How Does Retiree Health Insurance Influence Public Sector Employee Saving?

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In the United States, the cost of health care insurance for retirees can be very steep indeed. For retirees too young for Medicare, estimated annual health insurance premiums can easily amount to $14,000 per year for a retired couple.[1] Even for those age 65 and older who are covered by Medicare, out-of-pocket costs for a median couple can be $5,300 per year, and at the 90th percentile, annual expenses can total $110,000 for a couple.[2] Accordingly, as workers plan for and look ahead to retirement, they increasingly must recognize that health insurance costs may profoundly affect both their health and their ability to consume other goods and services during their golden years.

Employees who are able to look forward to employer-provided, and perhaps subsidized, group retiree health insurance coverage will most likely need to save less during their working careers due to the generosity of this benefit. For this reason, economic theory would predict that employer-provided retiree health insurance (RHI) benefits would be hypothesized to have a crowding-out effect on private household wealth accumulation, not dissimilar to that reported elsewhere for employer pensions, Social Security, and Medicare.[3] While numerous studies have

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[1] See McArcle, Stark, Levinson, and Neuman (2012). We also generated similar estimates using online calculators for a hypothetical couple both age 60 for PPO coverage with no deductible and $20/$30 co-payment in the State of Pennsylvania; c.f. http://www.ehealthinsurance.com/ehi/ifp/compare-plans?noSelectedPlan=true.

[2] This assumes each spouse incurs the median out of pocket spending of $2,500/year in 2008, for a total of $5,335 for a couple in 2012. At the 90th percentile, annual expenses would total $110,000 for the same couple. See Hoffman and Jackson (2012).

[3] C.f., Gruber and Yelowitz (1999) find a strong negative effect of Medicaid eligibility on wealth. Focusing on elderly households, Levin (1995) reported some evidence for precautionary saving by those having little health insurance, while Starr-McCluer (1994) found only mixed evidence that U.S. households facing greater health risks accumulated more wealth (the latter study did not differentiate active worker coverage from prospective retiree health insurance, however). Guariglia and Rossi (2004) use UK data and discern some crowding-out of private

previously estimated the impacts of pension and Social Security benefits on household retirement asset accumulation,[4] we are unaware of any similar research on the impacts of retiree health insurance *per se*. Accordingly, the present paper explores how employer-provided retiree health insurance may influence net household wealth among public sector employees, where RHI benefits are still quite prevalent..

In the U.S., most private sector U.S. firms no longer offer post-retirement healthcare benefits (Fronstin 2010). By contrast, most public sector employers do continue to offer job-based health insurance to retired employees (Clark and Morrill 2010). Still, the rising cost of RHI is beginning to challenge state and local governments' ability to continue providing this benefit over time (GAO 2007; Moran 2010). In fact, of late, some public employers have begun to implement RHI plan constraints by, for instance, limiting coverage to workers with long tenure and shifting an increasing proportion of the plan premiums to retirees. Some public employers have also imposed cost-shifting on active and retired workers (Coggburn 2010). These changes are all taking place against the backdrop of national changes in the healthcare environment, particularly with the 2010 passage of the Affordable Care Act (ACA). The law's impacts, we argue below, will be felt by public sector employers who offer health plans for active as well as retired employees.[5]

Economists and policy analysts have devoted considerable attention to examining the impact of pension plans on individual saving and retirement decisions. Nevertheless, only a

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saving when publicly provided health coverage is of poor quality. Yet none of these studies explicitly focuses on retiree health insurance among public versus private sector employees, as we do here.

[4] C.f., Hurd, Michaud, and Rohwedder (2012: 107) who use cross-national micro datasets to conclude that "extra dollar of pension wealth depresses accumulated financial assets around the time of retirement by 22 cents."

[5] For instance Segal (2013:7) states that "[s]ponsors of state employee plans will be able to compare the cost and value of those plan offerings to what the public Exchanges are offering."

handful of studies asks how RHI shapes key lifetime choices influencing retiree wellbeing, to date. The present paper offers the first comprehensive empirical analysis of the impact of retiree health plans of wealth accumulation of public employees. In what follows, we begin with a review of retiree health plans in the public sector. Next, we evaluate how the promise of subsidized retiree health insurance affects the need to save for retirement. As noted, theory suggests that workers covered by retiree health insurance would be likely to *save less* and *retire earlier* than comparable workers not covered by this type of retirement plan. Here we focus on the first hypothesis; a companion paper, Shoven and Slavov (2013) addresses the second.

To conduct the empirical analysis, we utilize a unique datafile on four baseline cohorts surveyed in the Health and Retirement Study (HRS). Our general strategy is to first generate household wealth values using the HRS, and then we compare these wealth values across workers covered by retiree health insurance plans versus those of their non-insured counterparts. We control for whether the workers held jobs with federal, state, or local government employers, or whether they worked for the private sector. Additionally, we can also control roughly for the fraction of the premium that public sector workers and retirees pay on their own, with the remainder paid by the employer. A variety of controls is also taken into account as will be detailed below, so as to make the attributes of the employees as similar as possible.

Our key findings may be summarized as follows:

- Most full-time public employees anticipate having health plan retiree coverage, unlike many private sector workers;

- Public sector employees covered by retiree health plans have substantially less wealth than similar private sector employees without retiree health insurance. In particular, Federal workers had about $73,000 (17%) less net wealth and $86,000 (30%) less

financial wealth than private sector employees lacking RHI; state/local workers with RHI accumulated about $77,000 (or 18%) less net wealth, and $80,000 (or 27%) less in financial wealth than their uninsured private sector counterparts.

