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Underfunded Public Sector Pension Plans, Social Security Participation, and the Retirement Decisions of Public Employees

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Social Security coverage is a key dimension of difference across public sector jobs that varies greatly from state to state and even within the same state. Overall, about 25% of public employees are without Social Security coverage. Their plans are typically more generous, but less well funded. There is limited research on the relative importance of retirement eligibility and plan financial risk on public workers' retirement choices, and how their choices would change if we extended Social Security to currently uncovered public employees. This work addresses this shortfall by analyzing how Social Security coverage and the structure and financial health of public pension plans affect public sector retirement.

I use data from the Health and Retirement Study — a survey that follows respondents from age 50 forward — to identify public sector workers in pension plans with and without Social Security coverage. The data include age of early and normal retirement eligibility in the public pension plan and state of residence, as well as detailed demographic characteristics such as health status.

I incorporate information on plan financial risk using the employee's state public pension plans financial status relative to their state's revenue capacity. While pension benefits are nominally guaranteed in state constitutions, the real benefit cuts that occurred during Detroit's emergence from bankruptcy in 2013 could not have escaped notice. States differ in their ability to raise revenue and, in any actual funding crisis, it is the degree of underfunding relative to the ability to raise revenue that matters. I construct a pension fund sustainability measure that reflects both the amount of underfunding and a state's ability to fully fund the plan with its own resources.

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There is a great deal of inequality in the resources available across states. For example, in 2017 the states with the lowest level of taxable resources per capita — around $50,000 — included Mississippi, West Virginia, Alabama, Idaho, and New Mexico. But states with some of the highest pension underfunding per capita also have the highest taxable resources: New Jersey, Delaware, Massachusetts, New York, and Connecticut have more than $80,000 in taxable resources per person.

I use three measures of states' public pension underfunding. First, I aggregate each state's unfunded public pension liability to reflect the unfunded liability across all of the state's public plans. Second, I calculate the ratio of state pension assets to benefits currently paid as a measure of the number of years the state could maintain benefit payments out of current assets. Third, I calculate a measure I refer to as the effective tax rate — that rate that, applied to the state's taxable resources, would equal the outstanding unfunded liability.

For about half the states, this effective tax rate is at least 5%, but for Connecticut, Mississippi, Hawaii, Alaska, Colorado, and New Mexico the rate exceeds 10%. For New Jersey, Illinois, and Kentucky, this rate is closer to 20%. Alternatively, pension liability could be split into "legacy debt" that arose before the pension fund was substantially prefunded, and the effective tax rate calculated for "current accrued service" to reduce the intergenerational transfer of public service costs. This calculation may be useful for policymakers when determining whether a state can pay for public sector services from its own resources.

My estimates of retirement determinants suggest that public employee retirement is most responsive to program eligibility focal points — becoming eligible through meeting age and service requirements — at all ages, beginning at age 50. I estimate that becoming eligible for early retirement or normal retirement between the ages of 50 and 54 increases the probability of retirement by about 0.05 and 0.06. But participants at the key preretirement age categories who are also covered by Social Security are much more likely to retire than those without Social Security in the same age group. This effect's economic magnitude is on par with the increased probability of retirement due to poor health. Depending on the particular age group, having Social Security coverage approximately doubles these retirement probabilities. Special early-out provisions also encourage earlier retirement, over and above the plan's early retirement provisions, particularly for public employees with Social Security coverage.

I also find that public employee retirement decisions are sensitive to plan underfunding and sustainability — the probability of retirement falls as plan underfunding increases. Public sector employees have an incentive to be aware of state funding status since their benefits ultimately may depend on fund solvency. But this effect is smaller than the influence of plan features.

These findings are consistent with the literature on default options in 401(k) plans. Defaults established in 401(k) plans affect plan participation and individual savings rates, for example, perhaps because employees view them as implicit suggestions. The results in this paper suggest that the same may be true for defined benefit plans in the public sector. It is possible that if becoming eligible for early retirement is perceived as a reference point, deviations from that point may be psychologically uncomfortable.

These estimates suggest that state and local governments or school districts might expect that public sector workers without Social Security coverage will be less sensitive to achieving retirement eligibility than same-age covered workers. Further, these results imply that extending Social Security coverage to uncovered workers increases early and normal retirement probabilities by between an estimated 4.7 and 10.1 percentage points, potentially further increasing employer retirement costs.

While personal circumstances such as poor health have similarly sized economic effects, governments may encourage retirement by offering retiree health insurance and/or an early-out package. Or, conversely, they may choose to retain employees longer by eliminating retiree health insurance (which, unlike pension benefits in most state, are not constitutionally protected) or by changing the age/service combination for early and normal retirement focal points as the latter appear to most affect retirement decisions. ❖

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