



HOW MANY PUBLIC WORKERS WITHOUT SOCIAL SECURITY COULD FALL SHORT?

By Jean-Pierre Aubry, Alicia H. Munnell, Laura D. Quinby, and Glenn Springstead*

INTRODUCTION

Social Security is designed to serve as the base of retirement support, to be supplemented by employer-sponsored plans. However, some state and local government employees – approximately one-quarter, or 5 million workers annually – are not covered by Social Security on their current job. Federal law allows these noncovered workers to remain outside of Social Security if their state or local plan provides comparable benefits. This *brief* addresses the extent to which lifetime benefits received by noncovered workers are equal to what they would have received from Social Security *alone*, had they been covered. Hence, the *brief* compares the pensions of noncovered workers to a very low bar, leaving to later discussion the broader question of how their total retirement income compares to workers with a lifetime of Social Security and employer-provided benefits.

This *brief* follows up on a CRR study that found that while all state and local plans currently satisfy the letter of the law, 43 percent do not provide Social Security-equivalent resources for some hypothetical new hires.¹ Specifically, these plans shortchange workers who spend 6 to 20 years in noncovered employment before finishing their careers in a covered job. The first question addressed here is: how often do noncovered workers leave with 6 to 20 years of tenure? The second question is: do most of these medium-tenure workers start, or end, their careers in government?

The discussion proceeds as follows. The first section sets the stage for the analysis by explaining why lifetime benefits for noncovered workers who stay 6-20 years fall short. The second section introduces the data and methodology used to analyze state and local tenure patterns. The third section presents the

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results, showing that around one-third of state and local workers – regardless of Social Security coverage or occupation – leave the government with 6 to 20 years of tenure. And around half of these medium-tenure workers finish their careers in a private (or federal) job. The final section concludes that a situation where hundreds of thousands of noncovered workers, in any given year, may not receive the basic level of Social Security protection from their pension raises concerns about their overall retirement security.²

BACKGROUND

Historically, state and local employees were not covered by Social Security because of uncertainty over the federal government's authority to impose payroll taxes on other governments and because public employees already earned defined benefit pensions.³ Today, certain public employers can remain outside of the program if they sponsor a retirement plan that meets generosity standards specified in IRS Employment Tax Regulations. These regulations state that defined benefit pensions (the dominant plan in the public sector) must provide an annuity, beginning on or before the Social Security full retirement age, of equal value to the Primary Insurance Amount that members would have received had they participated in Social Security. To help noncovered employers determine whether their plans are in compliance, the federal government has established Safe Harbor provisions.⁴

Concerned that some noncovered plans may have cut benefits below Social Security, the earlier CRR study collected data on pension benefit formulas and compared noncovered pension benefits to counterfactual Social Security benefits for hypothetical workers. It found that – while all plans meet the Safe Harbor requirements – they do not always provide Social Security-equivalent resources. Specifically, 43 percent of plans shortchange workers who leave their noncovered job with 6 to 20 years of tenure and finish their careers elsewhere.

This medium-tenure group falls short because their pension benefits are based on earnings when they leave noncovered government employment rather than earnings at retirement.⁵ In contrast, Social Security benefits replace a percentage of career-average salary, adjusted for wage growth. So, if medium-tenure workers had instead earned Social

Security for those same years of work, their benefit would have retained its real value. This issue of the erosive impact of wage growth only affects medium-tenure workers because those with very short tenures (5 years or less) have time to earn full Social Security benefits in the private sector. And career public employees, who receive benefits based on final average earnings, automatically receive benefits that are adjusted for wage growth.

The main questions are: How many state and local workers leave with 6 to 20 years of tenure? And, at what point during a career does this tenure typically occur?

DATA AND METHODOLOGY

The analysis draws on three publicly available longitudinal surveys and one large administrative database.