- After controlling on socioeconomic status and differences in pension coverage, the Federal gap is still 80% as large, and the state/local different 30% as large.

In a final section, we consider how state and local government RHI benefits might respond to the implementation of the Affordable Care Act to go into effect in January of 2014. We suggest that the introduction of state insurance exchanges and federal subsidies for low-income retirees may alter the labor market for public sector employees in important ways.

I. Retiree Health Plans in the Public Sector

To clarify the role of retiree health insurance in retirement planning, we begin by first examining how these plans vary across state, local, and federal government employers, and over time. Specific plan impacts would be anticipated to depend on plan generosity and whether a RHI subsidy was provided.

Currently most full-time U.S. public sector employees are covered by health plans that extend benefits to retirees. Yet these plans differ in their generosity and eligibility requirements across governmental units (Clark and Morrill 2010). Also in the public sector, the nature of the benefit and its cost may depend on individual worker characteristics. For instance, a state or local government might pay a higher percentage of the RHI premium for longer tenured workers.

In what follows we briefly review key provisions of retiree health insurance plans for each of the main groups of public sector workers: state employees and teachers, local government workers, and federal employees.[6]

A. Retiree Health Plans for State Employees and Teachers.

All states provide health insurance for their full-time active employees, and they also usually offer retired employees the opportunity to participate in some form of state-run health plan for retirees. In some cases, the health plans for general state employees likewise cover teachers; in other states, there are separate health plans for teachers; and in yet other states, health insurance for teachers is the responsibility of local school districts.[7]

Naturally, how much the RHI plans are worth to retirees depends, in part, on the share of the premium that employers pick up. An important way in which states differ has to do with how much the RHI plans cost versus the share of the insurance premium paid by the employer on behalf of the retiree. The GAO (2007) reported that, in 2006, 14 states paid the entire RHI premium for retirees who met specific age and service criteria. At the same time, 14 other states offered access only to the state health plans, so retirees had to pay all of the insurance premiums.

Of course, even without an employer subsidy, allowing access only still provides value to retired state employees as they need not be underwritten to gain access to the pool. Additionally, premiums for public retiree health plans are often determined by blending active workers and retirees in the same risk pool, thereby also offering retirees a subsidy. The remainder of the states

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[6] For an examination of military benefits, see http://www.tricare.mil/; we do not cover these in detail here.

[7] Various reports have highlighted the differences in retiree health plans across the states and the unfunded liabilities associated with these plans (Clark and Morrill, 2010; Franzel and Brown 2012, Pew Center on the States, 2010, 2011, 2013).

pays some portion of the premium, often as a function of years of service and date of employment.

Another key issue is that in recent years, retiree health plan coverage and benefit provisions have been altered, often in response to rising health care costs. In particular, eligibility requirements for coverage and subsidies have changed, along with deductibles, co-payments, plan provisions, and plan premiums. Over time, eligibility requirements for state subsidized RHI have become increasingly restrictive. For example, in 2007, the State of California OPEB Valuation Report noted several changes for retiree health benefits as follows:[8] retirees first hired prior to January 1, 1985 were eligible to receive 100 percent of state's contribution toward the member's health premium upon retirement, but those first hired between January 1, 1985 and January 1, 1989 with 10 years of service were eligible for 100 percent of the state's contribution to their premiums. Workers with fewer than 10 years of service received a subsidy equal to years of service times 10 percent. Finally, retirees first hired after January 1, 1989 with fewer than 10 years of service received no subsidy; for those with 10+ years of service, the state paid 50 percent of the premium and each year over 10 boosted the employer's portion of the premium by an additional 5 percent of the premium. The State paid 100 percent of the premium for workers with 20 or more years of service. In this way, a California public employee hired prior to 1985 could be eligible for a 100 percent premium subsidy after five years of service, whereas someone hired more recently might be required to have 10 years of service to receive a 50 percent premium subsidy, and only those with 20 or more years of service would receive the 100 percent subsidy.

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[8] State of California (2011).

Whether workers believe that employers' RHI promises will be kept is intimately linked to the point that few public sector employers have established substantial trust funds dedicated to pay for retiree health costs (Franzel and Brown 2010, Pew Center on the States 2010, 2011, 2013). Accordingly, some might see these RHI promises as involving a lower level of security than offered by public pension promises, since the latter are somewhat better funded.[9] Such a concern may be reinforced by the fact that retiree health plans have changed frequently of late, with cost increases sometimes imposed on retirees retroactively. For instance, Clark and Morrill (2010) surveyed several state administrators responsible for retiree health plans who suggested that plan modifications would curtail the fraction of future state retirees eligible to receive retiree health insurance. They also anticipated limiting future state subsidies for RHI premiums. The large unfunded accrued liabilities associated with RHI plans at all levels of government, combined with recent changes in these plans, have no doubt affected public sector workers' views of the likelihood they will recent promised health care benefits. To the extent that benefit security is eroded, this could reduce workers' expectations of promised future health insurance and decrease the effect of coverage on retirement and saving decisions. For all these reasons, the value of retiree health insurance for retirees from the same state with similar years of service can vary depending on employees' dates of hire.

