

Retirement Saving in a Multi-Plan Environment

Executive Summary

**Robert L. Clark,
Stephen Zelnak**
Professor, Poole College
of Management, North
Carolina State University,
TIAA Institute Fellow

Aditi Pathak,
Department of Economics,
North Carolina State
University

Denis Pelletier,
Associate Professor,
Department of Economics,
North Carolina
State University

Compared to retirement saving plans in the private sector, the retirement saving landscape is much different and more complex in the public sector, and there have been only a few studies examining retirement saving decisions of public employees.¹ Public employers have the option of offering alternative types of saving plans regulated under special tax codes. State governments can offer their employees the option of enrolling in either a 401(k) or a 457 plan. Local government employees may have the option of participating in a state-managed 457 plan, the state-managed 401(k) plan, and these agencies may also offer their own locally managed 457 plan. In addition to these plans, school districts may offer employees locally managed or, in some cases, state-managed 403(b) plans. Clark, Pathak and Pelletier (2017 forthcoming) provide a detailed comparison of the rules and regulations governing these different types of retirement saving plans.

Given this array of options, the saving decision for many public employees consists of first deciding whether to contribute to a retirement saving plan offered by their employer. Having made this saving decision, employees then must select the most appropriate saving plan from the two, three, or even four plans that are offered. In some cases, especially in 403(b) plans, even after selecting the plan of choice, employees will then find themselves having to choose from a number of vendors in one or more of these plans (Clark and Richardson, 2010; Clark and Hanson, 2013).

1. Clark et al (2016) provides considerable information about 403(b) plans and their use in the school districts in North Carolina. Clark and Hanson (2013) examined the use of 403(b) in all 50 states.

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To examine retirement saving plans in the multi-plan public sector environment, this paper reviews the plan offerings by school districts in North Carolina. All 115 districts in the state offer their employees the option of enrolling in the state-managed 401(k) plan and a district-managed 403(b) plan. In addition, many of the districts allow school personnel to contribute to the state-managed 457 plan and/or a locally managed 457 plan. The analysis begins with a discussion of how these plans differ in terms of tax limits, withdrawals and management by the district or state. Next, the current offerings of retirement saving plans are presented using data from a survey of school district administrators and payroll data provided by the districts. Finally, we estimate the choice of school personnel to participate in the various saving plans. We seek to determine what factors explain why individuals select one type of plan over another, and why some individuals contribute to two or more plans at the same time.

1. Savings options offered by North Carolina school districts

To determine the plans offered by each of the school districts in North Carolina, a survey was sent to each school district's Chief Finance Officer, Director of Business Operations, or Director of Human Resources. The survey data were merged with individual-level payroll records from March 2013 collected from about half of the school districts in North Carolina. The survey asked for information on all retirement saving plans offered by each district and the management and oversight of these plans and vendors, as well as for information about any employer-provided communications and other informational efforts related to retirement plans.² The payroll data included each employee's age, years of service, earnings and an occupational code.

Public school personnel in all school districts across North Carolina are enrolled in the Teachers' and State Employees' Retirement System (TSERS) and in the State Health Plan (SHP). While most of the annual salary for school district personnel is paid by the state according to a fixed pay scale, most districts provide a local supplement to some employees' state-funded base salary. Average annual

supplements for teachers vary from zero in six districts to more than \$6,000. Other employee benefits (e.g., vacation) and job requirements (e.g., number of work days and number of hours worked per day) are similar for all North Carolina school districts.

Public employers must consider three important elements concerning retirement saving plans when deciding on the number and type of retirement options to offer to their employees: (a) the type of tax-qualified saving plans to offer; (b) the number of vendors allowed to provide retirement plans and products to employees under each tax-qualified plan type offered; and (c) the extent of responsibility to assume in overseeing the plan(s) and in communicating information about the plans, vendors and fees to district personnel.³ Building a model of employers' decisions to offer and manage multiple plans is beyond the scope of the current paper; however, we acknowledge the importance of the choices offered to employees and the degree of oversight of these plans.