PUBLIC USE SURVEYS

- The *National Longitudinal Survey of Youth 1979* (NLSY79) follows a nationally representative sample of individuals born between 1957 and 1964. The panel structure of the survey allows us to observe respondents continuously until their mid-to-late 50s, but the results are noisy due to small sample sizes and self-reporting error, and the survey does not contain information on Social Security coverage until 2002.
- The *Panel Study of Income Dynamics* (PSID) tracks a representative sample of families and their descendants from 1968 through the present. While the PSID follows many workers for much of their work lives, it also suffers from small sample sizes and reporting error, and lacks information on Social Security coverage.⁶
- The *Health and Retirement Study* (HRS) follows individuals who were born between 1931 and 1965 and their spouses in middle and older age. We can determine the number of years that respondents ever worked in state or local government, as well as their Social Security coverage, from questions about past work history. However, these recall questions are particularly vulnerable to reporting error.⁷ Moreover, the HRS only asks state and local workers about their occupation starting in 2006.

ADMINISTRATIVE DATA

- The *Continuous Work History Sample* (CWHS) overcomes many of the limitations of public-use surveys. A random 1-percent sample of all wage and salary workers maintained by the U.S. Social Security Administration, the CWHS follows a very large number of workers over their entire career and has authoritative data on Social Security coverage. Nevertheless, it still has two weaknesses for this analysis. First, it only records sector of employment starting in 1981, so older individuals have missing sector data in the early parts of their careers. And, second, it does not contain detailed information on occupation within state or local government.

Since each data source has advantages and disadvantages, the approach is to synthesize results across all of them. Specifically, the analysis tracks the lifetime work experience of individuals ages 55 to 70 in 2016 (born between 1946 and 1961) to determine the number of years that each worker spends in the state or local sectors, and at what age that period of employment occurs. In most instances, the differ-

ent datasets yield similar conclusions. For example, Figure 1 shows that 21 to 36 percent of older workers in 2016 spent at least some of their career in a state or local government job.

RESULTS

The analysis first explores how many public workers fall into the medium tenure group. It then addresses when their government employment occurs.

HOW COMMON ARE MEDIUM TENURE WORKERS?

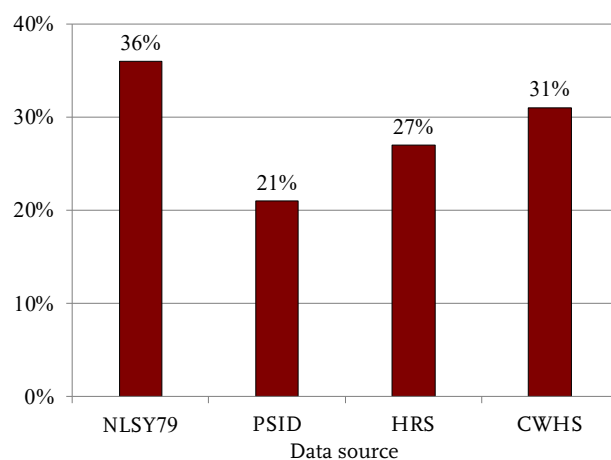
Table 1 reports the percentage of public sector workers falling into each tenure group – short (5 or fewer years); medium (6 to 20 years); or long (more than 20 years). Interestingly, the four data sources tell a similar story: around one-third of workers leave their government jobs with 6 to 20 years of tenure. Around 45 percent of workers only stay for 5 or fewer years, and around 25 percent are career employees.⁸

TABLE 1. DISTRIBUTION OF TENURE IN STATE AND LOCAL GOVERNMENT ACROSS FOUR DATA SOURCES

Tenure	Data source			
	NLSY79	PSID	HRS	CWHS
1-5	54%	48%	33%	41%
6-20	30	31	37	32
21+	16	21	30	27

Note: Sample is limited to workers ages 55-70 in 2016 with some state or local employment during their career.
Sources: Authors' estimates from the NLSY79 (1979-2016); PSID (1983-2017); HRS (1992-2016); and CWHS (1981-2016).

FIGURE 1. LIKELIHOOD OF EVER HAVING WORKED FOR STATE OR LOCAL GOVERNMENT



Note: The figure shows the percentage of older workers in 2016 who worked for state or local government at some point in their career.
Sources: Authors' estimates from the NLSY79 (1979-2016); PSID (1983-2017); HRS (1992-2016); and CWHS (1981-2016).