B. Local Government Retiree Health Plans.

Little systematic information is available regarding the retiree health insurance plans offered by local governments across the country. The Pew Center on the States (2013) recently conducted an analysis of 61 cities ranging in population size from New York City to Burlington, Vermont. Collectively, these cities represented 45 percent of all municipal employees, and the

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[9] Nevertheless, public sector pensions overall are far from fully funded; see for instance Novy Marx and Rauh (2011).

study covered 100 local government retiree health plans. The authors found that all cities studied offered retiree health plans, but only a few had accumulated significant assets in a trust fund to prepare for promised future expenditures. Thus, the retiree health plans they examined faced liabilities totaling $126 billion for the 61 cities, but the cities had assets of only $8 billion backing these promises.

Access to retiree health plans also varies considerably across the local employee workforce: some cities provide access only, while New York City pays 100 percent of the premium for eligible retirees younger than age 65. By contrast, Denver provides a dollar amount subsidy that varies with years of service. The Pew Center on the States (2013) has noted, however, that cities have been modifying retiree health plans rather rapidly of late, in an effort to reduce the growing cost of this benefit.[10]

C. *Health Insurance for Retired Federal Employees.*

The Federal Employees Health Benefits (FEHB) Program has several different plan from which workers and retirees can choose including a Fee-for-Service plan, Preferred Provider Organization, Health Maintenance Organizations, Point of Service, High Deductible Health Plan, and Consumer Driven Health Plan. Accordingly, federal workers' retiree health insurance will differ from one to another retiree, depending on the health plan elected. Most crucially, benefits do not change as individuals move from active to retired status (U.S. Office of Personnel Management, 2013). Federal retirees pay the same premiums and receive the same benefits as active Federal employees. Federal retirees are eligible to continue health benefits coverage if they meet the following requirements:

- They are entitled to an immediate annuity under a federal retirement system for civilian employees; and

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[10] Clark and Morrill (2011) provide a detailed report on the retiree health plans of three cities.

- They have been continuously enrolled (or covered as a family member) in any FEHB plan(s) for the five years of service immediately before the date the annuity starts.

Premiums are generally the same for active and retired federal workers; that is, most retirees share the cost of health insurance premiums with the government in the same way that they did while actively employed. Across the board, government contributions equal the lesser of 72 percent of the overall weighted average, or 75 percent of the total RHI plan premium. Temporary employees do not receive a government contribution toward the cost of their health insurance (U.S. Office of Personnel Management, 2013).

D. *Measuring the Value of Retiree Health Insurance.*

The preceding description of public sector retiree health insurance plans in the United States illustrates that it is difficult to accurately measure the value of this benefit to individual public sector workers. The problem is particularly acute for state and local public employees, as plan rules vary considerably across states and local governmental units. In addition, substantial changes have been made to these plans over time, so the value of a RHI promise varies with years of service, age, qualification for a pension benefit, and date of hire. These factors imply that the generosity of RHI to employees of the same governmental unit can be substantially different. Finally, the large unfunded liabilities of state and local RHI plans may raise doubts that these employers will honor these commitments in the long term. Each of these issues indicates the existence of measurement error in the RHI valuation, a point to which we shall return later.

Somewhat less of a measurement problem arises for federal employees, as all federal workers are covered by the same plan which has undergone relatively few changes over time. Accordingly, in the analysis to follow, it is anticipated that the estimated impact of RHI on

wealth accumulation will be estimated with more precision for federal workers, compared to results for employees in the state and local sectors.

II. How Retiree Health Insurance Can Shape Saving and Retirement

A life cycle model of economic behavior predicts that people will strive to smooth utility across time, saving while working so as to enjoy a reasonable lifestyle in retirement. Since higher retiree consumption must be financed by reduced worklife consumption, if people behave rationally, their retirement saving plans would be anticipated to take into account anticipated retirement income sources. For instance, expected Social Security benefits have been shown to partly offset household retirement saving needs.[11]

Early research[12] generated a wide range of estimates on the extent of saving reduction per dollar of pension or Social Security wealth using aggregate data. Subsequent analyses using individual survey data did not narrow the estimated effect of retirement benefits on wealth accumulation very much. Thus, Hubbard (1986) found very small offsets ($0.16 per dollar of pension wealth), while Gale (1998) reported very large offsets ($0.82 per dollar of pension wealth). Gustman and Steinmeier's (1999) estimates were around the midpoint ($0.50 per dollar of pension wealth). There is a related debate over whether tax-favored employer pensions and IRAs increased total national saving or not (c.f., Venti and Wise, 1996; Engen, Gale, and Scholz, 1996), with the bulk of the evidence suggesting that they do have a positive net effect, albeit with some crowd-out.

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[11] For a recent example of a lifecycle consumption, saving, and portfolio choice model, see Maurer, Mitchell, Rogalla and Kartashov (2013).
[12] C.f., Cagan (1965), Katona (1965), Feldstein (1974), Munnell (1974) and Feldstein and Pellechio (1979)

Similarly, employer pensions and retiree health plans would be thought to directly reduce worker saving needs, given that people anticipate a flow of income or a specified level of health insurance in retirement. Of course, some measurement and statistical complexities arise in the case of RHI that must be explicitly noted. First, and as noted above, the value of retiree health insurance coverage itself is difficult to measure and uncertain over time since employers regularly amend plans via changes in deductibles, co-payments, co-insurance, and premiums. Second, promised benefits from health insurance are less secure than are expected pension benefits due to the lack of pre-funding of RHI benefits. Third, existing datasets have little information on the current value of these benefits, and retiree health values will differ (even for the same employer) depending on when employees are hired and their length of tenure at retirement. Indeed, most of these factors will not actually be measured until employees retire.