Table 1 shows the incidence of various retirement plans in the 90 districts that responded to our survey, and for the 53 districts with payroll records that were successfully merged with survey responses. The analysis below is based on payroll records for 71,156 full-time employees in the 53 school districts and information from our district survey.⁴ Table 1 illustrates a wide variety of plan offerings, plan oversight and management decisions. In the following analysis, we have merged locally managed 457 plans and the state-managed 457 into a single category, "457 plan." While there may be some differences in the specific options between these two plan types, they are both subject to the regulations governing 457 plans. As shown in the first portion of Table 1, all school districts in the two samples offer a locally managed 403(b) plan and the NC 401(k) plan, North Carolina's state-managed 401(k) retirement saving plan. Thus, all districts in the sample offer at least two plans, and 75 out of 90 (over 80 percent) districts allow their employees to select from all three types of retirement saving plans. Among the districts that provided payroll data, the patterns in plan offerings are similar.

2. Additional data were gathered from districts' websites and other public sources to: (1) validate districts' survey responses, and (2) create an index of district website quality. A detailed discussion of the survey and its results are provided in Clark et al (2016).

3. In the public sector, it is often unclear who is actually responsible for making decisions about each of these elements of public employers' retirement plans. In the case examined here, district administrative staff must manage retirement programs, but the local school boards typically make the final decisions.

4. Clark, et al. (2016) provides a detailed description of the data.

Table 1. Plan offerings across North Carolina school districts

	(1)	(2)
School Districts	Survey	Payroll Data
Number of Plans:		
2	15 districts	5 districts
3	75 districts	48 districts
Offers 401(k) managed by state	90 districts	53 districts
Offers 403(b) managed by district	90 districts	53 districts
Offers 457 managed either by state or district	75 districts	48 districts

Numbers in italics are the count of districts that fall into each category.

Source: Information on number of plans in each district were gathered from a survey of school district administrators.

2. School personnel and their saving decisions

The payroll data provides individual records with information on age, gender, marital status, race, occupation, years of tenure and monthly earnings. In addition, these data indicated the amount employees contributed to each retirement saving plan offered by the district in March 2013. In total, we examined the records of 71,156 employees of

school districts across North Carolina. Using these records, we are able to determine whether workers were participating in the various plans. The means for the entire sample are presented in Table 2, Column 1. As expected, the labor force is more than three quarters female. The average age is 40 years with more than 11 years of tenure. Educational professionals represent 78.6 percent of the sample, and 72.9 percent of the employees are white.⁵

Table 2. Means of sample population by participation status: in percent

Characteristics	Total	Participating in at least one plan
	(1)	(2)
Age	40.06	46.62
Male	21.61%	19.26%
Female	78.39%	80.74%
Single	41.99%	40.92%
Married	58.01%	59.08%
Single Male	9.27%	7.90%
Married Male	12.34%	11.36%
Single Female	32.72%	33.02%
Married Female	45.67%	47.72%
White	72.90%	73.74%
Black	20.61%	19.63%
Hispanic	1.41%	1.03%
Other	5.08%	5.61%
Managers	3.09%	4.95%
Education Professionals	78.60%	82.36%
Support	18.30%	12.69%
Tenure (years)	11.28	13.66
N	71,156	22,791

Source: Payroll data from 53 school districts in North Carolina.

5. Individuals classified as educational professional include teachers, TAs, mentors, coaches, speech therapists, audiologists, tutors and instructors.

Column 2, Table 2, reports the means of individuals who are contributing to one or more plans in the payroll data. The average age of individuals contributing to a saving plan is about 6.5 years greater than the sample at large. It is interesting to note that women are more likely to be participating in a plan, as are managers and educational professionals, while a much smaller proportion of the support staff are contributing to a saving plan. Participants have about 2.4 more years of tenure than the general labor force.

