How Long Must State and Local Employees Work to Accumulate Pension Benefits?

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Although traditional pension plans are fading away in the private sector, they still cover seven in eight full-time state and local government employees (US Bureau of Labor Statistics 2013). By offering lifetime retirement benefits based on service years and final average salaries, defined benefit pensions generally provide secure retirement incomes to workers who devote their entire careers to government service.

These pensions provide little retirement income security, however, to most government employees with shorter tenures, even many who spend 20 years with a single public-sector employer.[1] Virtually every plan requires participants to contribute toward the cost of their retirement benefits, and employees must work many years before their future benefits exceed the value of their required contributions. Those who leave public service before reaching that milestone do not receive any employer-financed retirement benefits, despite their often lengthy careers. Recent pension reforms, focused mainly on cutting costs, generally force new hires to work even longer before they benefit from their pension plans. Alternative benefit designs like cash balance plans would enable all state and local government employees to accumulate retirement savings, including those with shorter careers.

This brief reports how long state and local government employees hired at age 25 must serve to earn any employer-financed pension benefits from their traditional plans. The analysis identifies the first year that employees could leave public employment with promised future pension payments worth more than their own plan contributions. We also examine how recent public pension reforms have altered when employees first accumulate any employer-financed benefits.

Results are based on the Urban Institute's State and Local Employee Pension Plan database, which provides detailed benefit rules for state-administered retirement plans covering teachers, police officers and firefighters, and general state and local government employees in all 50 states and the District of Columbia. Page 5 details our methods.

How Do Benefits Accumulate in Traditional Pensions?

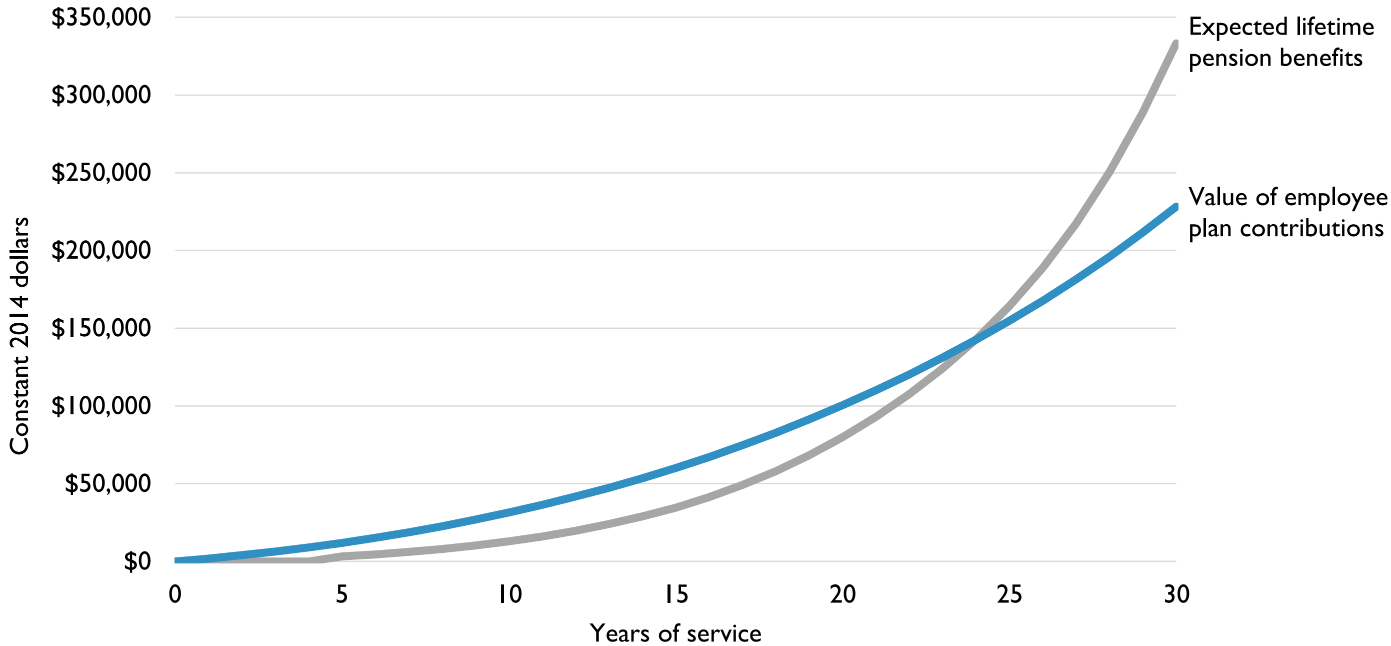
Traditional pensions pay annual retirement benefits equal to a specified percentage of final average salary—typically calculated over the last three or five years of employment—multiplied by completed years of service. Half of traditional state and local plans provide benefits that replace at least 46 percent of the final year's salary for employees who retire with 25 years of service. Retirement eligibility is usually tied to age and years of service. For age-25 hires, half of plans offer full benefits at age 55 or older. Ninety percent of plans mandate employee contributions, now averaging 7 percent of salary.