When determining the impact of retiree health insurance on saving for retirement, another factor worth noting is the impact that retiree health plans can have on workers' retirement ages. If the existence of the RHI induces workers to retire younger than they would have otherwise, they will then need to save more to finance their retirement consumption over longer periods of time. The jointness of the decision of retirement saving and age of retirement adds complexity to determining how individuals covered by retiree health insurance will adjust their retirement saving.[13]

It is also of note that employers who provide RHI almost always also offer some type of pension plan as well. These pension and health insurance benefits are similar in that they both

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[13] In a companion paper by Shoven and Slavov (2013), the authors examine more closely the question of whether retiree health insurance influences the age of retirement. Recent studies on impacts of retiree health insurance include: Blau and Gilleskie (2001, 2008), Gustman and Steinmeier (1994), French and Jones (2011), Karoly and Rogowski (1994), Robinson and Clark (2010), Madrian (1994), and Nyce et al. (2013).

incorporate incentives affecting firms' ability to attract, retain, and ultimately retire a high-quality workforce (Lumsdaine and Mitchell 1999). From the employee's viewpoint, these two benefits would thus jointly affect their private saving patterns and ultimate retirement ages. This means that, when estimating the impact of retiree health coverage on individual retirement saving and retirement, it is important to control for the retirement effects of pension plans as well. Moreover, as French and Jones (2011) note, people having stronger preferences for leisure may select into jobs offering retiree health coverage, and these jobs are also those providing more generous pension coverage. Failure to account for these factors could bias the estimated impact of retiree health coverage on retirement.

A final issue worth noting is that uncertainty around medical costs can also influence precautionary saving *per se*. Kotlikoff's (1988) work suggested that uncertain health expenses had a large positive impact on aggregate saving, whereas actuarially fair health insurance reduced saving. More recently, several authors have argued that uncertain medical expenses play a potentially large role in explaining the saving behavior of older Americans;[14] French and Jones (2011) conclude that individuals who can self-insure through saving value retiree health coverage less. Accordingly, RHI can depress personal wealth accrual not only because these benefits represent a source of wealth, but because they reduce older households' exposure to uncertainty and hence curtail the need for precautionary saving.

II. Dataset Construction

To analyze how retiree health insurance is associated with the key outcomes of interest here, we employ all four baseline waves from the Health and Retirement Study (HRS).

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[14] C.f., Love, Palumbo, and Smith (2009), Palumbo (1999), DiNardi, French, and Jones (2010), Hubbard, Skinner, and Zeldes (1994), and Anderson, French, and Lam (2004)

Specifically, we extracted working individuals in the original HRS group (interviewed in 1992), the Children of the Depression age (CODA) group (1998), the War Babies (WB) group (2004), and the Early Baby Boomer (EBB) group (2010). We required that all respondents had information on job tenure and their state of residence at baseline, as well as responses to the questions on whether they expected retiree health insurance. Our analysis, below, focuses exclusively on employees with at least five years of employment with their current employer to ensure that these individuals were likely to be eligible for retiree health coverage if such was offered. The size of our analysis sample is 6,875.

A. HRS Variables.

Several HRS datasets were used to generate the variables used in our analysis. Where possible, we relied on Core HRS variables from the RAND files (version L) supplemented with the relevant raw HRS datafiles for additional variables. We obtained permission to use the restricted occupation detail (HRS 2010) identifying which individuals were teachers and local employees at baseline, since most teachers are covered by state-wide retiree pension and medical plans.[15]

Our analytic sample thus included all respondents self-reported as working full or part time at baseline, having job tenure over five years, and for whom we had state of residence information and a response to whether the individual expected to receive retiree health insurance. Only non-proxy interviews are used; Figure 1 provides further details on the data construction process.

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[15] We also received permission to use the restricted geographic detail records (HRS 2009) for respondents' state of residence at baseline, which we used to infer the portion of premium paid by the employer for state retiree health insurance coverage (taken from GAO 2007). However we do not report results from this analysis here because the subsidy within a state varies by hire date and tenure, and we could not control for these variables; additionally not all state employees are covered by the same state plan.

Figure 1 here

B. Wealth Variables.

Table 1 summarizes the key variables used in the empirical analysis, beginning with the two wealth measures on which we focus. Total net wealth captures wealth net of debt, and it includes the reported values of checking/saving/money market accounts, stock/bond/mutual fund/investment trusts, as well as the net values of primary/secondary residences, vehicles, business, and IRA and Koegh accounts, minus debt. Total net financial wealth subtracts from net wealth the net values of residences.[16] Both wealth variables are winsorized at the top and bottom 0.5%. Average total net wealth in our sample is approximately $400,000 and net financial wealth is $264,000, values reflective of the relatively older age group under study (Gustman et al. 2010).

Table 1 here

Table 2 arrays these two wealth measures according to whether the respondent had retiree health insurance, and whether the respondent was a federal, state/local, military, private sector, or private (but formerly public sector) employee. Results indicate that overall, workers with no retiree health insurance accumulated more net wealth and financial wealth than their counterparts with no RHI. For instance, Federal workers had about $73,000 (17%) less net wealth and $86,000 (30%) less financial wealth than private sector employees without any retiree health insurance. State/local workers with RHI accumulated about $77,000 (or 18%) less net wealth, and $80,000 (or 27%) less in financial wealth, than their uninsured private sector counterparts.