While Table 1 shows aggregate tenure patterns for the entire state and local workforce, the concern here is noncovered workers specifically. Hence, Table 2 (on the next page) contrasts the tenure distribution for covered and noncovered workers in the CWHS.⁹ Noncovered workers tend to have longer tenures than their covered colleagues, but the basic conclusion is the same: around one-third of all noncovered workers leave their government jobs with six to 20 years of tenure, and so are at risk of receiving pension benefits that fall short of Social Security.

TABLE 2. DISTRIBUTION OF TENURE IN STATE AND LOCAL GOVERNMENT BY SOCIAL SECURITY COVERAGE

Tenure	Covered	Noncovered
1-5	44%	33%
6-20	31	32
21+	25	35

Notes: Sample is limited to workers ages 55-70 in 2016 with some state or local employment in their career. The table does not include workers who have both covered and non-covered tenure (7 percent of the state and local workforce). *Source:* Authors' estimates from the CWHS (1981-2016).

But it is possible that tenure patterns vary by occupation. For example, one might expect a clerk at the Department of Motor Vehicles to have a different pattern than a teacher or a police officer. So the question becomes, are certain occupations more at-risk than others?

Table 3 reports tenure patterns for three groups of employees: K-12 teachers, public safety officers, and "general" employees (all others).¹³ Although teachers and public safety officers do tend to stay longer in government, around one-third of each occupation is comprised of medium-tenure workers.

TABLE 3. DISTRIBUTION OF TENURE IN STATE OR LOCAL GOVERNMENT, BY OCCUPATION

Tenure	Teachers		Police/fire		General	
	NLSY79	PSID	NLSY79	PSID	NLSY79	PSID
1-5	28%	20%	32%	26%	58%	55%
6-20	31	40	30	29	30	29
21+	40	40	38	45	12	16

Note: Sample is limited to workers ages 55-70 in 2016 who have some state or local employment during their career. *Sources:* Authors' estimates from the NLSY79 (1979-2016); and PSID (1983-2017).

WHEN DOES GOVERNMENT EMPLOYMENT OCCUR?

As discussed earlier, the final pay structure of non-covered pensions means that the timing of government employment matters as well as the duration. Medium-tenure workers who join the government early in their careers watch the value of their benefits erode for decades, whereas those who spend their last

20 years in government employment enjoy benefits based on final average salary. Hence, it is important to determine the typical age at which state and local workers start their government jobs.

Table 4 presents the median entry age, by tenure, tabulated from the NLSY79, PSID, and HRS for all state and local workers.¹⁰ The results indicate that many workers enter government in their mid-20s or early-30s, implying that medium-tenure workers often leave government in their 40s, and receive a pension that has declined in real terms.

TABLE 4. MEDIAN AGE OF ENTRY INTO STATE OR LOCAL GOVERNMENT, BY TENURE

Tenure	Data source		
	NLSY79	PSID	HRS
1-5	22	37	29
6-20	25	35	38
21+	23	27	25

Note: Sample is limited to workers ages 55-70 in 2016 who have some state or local employment during their career. *Sources:* Authors' estimates from the NLSY79 (1979-2016); PSID (1983-2017); and HRS (1992-2016).

However, these median entry ages also imply that half of medium-tenure workers join the government in midlife, and can retire from their government jobs with a larger pension.¹¹ Hence, Table 5 presents the share of all state and local workers who are still working for government after age 55, by total tenure.¹² Intuitively, the table shows that around half of medium-tenure workers are still in the state and local sectors at older ages.

TABLE 5. SHARE OF WORKERS EMPLOYED BY A STATE OR LOCAL GOVERNMENT AT AGES 55-70, BY TENURE

Tenure	Data source		
	PSID	NLSY79	CWHS
1-5	12%	20%	17%
6-20	41	47	55
21+	73	69	93

Note: Sample is limited to workers ages 55-70 in 2016 who have some state or local employment during their career. *Sources:* Authors' estimates from the PSID (1983-2017); HRS (1992-2016); and CWHS (1981-2016).

CONCLUSION

This *brief* explored the adequacy of retirement benefits for state and local government employees who are not covered by Social Security. It takes a very narrow focus, asking whether noncovered workers receive an employer pension that generates as much in lifetime resources as Social Security *alone* would have provided.