Traditional plan participants do not accumulate many future retirement benefits early in their career. Benefits for workers who separate early are based on the relatively low salaries they received at younger ages, not the higher salaries typically received at older ages. Additionally, employees' early-career plan contributions are worth more than the same amount contributed later, because they could have earned interest longer if invested outside the plan. As a result, the value of required plan contributions often exceed future pension benefits until participants have worked long enough to receive generous pensions.

Consider employees hired at age 25 enrolled in a traditional plan that provides annual benefits equal to 2 percent of final average salary (averaged over the last five years) times years of service. Benefits vest after five years, meaning that employees who complete less service do not receive any pension benefits. In this hypothetical (but typical) plan, employees must contribute 7 percent of their salary to the plan each year and may begin collecting benefits at age 60. Benefits are adjusted each year after retirement to keep pace with inflation.

Lifetime pension benefits in this hypothetical plan grow slowly early in a career (figure 1). After 15 years of service, for example, employees earning average salaries would accumulate $35,000 in future lifetime pension benefits (expressed in constant 2014 dollars). These employees would receive annual payments equal to $15,000, replacing 30 percent of final average salary, but they would have to wait 20 years to begin collecting. By contrast, employees' plan contributions would be worth $60,000 after 15 years of service, about three-quarters more than the value of their future pension benefits. Those future pension benefits grow rapidly with additional service years, but in this example employees must work nearly 25 years before their future benefits are worth more than what they have contributed.

Figure 1. Illustrative Lifetime Pension Benefits and Employee Plan Contributions for State and Local Government Employees



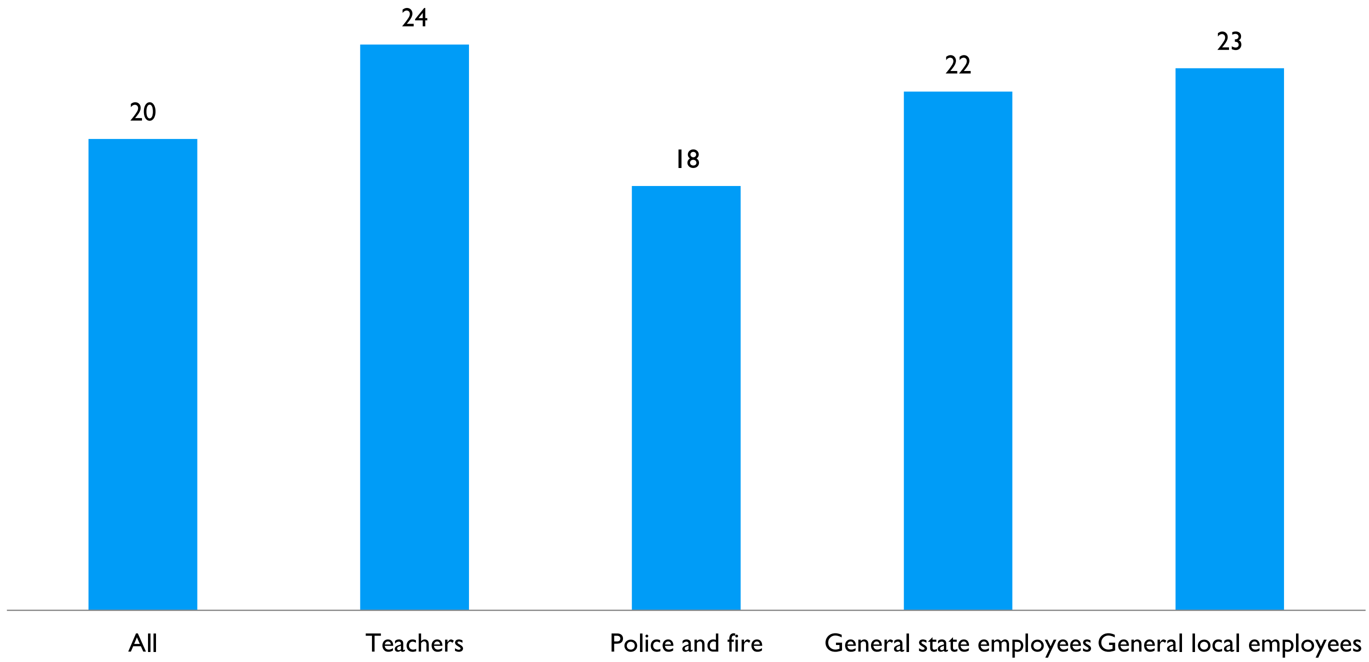
Source: Authors' calculations from the Urban Institute's State and Local Employee Pension Plan database.
Notes: The figure displays the value of lifetime pension benefits and required employee contributions for employees hired at age 25 earning average salaries and enrolled in a traditional plan that provides annual benefits equal to 2 percent of final average salary times years of service. Benefits vest after five years, and retirees may begin collecting at age 60. The required employee contribution rate is 7 percent. Calculations assume 8 percent nominal interest and 3 percent inflation.