Private sector workers anticipating RHI also saved less, on the order of $94,000 (22%) less in net wealth, and $81,000 (28%) less in financial wealth. At least in the aggregate, then, it

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[16] Due to lack of data for all of the HRS waves we analyze, *net* and *financial wealth* exclude pension and Social Security wealth.

appears that our hypothesis is supported: workers anticipating receiving RHI do accumulate less wealth than those without such promises. We also tested whether these four groups had significantly different mean accumulated wealth depending on coverage by RHI. Interestingly, mean wealth for those covered by RHI for federal, state and local, and private sector employees was significantly lower than mean wealth held by those lacking the promise of employer-provided retiree health insurance. In addition, mean wealth for those with RHI across the three public sector employee groups was not significantly different from each other.

Table 2 here

C. *Employment Sector Variables.*

To establish whether each worker was employed by a public or private employer, we use HRS questions on employment sector. These questions, however, provided less detail prior to 2006 than later. Before 2006, the HRS asked "Have you ever been employed by a unit of a state, county, or local government?" and "Aside from military service, have you ever been employed by the federal government?" If the respondent said no to both questions, he was classified as working in the private sector. If the respondent said yes to the first question, a follow-up question was asked: "During what years were you employed" in that sector. If the individual's years of employment in a state/county/local government included the baseline year, we classified him as working in the state and local sector. If his public sector employment was in the past, we classified him as currently employed in the private sector, but having had a past public sector job. From 2006 forward, the HRS asked: "Are you employed by the government at the federal, state, or local level?" If the respondent answered in the negative, we classified him as a private sector worker. If he answered in the affirmative, a follow-up question was used to distinguish

employment sector further "Would that be the federal, state, or local government?" Accordingly we classified individuals as federal, versus state and local, based on this follow-up question.[17]

In this way, we were able to identify approximately 5% of our sample as employed by the Federal government, 15% by state and local governments, 50% by private sector employers, and 30% which had worked in the public sector in the past but were currently private sector employees (see Table 1).

D. *Retiree Health Insurance Variable.*

The variation in benefit values within and across RHI plans and employees described above makes it difficult to impute a single dollar value to the benefit for respondents in a national survey such as the Health and Retirement Study. Accordingly, we assessed whether a respondent anticipated retiree health insurance (RHI) by relying on the HRS Core questions asked at baseline. Table 1 indicates that 45% of the sample indicates that it anticipates or is receiving employer-provided retiree health insurance.

E. *Income and Pension Variables.*

Table 1 also summarizes the earnings and pensions variables reported in the HRS. The former was measured using actual baseline household earnings which averaged about $56,000 (in 2012 dollars). We also generated a pension variable indicating whether a respondent expected a pension from a current or past job (equal to 1 or 0), as well as whether the respondent anticipated a defined benefit (DB) plan from a current job. In our sample, 68% of respondents anticipated some pension, and 47% expected a DB pension.

F. *Socioeconomic Controls.*

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[17] If the respondent said he was in the military currently, or his years of active service included the baseline year, he was classified as working in the military and excluded from the sample.

To be able to compare wealth patterns more comprehensively, we hold constant several socioeconomic characteristic controls including the employee's age, marital status, race/ethnicity, sex, educational status, number of children, health status, years on the job, and years worked. Table 1 shows that, in our sample, the average age was about 54, about half were male, 80% White, and 7% Hispanic. Around one-fifth had less than a high school education, just under half had completed high school, and almost 30% had at least some college. The majority, 81%, was married and averaged about three children; some 13% declared themselves in poor or fair health, and on average they had worked for 32 years (with 18 years on the current job). Approximately two-thirds of the sample came from the first round HRS, with the remainder representing the War Babies, CODA, and Early Baby Boomer cohorts.

III.   Multivariate Regression Results

Next we summarize our multivariate results from OLS regression analysis of the two key wealth measures of special interest here. These outcomes are related to the retiree health insurance variables described above, after including demographic, income, and pension controls. The first column of coefficient estimates focuses on the factors associated with net wealth, whereas the second focuses on financial wealth.

Table 3 here

The first four rows of the table indicate the differential impact of being a worker with retiree health insurance coverage in each of the sectors, compared to not having RHI, and controlling on other differences across the employee population. Not surprisingly, compared to Table 2, the saving decrements are smaller after including all the controls. But the RHI terms remain economically large and, in some notable cases, statistically significant. As hypothesized above, the coefficient for Federal government employees is measured quite precisely and it is

significantly different from zero. The result implies that this group accumulated $59,000 less net wealth and $54,000 less financial wealth compared to employees without RHI, after controlling for other factors. These effects are approximately 80% as large as the differences in means shown in Table 2.

Also as hypothesized, RHI coverage coefficients for state and local employees are estimated less precisely. Nevertheless, we see that comparable state and local employees having RHI accumulated about $20,000 less wealth. And finally, private sector workers with a RHI promise (including those who held public sector jobs in the past) also are estimated to have saved less.

The other control variables behave as expected, with saving levels significantly higher for Whites (lower for Hispanics), higher for the better paid, better educated, and married, lower for those having many children, and lower for those in poor health. In sum, we find evidence supportive of the hypothesis that workers covered by retiree health insurance saved less than comparable workers not covered by RHI. Moreover, the group anticipating what is likely the most secure RHI promise - Federal benefits – saved the least.

IV. Thoughts on How the ACA Might Alter Our Results

The recently passed Affordable Care Act (ACA) is anticipated to change the way many employers think about health insurance benefits. In particular, from January 2014, the ACA will de-link what has long been the primary connection between employment and health insurance for many Americans. While there is considerable controversy about what exactly might happen as a consequence, here we offer some preliminary thoughts focusing particularly on RHI offered to retiring public sector workers.

