



# DO BENEFIT CUTS ENCOURAGE PUBLIC EMPLOYEES TO LEAVE?

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## INTRODUCTION

A number of state and local pension systems have persistently low levels of funding. These poorly funded plans in places like Kentucky, Illinois, and New Jersey may eventually reduce benefits not only for new hires, but also for *current* employees. The question is: do cuts to pension benefits encourage a state's public sector workers to leave for the private sector?

This *brief*, based on a recent paper, evaluates a 2005 reform of the Employees' Retirement System of Rhode Island (ERSRI) that cut core benefits for state employees and teachers without raising salaries to compensate.<sup>1</sup> It examines whether these benefit cuts for current employees encouraged them to separate from the government, investigates whether teachers (an important and often-studied group) reacted differently to cuts than other workers, and explores the possible consequences for public services.

The discussion proceeds as follows. The first section outlines Rhode Island's history of pension reforms and describes the 2005 legislation. The second section introduces the evaluation methodology and quantifies the effect of the 2005 reform on employee separation. The third section addresses the potential costs of an employee exodus. The final section concludes that benefit cuts encourage government workers to leave their jobs – particularly non-teachers who may have more options in the private sector – but that the size of the response is small relative to the budgetary savings from the reform. Nevertheless, government employers should consider the human resource cost of reduced compensation when analyzing potential pension reforms.

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## OVERVIEW OF RHODE ISLAND REFORMS

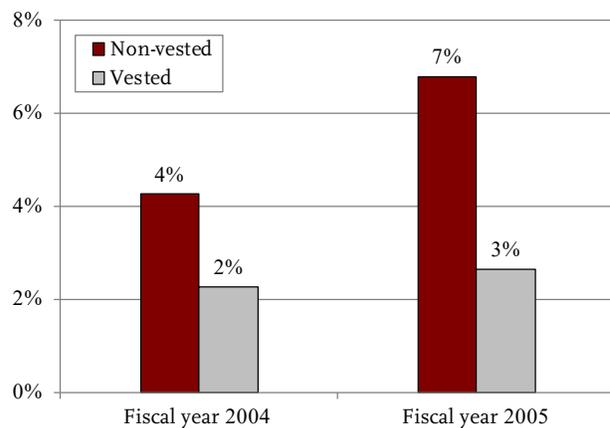
Although ERSRI has undergone a number of reforms in the last 15 years, this analysis focuses on the 2005 reform.<sup>2</sup> The 2005 reform raised the normal retirement age (NRA), reduced the multiplier that determines benefit levels, and capped future cost-of-living adjustments (COLAs) (see Table 1). Importantly, the policy applied only to ERSRI members who had not earned 10 years of tenure (the threshold needed to vest in their benefits) as of June 30, 2005. Not only did the reform spare vested members, but it also ignored local government employees who participate in a separate pension system, the Municipal Employees Retirement System (MERS).

Although the reform only targeted some employees, Rhode Island's actuaries predicted that the benefit cut would reduce future pension costs by \$243 million.<sup>3</sup> But, for this analysis, what matters is how much the reform cut the benefits of individual employees. To quantify the magnitude of the cut from an employee's perspective, one can compare the present value of future benefits under the pre-reform plan and the post-reform plan.<sup>4</sup> Prior to the reform, an employee who stayed in the plan just long enough to vest (10 years of tenure at separation) could begin to collect benefits at age 60; after the reform, he could collect a lower level of benefits beginning at age 65. The calculation indicates that the reform reduced this employee's benefits by 44 percent.<sup>5</sup> Employees who remained in state government for more than 10 years saw reductions of a similar magnitude.

## EVALUATING THE EFFECT OF THE BENEFIT CUT

To observe how the separation patterns of public employees in Rhode Island varied before and after the 2005 pension reform, the analysis relies on a database of personnel records provided by the state for the 2003-2008 period. As motivation for the analysis, Figure 1 uses these individual-level data to show the annual separation rate from ERSRI in 2004 and 2005.

FIGURE 1. ANNUAL SEPARATION RATE FROM ERSRI BY VESTED STATUS, FY 2004-2005



Source: Authors' estimates from employment records provided by ERSRI (2003-2017).

TABLE 1. BENEFIT PROVISIONS, PRE-REFORM (2003-2004) AND POST-REFORM (2005-2008)

| Provision                   | ERSRI pre-reform   | ERSRI post-reform for those not vested on 6/30/2005   |
|-----------------------------|--|---|
| Vesting period              | 10 years of tenure   | 10 years of tenure  |
| Normal retirement age       | <ul style="list-style-type: none"> <li>• Age 60</li> <li>• Or any age with 28 years of tenure</li> </ul> | <ul style="list-style-type: none"> <li>• Age 65</li> <li>• Or age 59 with 29 years of tenure</li> </ul> |
| Benefit multiplier          | Varies based on tenure   | Varies based on tenure, lower than pre-reform   |
| Final average salary period | 3 years  | 3 years   |
| Benefit cap                 | 80% of FAS   | 75% of FAS  |
| COLA                        | 3% compounded annually   | CPI capped at 3% compounded annually, starting 3 years after retirement                                 |

Note: The provisions only reflect general state employees and teachers, who comprise the majority of members. Sources: Various *Actuarial Valuation Reports* and plan documents (2003-2008).