Shorter-Term Employees Often Get Nothing from Their Pension Plans

In half of the traditional plans administered by state governments, employees must work at least 20 years before accumulating any employer-financed pension benefits (figure 2).[2] Employees in those plans who separate with less than 20 service years are better off collecting a refund on their plan contributions than waiting to collect a pension at their plan's retirement age, so they effectively gain nothing from their retirement plan. In half of plans covering public school teachers, it takes at least 24 years of service to earn any employer-financed pension benefits; in half of plans covering police officers and firefighters, it takes 18 or more service years.

Only 19 percent of plans enable state and local government employees hired at age 25 to accumulate any employer-financed pension benefits within the first 10 years of employment, including only 14 percent of plans covering public school teachers (table 1). In more than a fifth of plans (22 percent) age-25 hires must work more than 25 years before their future pension benefits are worth more than their plan contributions. Teachers have to work longer than other public employees to earn employer-financed pensions. In nearly two-fifths of plans (39 percent) covering teachers, age-25 hires who leave before completing 26 years of service get nothing from their pension plans other than their own contributions.

Figure 2. Median Years of Service Required before Age-25 Hires Earn Any Employer-Financed Pension Benefits, by Occupation (%)



Source: Authors' calculations from the Urban Institute's State and Local Employee Pension Plan database.
Notes: The sample is restricted to 612 traditional public pension plans administered at the state level. Calculations use the interest rates assumed by each plan.