How employers respond to the ACA in the context of RHI will depend on how job-linked benefits compare to those that might be offered through the Health Exchanges established under the act (Pauly and Duggan 2012). The exchanges will surely make health insurance more accessible to those currently lacking insurance, some of whom are retirees. Moreover, premiums for many workers and retirees will be subsidized on a sliding scale for those with incomes below 400 percent of the Federal Poverty Level (FPL). It has been estimated that the subsidies will cover many individuals, especially those retiring in their 50s and 60s.[18]

Accordingly, to the extent that it will become less expensive for some employees to elect ACA-based health insurance than to take up employer-provided RHI, this reduction in the price of retiree health insurance is likely to make some employees and retirees better off. It is also worth noting that wages could rise for workers at firms that drop their RHI benefit offerings (Burtless and Milusheva, 2013), passing on cost-savings that employers might experience.

The existence of the exchanges and the federal subsidy could have implications for our results presented earlier, particularly for workers who retire prior to eligibility for Medicare at age 65. Retirees who were not covered by retiree health on their jobs will now need less wealth in retirement, so the difference in wealth accumulation between those with and without employer-provided RHI would be predicted to decline. Moreover, market-driven wage differentials between those with and without employer-provided RHI would also be predicted to diminish, as a result of the ACA.[19]

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[18] Premiums for health insurance purchased through the exchanges is to cost no more than two percent of income for incomes up to 133% of the FPL, and up to 9.5% of income for those earning 3-400% of the FPL. These premiums refer to the second lowest-cost offering in the "Silver Plan" category; it is estimated that these plans will cover approximately 70& of the total cost of medical care.

[19] It has been suggested that some public sector employers will curtail employees' work hours to avoid having to provide them with benefits (Merline, 2013). Unless earnings are raised to

VI. Conclusions

Economic theory predicts that employer-provided group retiree health insurance coverage can reduce employee incentives to save during their working careers. The literature has devoted much attention to measuring crowding-out by pensions, Social Security, Medicare, and national health insurance, little research to date has considered whether rather generous employer-provided retiree health insurance benefits could have the same effect. Our paper offers the first comprehensive empirical analysis of the impact of retiree health plans of wealth accumulation of public employees. We use HRS data to show that public sector employees covered by retiree health plans do have substantially less wealth than otherwise similar private sector employees lacking retiree health insurance. In particular, Federal workers had about $73,000 (17%) less net wealth and $86,000 (30%) less financial wealth than private sector employees lacking RHI. We also find that state/local workers with RHI accumulated about $77,000 (or 18%) less net wealth, and $80,000 (or 27%) less in financial wealth than their uninsured private sector counterparts. After controlling on socioeconomic and pension coverage differences, the Federal gap is still 80% as large, and the difference is measured with reasonable statistical precision. For reasons we enumerate above, the state/local workforce wealth differences are measured less robustly, but it still appears they save 30% less after controls.

compensate for the loss in benefits, this could make it difficult for employers to attract, hire, and retain.

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Table 1: Variables and Descriptive Statistics in Analysis Sample
Source: Authors' computations from the HRS; see text. N=6,875.

Type	Label	Mean	Std Dev
Employment Sector	Federal gov't employee	0.05	0.21
	State/Cty/Local gov't employee	0.15	0.36
	Military employee	0.00	0.03
	Private sector employee	0.50	0.50
	Private sector now (public in past)	0.30	0.46
Retiree Health Insurance	Has retiree health insurance	0.45	0.50
Income, Pensions, and Wealth	Annual earnings (2012$)	55,962	56,542
	Any pension (current/past employer)	0.68	0.47
	DB pension (current/past employer)	0.47	0.50
	Net Wealth (2012$)	399,796	669,158
	Net Financial Wealth (2012$)	263,708	569,382
Socioeconomic Status Variables	Age	54.30	4.87
	Male	0.51	0.50
	White	0.80	0.40
	Hispanic	0.07	0.26
	LT high school	0.21	0.41
	High school	0.49	0.50
	Some college	0.19	0.39
	Graduate school	0.11	0.31
	Married	0.81	0.39
	Children number	2.95	1.93
	Poor health	0.13	0.33
	Years of work	32.01	8.68
	Current job tenure	18.40	9.58
Wave	HRS	0.69	0.46
	CODA	0.01	0.11
	WB	0.15	0.35
	EBB	0.15	0.36

Table 2. Net and Financial Wealth by Employment Sector
Source: Authors' computations from the HRS; see text. (2012 $). Note: * means significantly different compared to No RHI at the 10%; ** 5%; and *** 1% level, respectively. Means of RHI Fed, RHI St/Local, and RHI Private are not significantly different from each other.