Individuals are not restricted to contribute to only one plan. In fact, they have the option of contributing to any or all of the plans offered by their district. Table 3 indicates

the proportion of employees who contribute to the various plans. First, we note that 32.0 percent of the individuals are contributing to at least one retirement saving plan. Of these, 20,388, or 18.8 percent, of employees contribute to exactly one plan, with the district-managed 403(b) plan being the most popular: 14.7 percent of employees contribute to it. In contrast, 10.0 percent contribute solely to the state-managed 401(k) plan. Only 4.0 percent of all workers contribute only to a 457 plan. In total, 89.5 percent of all individuals who are contributing to any plan are participating in a single plan.

Table 3. Distribution of employees by retirement saving plans and participation rates

Characteristics	Number of Individuals	Participation Rate Percent of Sample
Total Sample	71,156	100.0%
No Plan	48,365	68.0%
Any Plan	22,791	32.0%
Type of Coverage		
Only 401(k)	7,095	10.0%
Only 403(b)	10,464	14.7%
Only 457	2,829	4.0%
401(k) and 403(b)	964	1.4%
401(k) and 457	971	1.4%
403(b) and 457	292	0.4%
401(k), 403(b) and 457	176	0.2%

Source: Payroll data from 53 school districts in North Carolina.

Earlier, we discussed how combining either a 401(k) or a 403(b) plan with a 457 could have some financial advantages due to differences in tax regulations. In this sample of North Carolina school personnel, 971 individuals contributed to both 401(k) and the 457 plans, another 292 employees participated in both 403(b) and 457 plans, while another 176 workers contributed to all three plans. Thus, 6.3 percent of individuals who contributed to a retirement saving plan chose a strategy that would allow them to exceed the contribution limit of \$18,000 per year. Perhaps the oddest combination is the 964 employees who contributed to the 401(k) and the 403(b) plans. These plans were subject, in general, to the same government rules.

3. Choice of a retirement saving plan

The following analysis is based on the assumption that school personnel first determine if they want to allocate some of their monthly earnings from current consumption to a qualified

retirement saving plan offered by their employer. Having made the decision to save through an employer plan, individuals then consider the plans that are available to them and select the plan that best fits their saving preferences. This latter choice may be influenced by the various characteristics of the three plans and the marketing done by the various vendors.

The participation decision

The individual-level means of the independent variables for the full sample of employees are shown in Column 1, Table 4. The sample is predominantly female: 78 percent of all school personnel are women. The mean salary is approximately \$31,500, and average tenure is 11.3 years. Instructional staff represents 79 percent of the sample, with 18 percent being support personnel and 3 percent classified as management. About 73 percent of the sample is white, with 21 percent being black, and one percent represented by Hispanics. Slightly less than one third of the sample is contributing to at least one of the plans.

Table 4. Marginal effects of participation in any retirement saving plan

	Means (1)	Participation in any plan (2)
Annual Salary (in \$10,000s)	3.15	0.117*** (0.003)
Salary^2		-0.009*** (0.000)
Tenure (years)	11.28	0.037*** (0.001)
Tenure^2		-0.001*** (0.000)
Managers	3.09%	0.082** (0.011)
Support	18.30%	-0.119*** (0.005)
Black	20.61%	0.016*** (0.005)
Hispanic	1.41%	-0.031* (0.016)
Other Ethnic Group	5.08%	0.023** (0.009)
Single Male	9.27%	-0.009 (0.007)
Married Male	12.34%	-0.025*** (0.006)
Single Female	32.72%	0.029*** (0.004)
Observations		71,156
Mean of Dependent Variable		0.320

Marginal effects are calculated at the mean values based on probit estimates of participation in any plan. District fixed effects are included. Standard errors clustered at the district level. Statistical significance: 10% (*), 5% (**) and 1% (***).