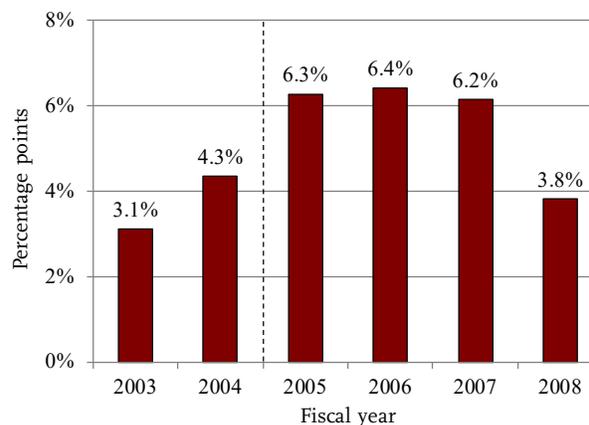
In both years, non-vested employees were substantially more likely to separate than their vested colleagues. However, in 2004 (the year before the benefit cut) non-vested employees were only 2 percentage points more likely to separate than vested colleagues, whereas in 2005 non-vested employees were 4 percentage points more likely to separate. This jump in the relative separation rate that occurred in 2005 suggests that the benefit cut may have caused some non-vested employees to leave their jobs.

Yet, Figure 1 may not tell the full story for two reasons. First, the effect of the benefit cut may have extended past 2005, as it would have taken time for affected employees to learn about the cuts and search for outside opportunities in the private sector. Second, some employees who were not vested in 2005 may have known about the pension reform when they were hired, and never expected to receive the more generous level of benefits. To account for these two possibilities, the next phase of the analysis limits the population to employees who were hired before the benefit cut was announced, and follows these workers over a longer period of time.

Specifically, the analysis follows individual ERSRI members who were employed at the beginning of 2003, and notes the year in which they left their jobs. Those without enough tenure to vest before the reform comprise the “treatment” group, while those with sufficient tenure to vest are the “control” group. The analysis calculates how many members of the treatment and control groups had left state government by the end of each year between 2003 and 2008. This calculation yields the cumulative probability that a treatment or control group member had separated by the end of a given year.

The next step is to compare the two groups by looking at the difference in their separation rates. As noted above, the non-vested group was more likely to separate even before the benefit cut. Of particular interest is how the gap in cumulative separation rates increased after 2004 (see Figure 2). After the reform, the gap between non-vested and vested workers rose by 2 percentage points – from about 4 percentage points to about 6 percentage points – and remained at this higher level for a few years.<sup>6</sup>

FIGURE 2. DIFFERENCE IN THE CUMULATIVE SEPARATION RATES OF NON-VESTED AND VESTED ERSRI WORKERS, FY 2003-2008



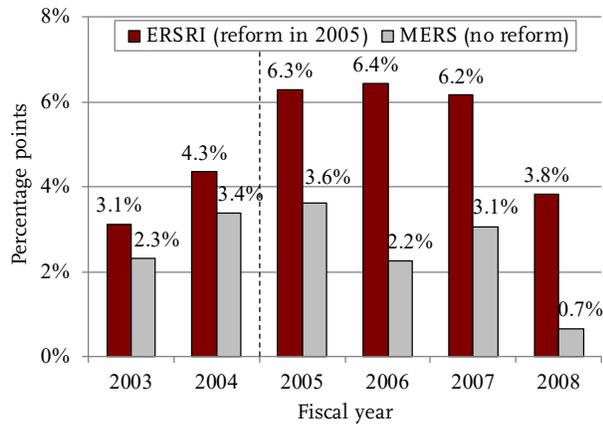
Source: Authors' estimates from employment records provided by ERSRI (2003-2017).

This finding suggests that the benefit cut spurred separations. However, the difference in the cumulative separation rates was already trending upward in 2004, the year before the benefit cut. This trend could have been due to many factors, including a strong economy that may have disproportionately lured short-tenure workers to the private sector.

To control for these other factors that affect employment, the analysis looks at the separation patterns of municipal employees in MERS. Looking at municipal employees is a good test because MERS members were all unaffected by the benefit cut, have the same 10-year vesting period as ERSRI, and work in the same local labor market as state employees (as Rhode Island is a very small state). As before, the population of workers is broken into non-vested and vested groups, based on their potential vested status in 2005.