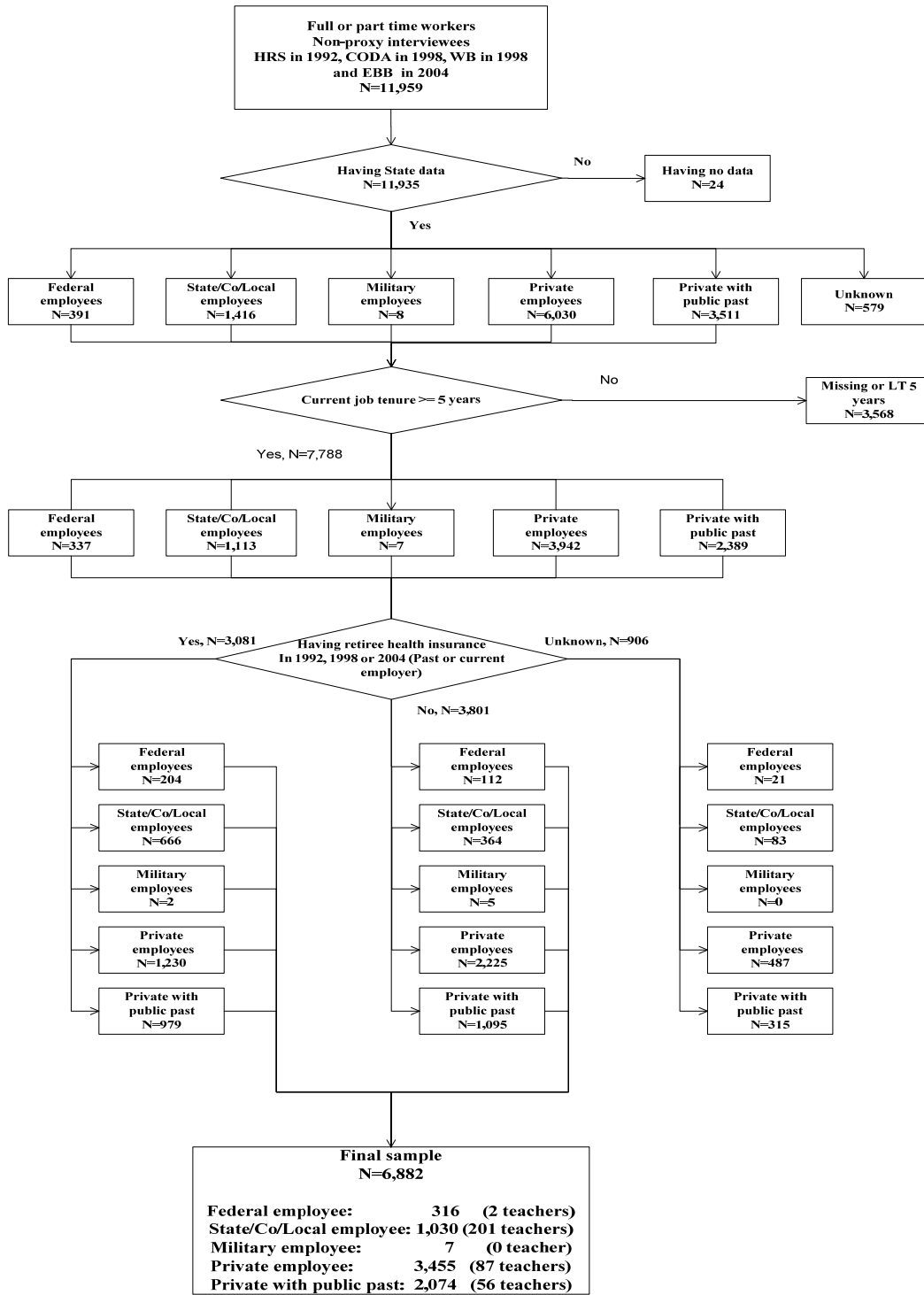| Respondent group	Net wealth ($)	Financial wealth ($)
No RHI	429,516	291,277
RHI Federal	356,207 **	204,687 ***
RHI St/Local	352,137 ***	211,168 ***
RHI Private	335,339 ***	209,767 ***
RHI Expublic	408,791	273,814

Table 3. Factors Associated with Net Wealth and Net Financial Wealth
Source: Authors' computations from the HRS; see text. (2012 $). Note: * coefficient significant at the 10%; ** 5%; and *** 1% level. Missing value controls for explanatory variables also included.

Explanatory Variables	Mean	Net wealth ($) Mean=400,044			Financial wealth ($) Mean=263,877		
		Estimate	St err.		Estimate	St err.	
RHI*federal	0.03	-59,232.44	30,848.8	*	-54,300.7	23,921.5	**
RHI*stlocal	0.10	-24,551.47	24,251.9		-20,055.1	20,859.2	
RHI*private	0.18	-7,925.96	19,144.5		1,831.4	16,573.0	
RHI*expublic	0.14	-17,636.70	25,296.7		2,435.4	22,703.2	
Age	54.30	-370.84	17,511.9		-8,542.5	15,765.1	
Age2	2,972.56	117.65	166.0		168.1	149.9	
Male	0.51	-87,499.80	14,425.5	***	-65,284.4	12,423.0	***
White	0.80	101,564.44	15,030.7	***	66,070.6	13,224.6	***
Hispanic	0.08	-78,695.10	17,431.4	***	-73,413.3	14,416.4	***
LT high school	0.21	-70,535.52	18,111.1	***	-47,852.8	15,569.5	***
Some college	0.19	114,102.57	22,912.1	***	78,851.0	19,212.4	***
Graduate school	0.11	184,100.00	36,717.0	***	145,853.6	32,218.2	***
Married	0.81	223,653.18	17,181.3	***	151,280.6	15,090.5	***
Children number	2.94	-21,209.72	4,123.2	***	-14,671.6	3,577.1	***
Poorhealth	0.13	-59,733.28	18,822.5	***	-46,747.8	16,154.2	***
Years of work	32.01	-1,038.05	1,045.8		-894.4	906.3	
Work part time	0.13	86,803.67	27,892.5	***	59,291.3	24,542.4	**
Selfemployed	0.16	472,415.49	44,643.8	***	422,267.5	39,767.2	***
Annual earning ($)	55,941	3.36	0.3	***	2.6	0.3	***
Any pension	0.68	37,124.50	26,262.5		11,556.8	22,740.2	
R-squared			0.23			0.20	
N			6,875			6,875	

Figure 1: Construction of the HRS Analysis Sample

Note: Military employees were dropped from our analysis sample due to the small number of observations.