The decision to participate in any plan is estimated using a probit model, with the dependent variable being one if the individual was participating in any of the three plans, and zero otherwise. The marginal effects at the mean of the variables derived from the estimated probit coefficients are reported in Column 2, Table 4. The estimated results indicate that managers are 8.2 percentage points more likely to participate in these plans compared to educational professionals, while the support staff are 11.9 percentage points less likely to enroll in one of the retirement saving plans. Holding other factors constant, blacks are slightly more likely to participate and Hispanics are slightly less likely to contribute to one of the plans. Married men are 2.5 percentage points less likely to enroll in one of these plans compared to married women, while single females are 3.0 percentage points more likely to be participants in the employer plans.

Choice of retirement saving plans

Having made the decision to contribute to an employer-provided retirement saving plan, individuals must now decide among the three plan types offered to them. In these North Carolina school districts, every employee has access to a 401(k) and 403(b) plan, and about 93 percent have access to a 457 plan. Among participants in retirement plans, 31.1 percent only contribute to a 401(k) plan, 45.9 percent only contribute to a 403(b) plan, and 12.4 percent only contribute to a 457 plan. Individuals contributing to a 401(k) and a 403(b) make up 4.2 percent of the sample, about the same percentage as individuals who selected a 401(k) and a 457 plan. Individuals investing in 403(b) and 457 plans make up about 1.3 percent of the sample. Finally, one should notice that 0.8 percent of participants are contributing to all three plans.

The marginal effects of the determinants of contributing to a specific plan were estimated using a multinomial logit model. The analysis enables employees to select from each of the three plan types individually or any combination of the three plan types, making a total of seven possible choices. The analysis of participation in a retirement saving plan indicates that the choice of a plan is significantly determined by occupational and demographic characteristics. Managers are 12.5 percentage points more likely to only participate in the 401(k), and 11.7 percentage points less likely to only enroll in a 403(b) plan, compared to classroom personnel. The retirement saving decisions of the support staff follow

a similar pattern. These differences in saving choices may reflect that managerial and support personnel may be more familiar with 401(k) plans since they may have spent working years outside of public education, while educational professionals typically will have spent more of their working life in public education. These results indicate that, with all else being equal, classroom personnel are the primary users of the 403(b) plan.

Holding other characteristics constant, blacks are 10.4 percentage points more likely to select a 403(b)-only plan, and 10.9 percentage points less likely to select a 401(k)-only plan. Compared to married women, single women and single men are about 6 and 3 percentage points, respectively, more likely to enroll in only a 403(b) plan, and 5.5 and 4.2 percentage points less likely, respectively, to select only a 401(k) plan.

In this analysis, we find no statistically significant evidence that highly compensated employees and managers are more likely to select plan combinations that enable them to take advantage of tax laws to make annual contributions exceeding the maximum contribution limits. This could be due to the relatively small number of individuals who combine other plans with a 457 plan. Comparing the means of individuals who contributed to either a 401(k) or a 403(b) plan and a 457 plan to individuals who contributed to only one plan or to a 401(k) plan plus a 403(b) provides no support that managers and highly compensated workers are more likely to take advantage of the separate IRS rules allowing the separate contribution caps in 457 plans. In fact, those that contribute to a 457 plan plus another retirement saving plan actually have lower annual earnings.

Concluding observations

Public employees face an expanded choice of retirement saving plans relative to similar workers in the private sector. Federal tax policies allow state and local governments the opportunity to offer 401(k) plans that dominate the private sector, along with 457 plans. Public schools and certain other organizations also can offer 403(b) plans to their employees. Our analysis of public school employees in North Carolina illustrates a range of economic and demographic factors that influence the decision to enroll in one of these plans in a similar fashion as private sector employees.



The three plans have similar characteristics and IRS guidelines; however, several differences in the plans imply that certain workers may prefer one plan type over the others. The multinomial logit results indicate that significant determinants of plan choice are occupation, race, gender and marital status. These findings might reflect how individuals' choices of retirement plans respond to the

marketing efforts of vendors that vary across the districts and to their own work and retirement plans. Finally, we find no indication that managers and highly compensated employees are using the availability of multiple plans to exceed the annual contribution limit on retirement saving.

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