Figure 3 (on the next page) expands Figure 2 to include the MERS members. Reassuringly, MERS displayed the same upward trend in 2004 as ERSRI, but stabilized in 2005 and subsequently declined. The fact that ERSRI and MERS diverged in the year of the pension reform indicates that the benefit cut encouraged some state employees and teachers to leave their jobs.

FIGURE 3. DIFFERENCE IN THE CUMULATIVE SEPARATION RATES OF NON-VESTED AND VESTED ERSRI AND MERS WORKERS, FY 2003-2008

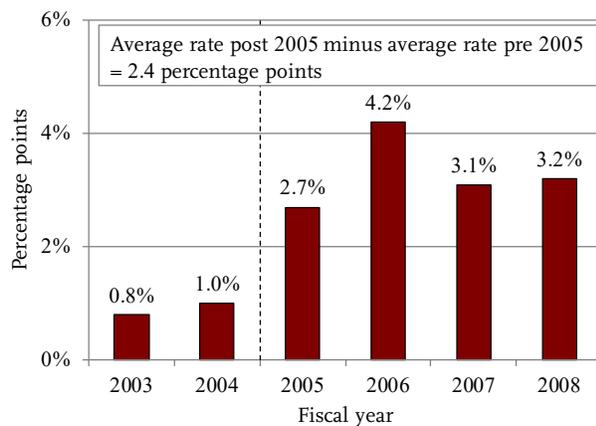


Note: See Endnote 7.

Source: Authors' estimates from employment records provided by ERSRI (2003-2017).

The last step in the analysis quantifies the impact of the benefit cut by removing the time trend observed in MERS from the time trend observed in ERSRI. To this end, Figure 4 simply subtracts the red bars in Figure 3 from the gray bars in Figure 3; the resulting gap provides an ERSRI-MERS comparison.

FIGURE 4. DIFFERENCE IN THE CUMULATIVE SEPARATION RATES OF NON-VESTED AND VESTED ERSRI WORKERS RELATIVE TO THOSE IN MERS, FY 2003-2008



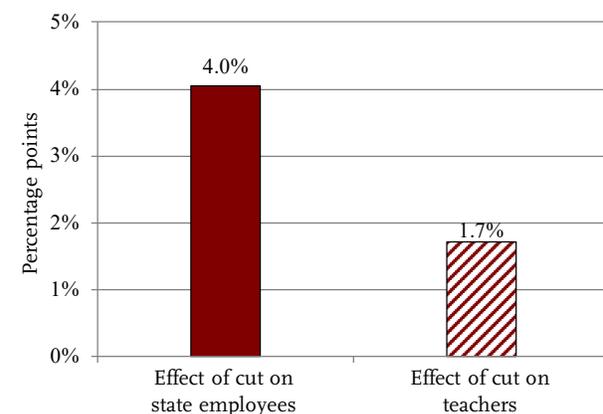
Note: See Endnote 8.

Source: Authors' estimates from employment records provided by ERSRI (2003-2017).

For example, in 2004, the difference in separation between non-vested and vested members of ERSRI was 1 percentage-point higher than the difference in separation between non-vested and vested members of MERS. Then it suddenly jumped up by 2.4 percentage points (the average in the post-reform period minus the average in the pre-reform period). In other words, the benefit cut in ERSRI caused an approximately 2.4-percentage-point increase in the rate at which current employees, who suddenly lost benefits, left for the private sector. The paper underlying this *brief* confirms that the estimated effect is statistically significant.<sup>9</sup>

A remaining question is whether the cuts affected all employees equally. In particular, teachers might be less responsive than state-government employees because teachers may have to change careers in order to find private sector employment. Indeed, occupation turns out to be a strong predictor of employee responsiveness. Figure 5 uses the same methodology described above to estimate the effect of the cut for state employees and teachers separately.<sup>10</sup> State employees were highly responsive to the reform, being 4-percentage-points more likely to separate because of it. Teachers, on the other hand, were only 1.7-percentage-points more likely to separate in response to

FIGURE 5. EFFECT OF RHODE ISLAND'S 2005 BENEFIT CUT ON THE PROBABILITY THAT ACTIVE EMPLOYEES IN 2003 LEAVE THEIR JOBS BEFORE 2008



Notes: The solid bar is statistically significant at the 1-percent level. The shaded bar is marginally significant at the 10-percent level. The difference between the two groups is highly significant.

Source: Authors' estimates from employment records provided by ERSRI (2003-2017).

the cut. It is possible that state employees (such as lawyers, accountants, clerks, and maintenance workers) have alternative employment opportunities in the private sector that K-12 teachers lack, or teachers may simply enjoy their jobs more.