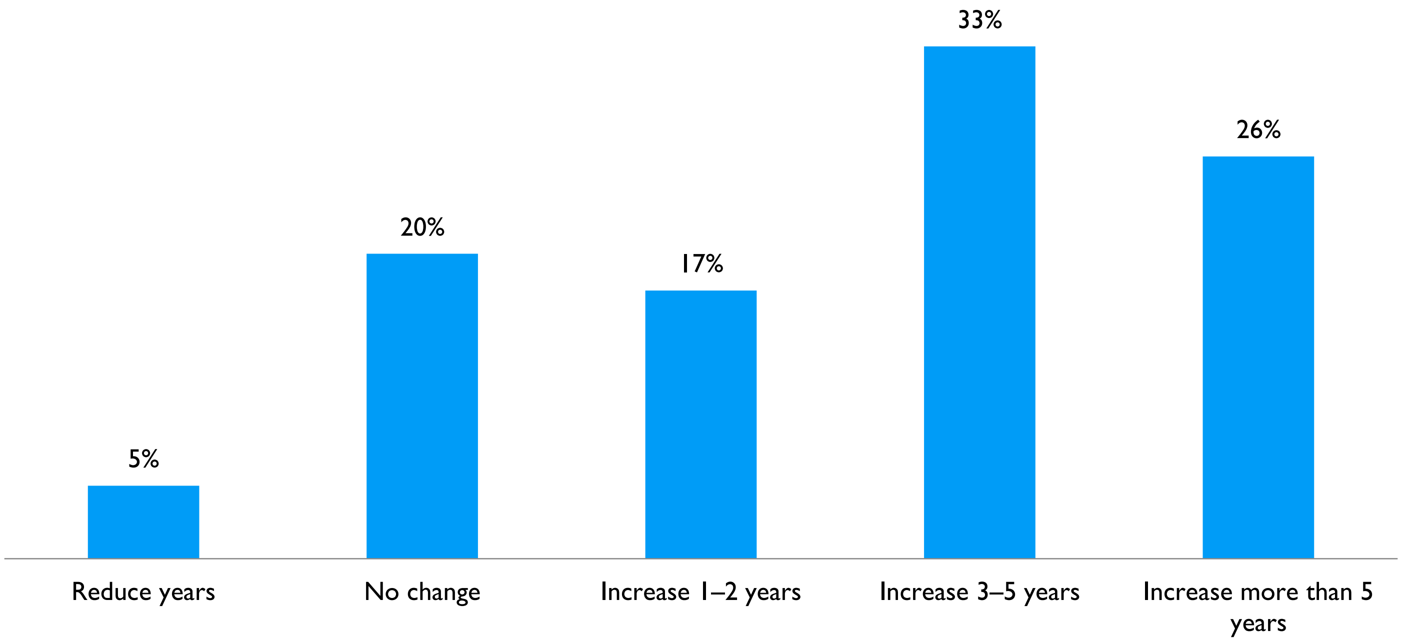
Table 1. Distribution of Years of Service Required by Age-25 Hires to Earn any Employer-Financed Benefits in Traditional State and Local Pension Plans, by Occupation (%)

	All	Teachers	Police and fire	General state	General local
5 or less	9	4	13	11	7
6–10	10	10	12	12	5
11–15	10	7	14	7	8
16–20	22	11	37	15	16
21–25	27	29	22	25	35
More than 25	22	39	3	31	29

Source: Authors' calculations from the Urban Institute's State and Local Employee Pension Plan database.
Notes: The sample is restricted to 612 traditional public pension plans administered at the state level. Calculations use the interest rates assumed by each plan.

Many states have recently responded to mounting concerns about public pension financing by cutting benefits, including boosting required employee contributions, trimming cost-of-living adjustments, raising retirement ages, and revising the benefit formula. These reforms generally mean that employees must work longer to accumulate any employer-financed pension benefits. Among 128 plans that changed their benefit rules between 2010 and 2013, the median service years that employees hired at age 25 must complete increased from 20 before the reforms to 24 afterward. The reforms increased minimum service years in three-quarters of affected plans (figure 3). They rose by at least three years in more than half of plans and by more than five years in about a quarter of plans.

Figure 3. Impact of Recent Pension Reforms on Service Years Required to Earn Any Future Employer-Financed Pension Benefits



Source: Authors' calculations from the Urban Institute's State and Local Employee Pension Plan database.
Notes: Estimates are for age-25 hires and are restricted to 128 state-administered traditional pension plans that revised their benefit rules after 2010. Plans that switched to cash balance or hybrid designs are excluded.

Conclusions

In half of traditional state and local government pension plans, employees must serve at least 20 years to receive a pension worth more than their own contributions. More than a fifth of traditional plans require more than 25 years of service. Employees with shorter government careers are better off taking back their plan contributions when they quit rather than waiting to collect a government pension. They get nothing from their retirement plan despite their many years of service. In fact, many *lose* money because the pension plan's credited interest often falls below market rates; these participants would do better if they could invest their payroll deductions outside the plan. Instead of benefiting from their pension plans, they are net contributors.

