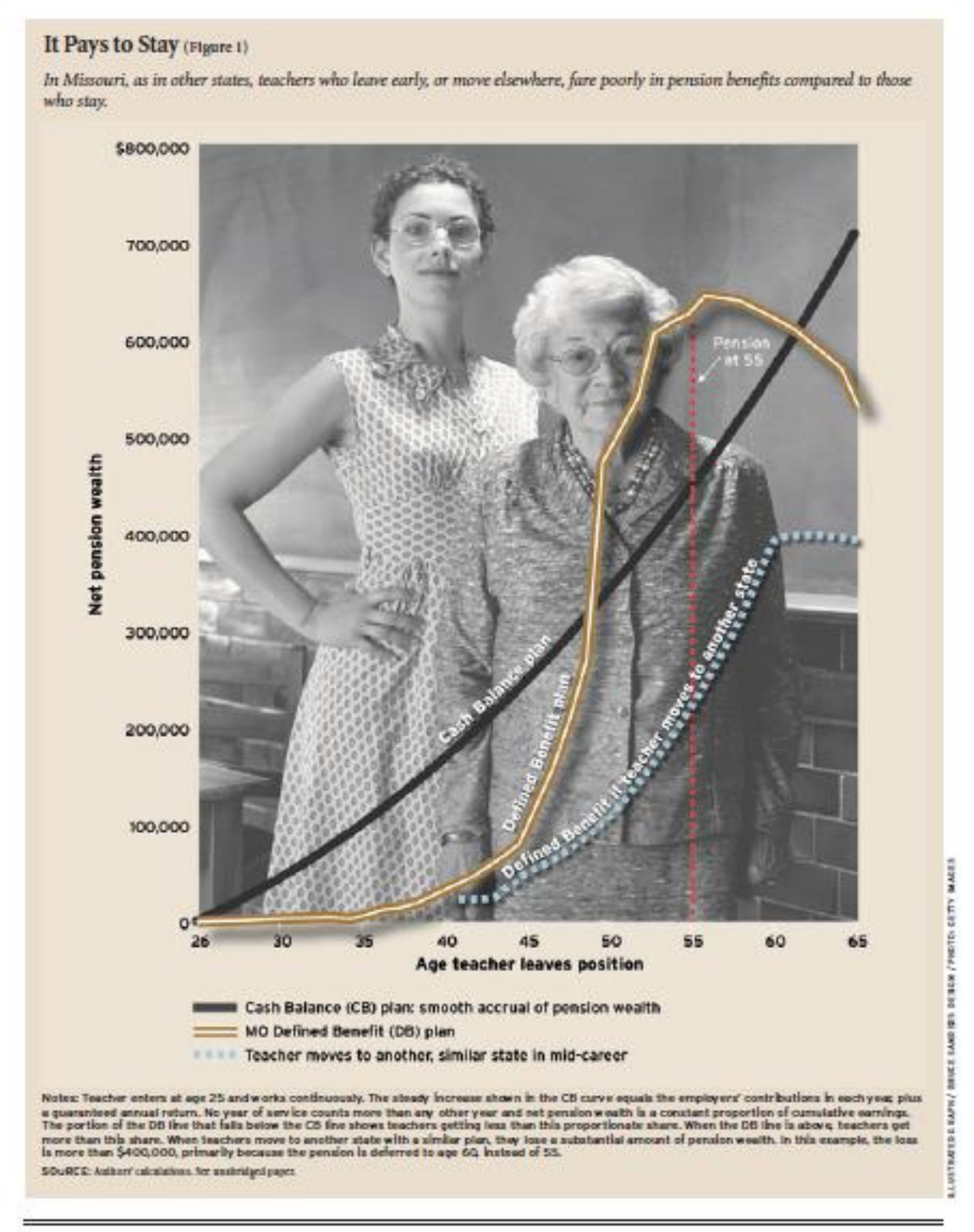
- Furgeson, Strauss, Vogt (2006) - PA
- Brown (2008) - CA
- Ni and Podgursky (2011) – MO
- Costrell and McGee (2010)- AR

Experience and Age of Teacher Retirees: 1993, 2002, and 2007 (Missouri)

	1993	2002	2007
Mean Experience	27.1	27.6	26.4
Median Experience	28	29	28
Mean Age	58.7	55.7	56.5
Median Age	59	55	56
N	875	1612	1648

Trend toward later retirement in other sectors and other industrial nations:
Gendell (2008)
Burtless, (2008)

Source: Ni, Podgursky, Ehlert, 2009



research

Golden Handcuffs

Teachers who change jobs or move pay a high price

Teacher pensions consume a substantial portion of school budgets. If relatively generous pensions help attract effective teachers, the expense might be justified. But new evidence suggests that current pension systems, by concentrating benefits on teachers who spend their entire careers in a single state and penalizing mobile teachers, may exacerbate the challenge of attracting to teaching young workers, who change jobs and move more often than did previous generations.