## SHOULD GOVERNMENT EMPLOYERS WORRY ABOUT SEPARATION?

The preceding analysis suggests that state and local governments should consider the human resource costs of pension reforms when attempting to shore up the funding of troubled systems. Employee separation imposes two types of costs. The first is the direct cost of hiring and training replacements for workers who leave. A number of studies place these direct costs at around \$4,000 to \$18,000 per worker.<sup>11</sup> Assuming that Rhode Island is similar, the 2005 reform incurred a one-time hiring and training cost of between \$1.8 million and \$8.1 million – small in magnitude relative to the pension savings of \$243 million.

The second cost is workforce composition, which is harder to quantify, but potentially more important. Specifically, employee separation could hurt public service provision if new hires are less skilled than those who leave. The concern is that governments cutting their pensions in order to ease budgetary pressures may not offset the lost benefits with a salary increase. In this scenario, the pension cut represents a net reduction in total compensation, making government jobs less attractive to skilled workers who have competing offers in the private sector.<sup>12</sup>

## CONCLUSION

State and local governments with financially troubled pension systems may consider benefit cuts as a way to ease budgetary pressures. This *brief* shows that pension cuts for current employees induce affected workers to leave for the private sector. Specifically, it examines the experience of Rhode Island, which in 2005 achieved an estimated \$243 million in budgetary savings by reducing the benefits of non-vested state employees and teachers. This pension reform caused a 2.4-percentage-point increase in the fraction of non-vested employees separating over the next four years.

Although the cost of separation was small relative to the fiscal savings, these findings suggest that governments should also consider the human resource costs of cutting benefits. In particular, human resource costs are likely to be concentrated in the government occupations that have clear private sector alternatives, such as lawyers, accountants, and engineers. When pension cuts are necessary, governments may be able to mitigate human resource costs by offsetting the benefit cut with less-expensive salary enhancements. The degree to which workers are willing to trade wages for pensions is left as a question for future research.

## ENDNOTES

1 Quinby and Wettstein (2019).

2 In 2009, another set of reforms targeted ERSRI members who had been unaffected by the prior reform, but who were not eligible to retire. In 2011, the Rhode Island legislature fundamentally altered the structure of pension benefits by converting to a hybrid defined-benefit/defined-contribution plan.

3 *Actuarial Valuation Report of ERSRI*.

4 The calculation discounts future benefits to 2005, assumes inflation of 2.8 percent, and discounts benefits by a nominal 5.8 percent. The comparison is made for a hypothetical employee who resembles a typical non-vested member of ERSRI in 2005. The worker enters the government in 2001 at age 34 and experiences 5-percent nominal wage growth annually.

5 Although of lesser magnitude, the pension cut also had an indirect spillover effect on the state's retiree health insurance (RHI) program for ERSRI members. The reform did not make any direct cuts to RHI, but receipt of RHI benefits is tied to the pension's NRA. Consequently, state employees affected by the pension reform also lost five years of subsidized RHI premiums. However, the magnitude of the RHI cut is small relative to the pension cut – only 15 percent of the present value of lost pension benefits. See the full paper (Quinby and Wettstein 2019) for details.

6 Economists refer to this methodology for evaluating a policy change as “differences-in-differences.”

7 Figure 3 follows members of ERSRI and MERS who were actively employed in 2003. The bars labeled ERSRI subtract the cumulative separation rate in the ERSRI control group from the cumulative separation rate in the ERSRI treatment group. The bars labeled MERS subtract the cumulative separation rate in the MERS control group from the cumulative separation rate in the MERS treatment group.

8 Figure 4 follows members of ERSRI and MERS who were actively employed in 2003. The bars depict the result of a differences-in-differences calculation: first subtract the cumulative separation rate in the ERSRI control group from the cumulative separation rate in the ERSRI treatment group. Then subtract the cumulative separation rate in the MERS control group from the cumulative separation rate in the MERS treatment group. The bars depicted in the figure subtract the difference in MERS from the difference in ERSRI.

9 The regression in the full paper also controls for demographic characteristics of the employees.

10 The results in Figure 5 are derived from regression analysis discussed in the full paper.

11 Studies of K-12 education estimate hiring and training costs between \$4,000 and \$18,000 per departing teacher (Barnes, Crowe, and Schaefer 2007; and Watlington et al. 2010). Graef and Hill (2000) estimate \$10,000 to replace a child protective services worker. Registered nurses are estimated to have exceptionally high per-separator costs of between \$24,000 and \$67,000 (Jones 2005; Nursing Solutions Inc. 2016; The Lewin Group, Inc. 2009; and Waldman et al. 2004), but they make up a small share of ERSRI employees.

12 See, for example, Bacolod (2007); Corcoran, Evans, and Schwab (2004); Figlio (1997); and Nagler, Piopiunik, and West (2015). Separation could also adversely affect agency performance by reducing staff cohesion (Bryk and Schneider 2003; and Johnson, Harrison, and Donaldson 2005).

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