A prior CRR study found that 43 percent of noncovered public pension plans do not generate Social Security-equivalent lifetime benefits for a significant minority of new hires. In particular, workers who spend the first half of their career in a noncovered job are most at risk of falling short.

The question here is how many workers leave their government jobs with 6 to 20 years of tenure, and at what point in their careers does this tenure occur? Using four different datasets – three public-use surveys and administrative Social Security data – it finds that around one-third of noncovered workers fall into this medium-tenure group. Of these medium-tenure workers, around half spend the first part of their career in a noncovered job, and so are at risk of receiving a pension that does not fully replace Social Security.

Although relatively few workers may fall short of Social Security, the problem is still serious. Social Security is intended to provide a *minimum* level of retirement income for all Americans. Covered public sector workers – and many private sector workers – augment their Social Security benefits with employer-sponsored retirement plans. Thus, learning that hundreds of thousands of noncovered workers, in any given year, are at risk of not receiving that minimum is concerning.

ENDNOTES

- 1 Quinby, Aubry, and Munnell (2021).
- 2 Estimates from the *Continuous Work History Sample* (CWHS) maintained by the U.S. Social Security Administration suggest that around 1.5 million noncovered workers approaching retirement in 2018 left their state and local jobs before age 56 with 6-20 years of tenure. The CWHS is a 1-percent random sample of Social Security Numbers, so it may include some sampling error.
- 3 A series of amendments beginning in the 1950s allowed state and local governments to join Social Security; today, most public employees are covered by the program.
- 4 Benefits in defined benefit plans are equal to a benefit factor multiplied by average final earnings and years of service. The Safe Harbor provisions assume retirement at age 65 and set a benefit factor that varies with the number of years included in the final earnings calculation.
- 5 In addition, some noncovered plans require long vesting periods and lack full cost-of-living adjustments in retirement (See Quinby, Aubry, and Munnell 2020 for details).
- 6 The analysis of the NLSY79 and PSID is limited to respondents because data for spouses is much less reliable. Some older respondents in the PSID are missing early data because their careers started before 1968.
- 7 In particular, workers with very short stints in state or local government may not bother to report them.
- 8 These results align with Munnell et al. (2012) who conducted a similar exercise for younger cohorts of workers using the data published in public plans' *Actuarial Valuations*.
- 9 Recall that the CWHS is the most reliable source of data on Social Security coverage.
- 10 This analysis includes both covered and noncovered workers because the CWHS is missing early employment data for the older cohorts in our analysis.
- 11 Moreover, the CWHS data show that approximately 45 percent of medium-tenure workers have more than one employment stint in state and local government.

12 The NLSY79 is excluded from this analysis because it only observes workers ages 52-59 in 2016. The analysis includes both covered and noncovered workers for consistency with Table 3.

13 This phase of the analysis relies on the NLSY79 and PSID, because the HRS and CWS do not contain sufficiently detailed information. Hence, it includes both covered and noncovered workers. Since some workers switch public sector occupations, the analysis classifies workers by the occupational category in which they spend the most working years.

REFERENCES

- Munnell, Alicia, Jean-Pierre Aubry, Joshua Hurwitz, and Laura Quinby. 2012. "Public Plans and Short-Term Employees." Working Paper 18448. Cambridge, MA: National Bureau of Economic Research.
- Quinby, Laura D., Jean-Pierre Aubry, and Alicia H. Munnell. 2021. "Do Public Workers Without Social Security Get Comparable Benefits?" *State and Local Plans Issue in Brief* 77. Chestnut Hill, MA: Center for Retirement Research at Boston College.
- Quinby, Laura D., Jean-Pierre Aubry, and Alicia H. Munnell. 2020. "Pensions for State and Local Government Workers Not Covered by Social Security: Do Benefits Meet Federal Standards?" *Social Security Bulletin* 80(3): 1-29.
- University of Michigan. *Health and Retirement Study, 1992-2016*. Ann Arbor, MI.
- University of Michigan. *Panel Study of Income Dynamics, 1983-2017*. Ann Arbor, MI.
- U.S. Bureau of Labor Statistics. *National Longitudinal Survey of Youth 1979, 1979-2016*. Washington, DC.
- U.S. Social Security Administration. *Continuous Work History Sample, 1981-2016*. Washington, DC.

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