The design of teacher pension plans is a timely concern: like other public pension plans, those for teachers are becoming more costly. Employer contributions to pension

Those data do not yet reflect the impact of the stock market decline since 2007: the drop in the value of pension funds means further increases in employer contributions will be required to fund promised benefits. As fiscal concerns force states to reevaluate the costs of teacher pension plans, officials might also consider the plans' consequences for teacher quality.

In earlier work we highlighted the peculiar incentives for retirement built into these plans (see "Peaks, Cliffs, and Valleys," *features*, Winter 2008). Most plans create large spikes in pension wealth accumulation for teachers in their 50s. These spikes act as an incen-

Costrell and Podgursky (2010)

Missouri

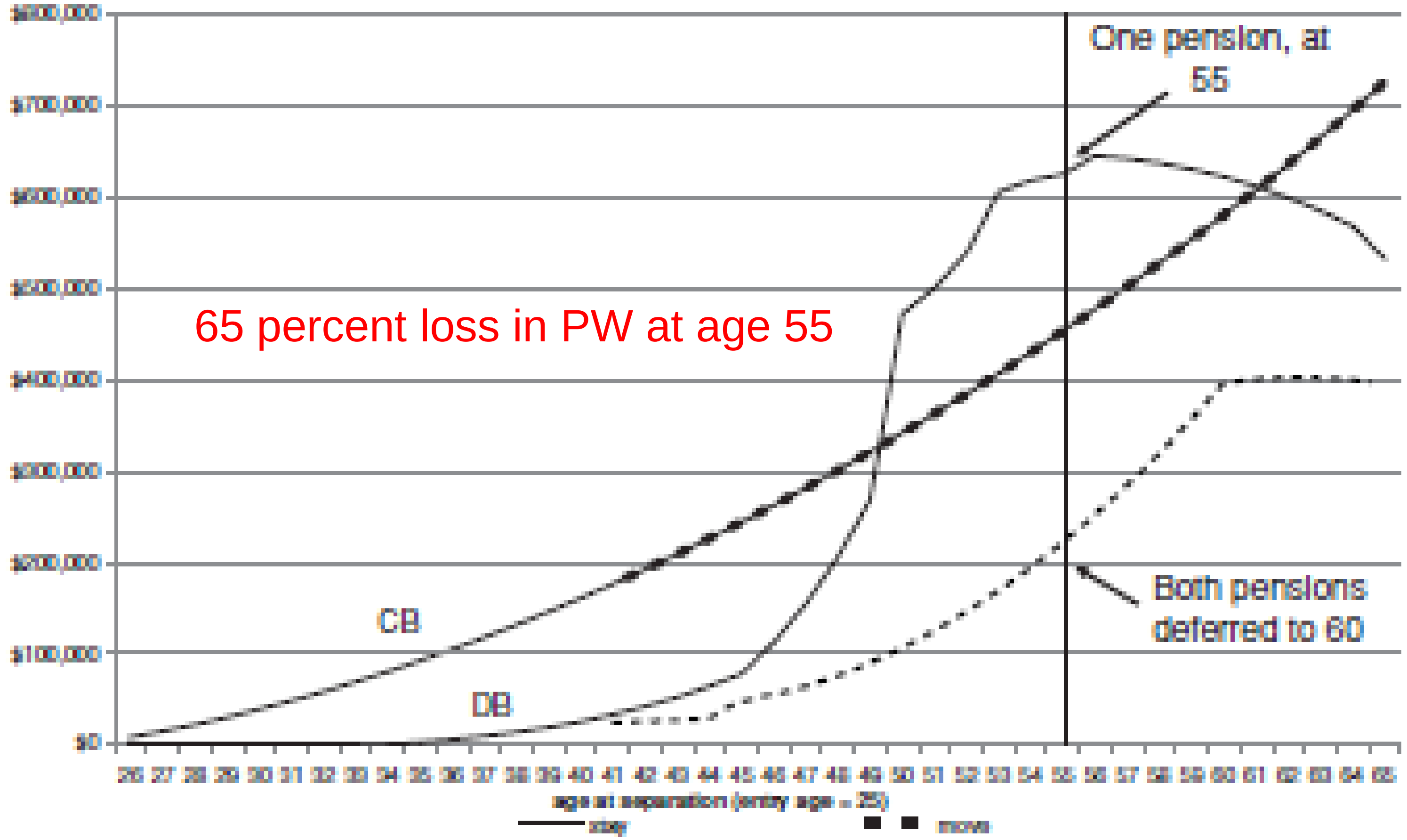


Figure 7. Net Pension Wealth, MO: Movers vs. Stayers, DB and CB. 65% Loss from Mobility for Age 55 Separator: $407K

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

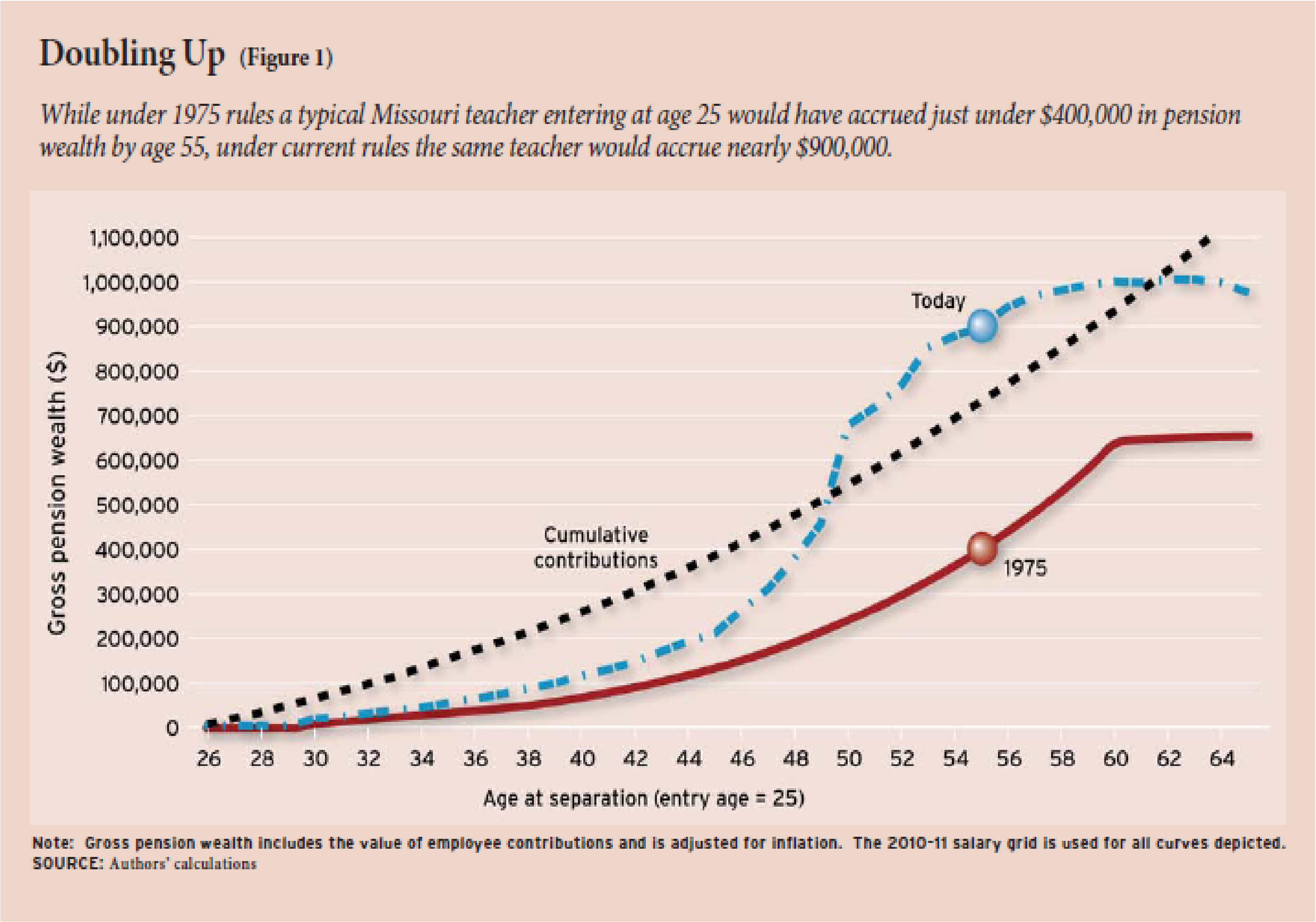
Koedel, Grissom, Ni, Podgursky (2011)