Although much of the debate on public pension reform focuses on employees with 30 years of service, most state and local government workers have much shorter public-sector careers. More than three-fifths of public school teachers leave the profession within 20 years (National Center for Education Statistics 2014), while three-fifths of state government employees in Kentucky who complete at least five years of service leave before they complete 20 years (Johnson and Southgate 2014). These employees subsidize benefits received by very long-tenured retirees, who usually receive extremely generous pensions.

Recent pension reforms have made matters worse, further cutting benefits for shorter-term participants. Instead of simply trimming traditional pensions, policymakers should consider alternative benefit designs such as cash balance plans that allow employees to accumulate future retirement benefits gradually throughout their careers rather than restricting benefits to those with the longest tenures. Cash balance plans create employee accounts to which both employees and employers contribute a portion of salary each period. These accounts are pooled and professionally managed, and balances grow over time with additional contributions and investment returns. Employees can withdraw the account balances when they separate, or convert their balances into a lifetime annuity when they retire. Such reforms would distribute benefits more equally over the workforce and attract younger employees who change jobs more frequently than earlier generations.

About Our Methods and Data

The State and Local Employee Pension Plan (SLEPP) database compiles information on employee contribution rates, vesting requirements, benefit eligibility rules, benefit formulas, early-retirement reductions, cost-of-living adjustments, and actuarial assumptions for retirement plans covering state and local government employees. Because states frequently change their plans for new hires but exempt incumbent employees, plan rules often vary by hire date. The database collects information for each of these variants, often called plan tiers, so it represents plan rules for nearly all participants employed in 2014. SLEPP includes 660 plan tiers covering teachers, police officers and firefighters, and general state and local government employees in all 50 states and the District of Columbia. Only state-administered plans are included; plans administered by municipalities are excluded. See www.urban.org/retirement_policy/pensionsproject.cfm for more information.

For each service year we compare employees' accumulated plan contributions to the present discounted value of the stream of expected future pension benefits if they left the plan. Plan participants who separate before future benefits exceed accumulated plan contributions do not earn anything from their plan; instead, their pension is fully financed by their own contributions. Future pension benefits are discounted by the probability that separating employees might die before they can collect their payments and by the interest they forgo while waiting. Employees' plan contributions are augmented by what could have been earned if they had been invested instead of paid to the plan. Calculations use the interest rates assumed by each plan (generally about 8 percent). We also assume 3 percent inflation and average salary growth.

We restrict our analysis to plans that provide traditional pensions. Cash balance and hybrid plans are excluded. We carry out the analysis at the plan-tier level, weighting all plan tiers equally.

Notes

1. In 2012 the median number of years that workers had been with their current employer was 6.4 for state government employees and 8.1 for local government employees (US Bureau of Labor Statistics 2012).
2. These calculations use the nominal annual interest rate adopted by each plan, typically 8 percent. Calculations that use a lower interest rate show that plan participants accumulate employer-financed pension benefits somewhat sooner.

References

Johnson, Richard W., and Benjamin G. Southgate. 2014. "How Will State and County Government Employees Fare under Kentucky's New Cash Balance Pension Plan?" Washington, DC: The Urban Institute.

National Center for Education Statistics. 2014. "Schools and Staffing Survey: Retirement and Pension Status among 2008-09 Public School Teacher Leavers, by Selected Teacher and School Characteristics in the 2007-08 Base Year: 2008-09." Washington, DC: US Department of Education. https://nces.ed.gov/surveys/sass/tables_list.asp#2012.

US Bureau of Labor Statistics. 2012. "Employee Turnover in 2012." Washington, DC: US Department of Labor. http://www.bls.gov/news.release/pdf/tenure.pdf.

———. 2013. "National Compensation Survey: Employee Benefits in the United States, March 2013." Washington, DC: US Department of Labor. http://www.bls.gov/ncs/ebs/benefits/2013/ebbl0052.pdf.

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The Urban Institute is a nonprofit, nonpartisan policy research and educational organization that examines the social, economic, and governance problems facing the nation. The Public Pension Project is a joint effort by Urban's Program on Retirement Policy and State and Local Finance Initiative. It examines the cost and financing of retirement plans provided to government employees, assesses their impact on retirement security and employee recruitment and retention, and evaluates reform options. The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders.

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