Data Appendix: Variables and Sources

Source	Label	Var. Name	Construction
RAND L	Age	age	age=baseline year - rabyear
	Male	male	If ragender=1 then male=1, If ragender=2 then male=0
	White	white	If RARACEM = 1 then white=1, else =0
	Hispanic	hispanic	If RAHISPAN=1 then hispanic=1, else 0;
	LT high school	education_lths	if raedegrm in (0, 1) then education_lths=1
	High school	education_hs	if raedegrm in (2, 3) then education_hs = 1
	Some college	education_smcl	if raedegrm in (4, 5) then education_smcl = 1
	Graduate school	education_gtcl	if raedegrm in (6, 7) then education_gtcl = 1
	Married	married	At baseline: if r1mstat or r4mstat or r4mstat in (1, 2, 3) then married = 1; else 0
	Children number	childnum	At baseline: childnum = h1child, h4child or h7child
	Poor health	poorhealth	At baseline: poorhealth = 1 if R1SHLT, R4SHLT or R7SHLT in (4, 5), else 0
	Worked year	worked_yr	At baseline: r1jyears, r4jyears or r7jyears
	Current job tenure	jobtenureyr	At baseline: R1JCTEN, R4JCTEN or R7JCTEN
	Work full time	work_ft	At baseline: R1LBRF = 1, R4LBRF = 1 or R7LBRF = 1
	Work part time	work_pt	At baseline: R1LBRF = 2, R4LBRF = 2 or R7LBRF = 2
	Self employed	selfemploy	At baseline: R1SLFEMP=1, R4SLFEMP=1 or R7SLFEMP=1
	Retiree health insurance	retiree_health	At baseline: retiree_health=1 if R1COVRT = 1 and R1COVR = 1 or if R4COVRT = 1 and R4COVR = 1 or R7COVRT = 1 and R7COVR = 1; retiree_health=0 (if R1COVRT = 0 or R1COVR = 0) or (if R4COVRT = 0 or R4COVR = 0) or (if R7COVRT = 0 or R7COVR = 0);
	Annual earnings ($2012)	income_amt	At baseline: income_amt=r1iearn, r4iearn or r7iearn,.

(continued)

Source	**Label**	**Var. Name**	**Construction**
	Any pension from current job, RAND	haspenrd	At baseline: if R1JCPEN, R4JCPEN or R7JCPEN=1 then haspenrd=1; else 0
	DB pension from current job, RAND	hasdbpenrd	if R*PTYP1, R*PTYP2, R*PTYP3 or R*PTYP4=1 or 3 then hasdbpenrd=1; else 0
	Capped Total Wealth ($2012; incl 2ndry Residence, excl pension and SSB wealth)	atotb	atotb=H8ATOTB, winsorized with top and bottom 0.5%
	Capped Total Financial Wealth ($2012; H8ATOTB - H8AHOUS - H8AHOUB - H8ARLES + H8AMORT + H8AMRTB)	atotf	atotf=H8ATOTB - H8AHOUS - H8AHOUB - H8ARLES + H8AMORT + H8AMRTB, winsorized with top and bottom 0.5%
HRS - Restricted Occupation data	Teacher	teacher	teacher = 1 if 113 <= V2720 <= 163 or 113 <= Q3253 <= 163 or 113 <= JJ062 <= 163; =0 else
HRS - Core	Federal gov't employee	rfederal	if v3945 = 1 and (v3947 >= 1992 or v3949 >= 1992)
		rfederal	if f3992 = 1 and (f3994 >= 1998 or f3996 >= 1998)
		rfederal	rfederal=1 if jl082 = 1 and (jl084 > = 2004 or jl086 >= 2004)
	State/County/Local gov't employee	rstate	if v3940 = 1 and (v3942 >= 1992 or v3944 >= 1992)
		rstate	if f3987 = 1 and (f3989 >= 1998 and f3991 >= 1998)
		rstate	if jl077 = 1 and (jl079 >= 2004 or jl081 >= 2004)
	Military employee	rmilitary	if v222 = 1 and v224 >= 1992
		rmilitary	if f1008 = 1 and f1010 >= 1998
		rmilitary	if jb035 = 1 and jb037 >= 2004
	Private employee	rprivate	if v3945 = 5 and v3940 = 5 and v222 = 5
		rprivate	if f3992 = 5 and f3987 = 5 and f1008 = 5
		rprivate	if jl082 = 5 and jl077 = 5 and jb035 = 5
	Private (w/public pas	rexpublic	if v3945 = 1 or v3940 = 1 or v222 = 1
		rexpublic	if f3992 = 1 or f3987 = 1 or f1008 = 1
		rexpublic	if jl082 = 1 or jl077 = 1 and jb035 = 1

(continued)

Source	Label	Var. Name	Construction
RAND L	Cohort	cohort_hrs	cohort_hrs=1 if hacohort=3
		cohort_cod	cohort_cod=1 if hacohort=2
		cohort_wb	cohort_wb=1 if hacohort=4
		cohort_ebb	cohort_ebb=1 if hacohort=5
HRS - Restricted Geographic data	State	state	At baseline: STFIPS92, STFIPS98 or STFIPS04