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)



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

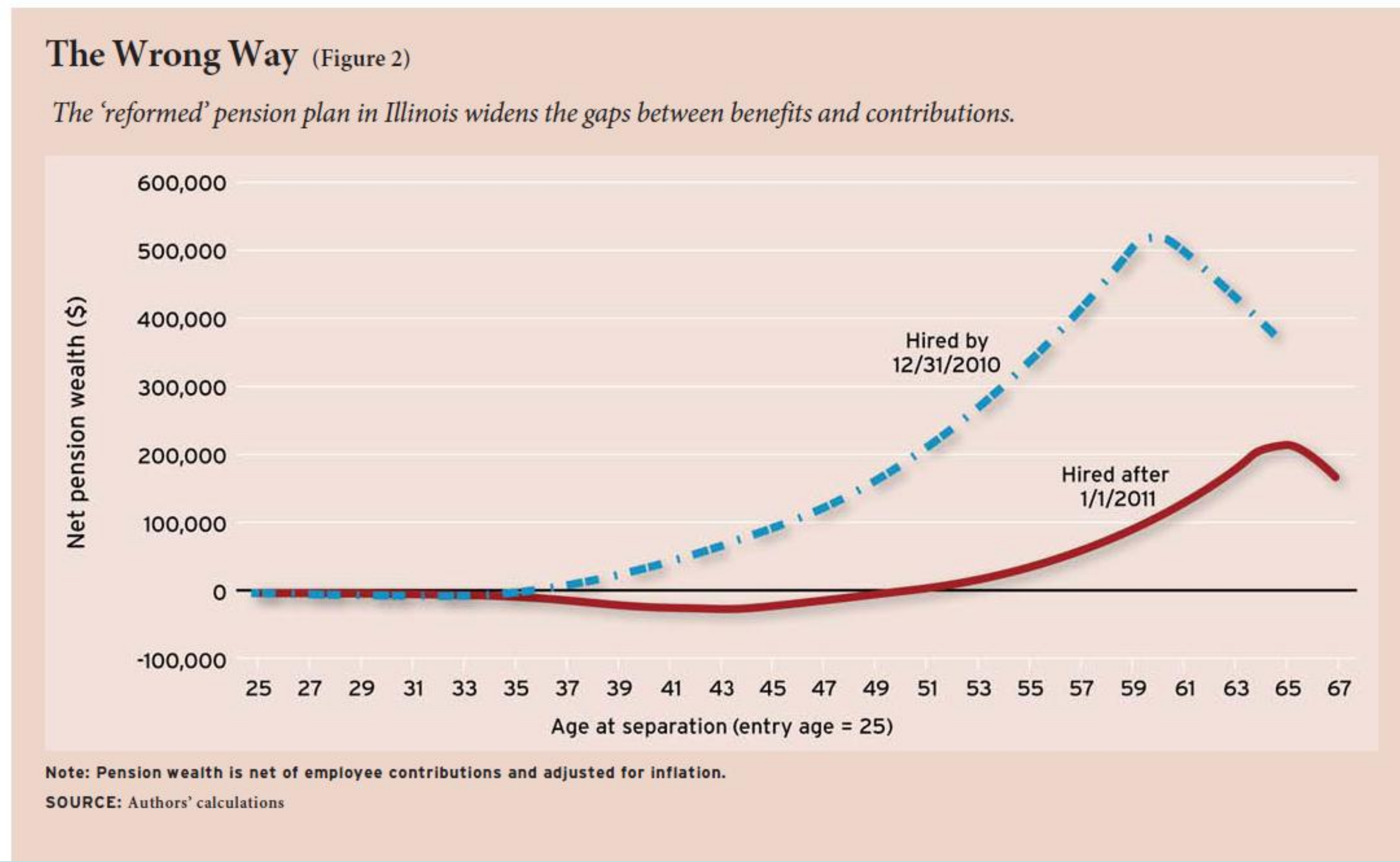
Reform Options

- Goal
  - Portable Benefit
  - Transparent
  - Smooth accrual
  - Equitable
- DC is only one, and may not be best
- Cash Balance Plans
  - 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



4. Retiree Health Insurance
   - Rationalizing pension retirement incentives will help

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