JOB TENURE AND THE SPREAD OF 401(k)S

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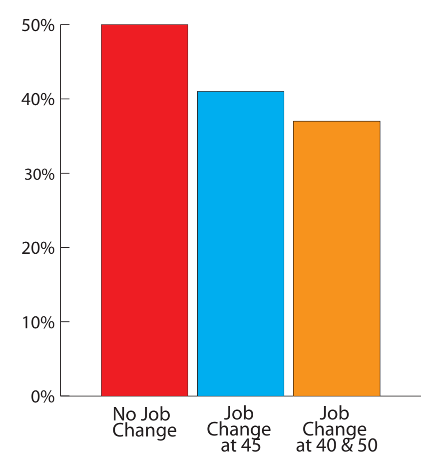
Commentators constantly cite an increase in labor mobility as a major reason for the shift in the private sector from defined benefit to defined contribution plans. But while most casual observers accept such a phenomenon, economists have been hard pressed to find any significant change over time. Only in recent years has the data indicated that mobility might have increased for some groups. This pattern suggests that the advent of 401(k) plans led to an increase in mobility rather than an increase in mobility leading to the proliferation of 401(k)s. We attempt to sort out this "chicken and egg" issue using data from the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP).

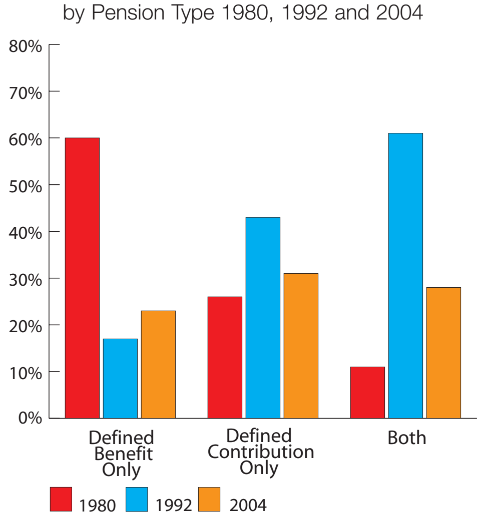
Pension Coverage and Mobility

Twenty years ago, most people with pension coverage had a traditional defined benefit plan. Today, most rely on a defined contribution plan – most often a 401(k). Defined benefit plans and 401(k)s would be expected to have a very different effect on worker mobility. Workers with final earnings defined benefit plans who change jobs, even among firms with identical plans and immediate vesting, receive significantly lower benefits than workers with continuous coverage under a single plan.

The Impact of Mobility on Defined Benfit Replacement Rates



Private Sector Workers with Pension Coverage by Pension Type 1980, 1992 and 2004



An example might help clarify. Consider a worker who is covered by a defined benefit plan that pays 1.5 percent of final earnings for each year of service. This worker, who starts working for the company at age 30 and retires at age 62 earning $55,000, would be entitled to an annual benefit at age 62 of $26,200 per year (1.5 percent x 32 years x $55,000). However, if that worker switched jobs at age 45, when he was earning $35,000, even to a firm with an identical plan, he would have a combined benefit of only $20,900. From his first employer, he would receive $7,875 (1.5 percent x 15 years x $35,000), and from his second employer $14,025 (1.5 percent x 17 years x $55,000).

Defined contribution plans generally – and 401(k) plans in particular – should not deter mobility in any way. Benefits accrue smoothly over the worker's lifetime so, once vested, workers do not forfeit any benefits when they change employers, and therefore 401(k) plans. Thus, commentators often suggest that increased mobility of U.S. workers is one factor that explains the shift in coverage to 401(k)s.

Shift in Pension Coverage and Tenure

Early researchers were focused on the general question of downsizing, rather than on the specific issue of the mobility of older workers who would likely be most affected by the shift in pension coverage. The question addressed here is which of the following two statements best describes the sequence of events. First, a significant increase in mobility occurred throughout the workforce, making 401(k)s a much more attractive vehicle – the chicken, then the egg. Alternatively, as much of the earlier literature suggests, virtually nothing happened in the 1970s and 1980s, and mobility increased only after the spread of 401(k) plans – the egg, then the chicken.

The first step in sorting out what happened is to look at trends in median tenure by age over the period using the tenure supplements to the Current Population Survey (CPS).

First, before 1990 the median years of tenure for both males and females are virtually flat for every age group. This data confirms much of the earlier work on mobility that showed very little change during the 1970s and 1980s. Second, beginning in 1990, after a decade of 401(k) plans, the median tenure for men at older ages starts to decline. If the shift in pension coverage were to have an effect, this is where one would expect to find it.

The CPS tenure data can be used to look at the tenure of older workers in a slightly different way. Specifically, for each survey it is possible to identify those working full time at age 55, 60, etc., who are still with the same employer they worked for at age 50. Under a defined benefit plan, workers would suffer a substantial loss of benefits by moving in their fifties, whereas no such loss occurs under a 401(k) plan. Mechanically, this exercise involves simply asking, say, the 55-year-old full-time worker, how long he has been with his current employer?

If the response is five years or more, the worker is classified as working with his age-50 employer. Those working with the same employer are then divided by total workers to get the proportion of the workforce with what used to be thought of as the typical pattern of employment.

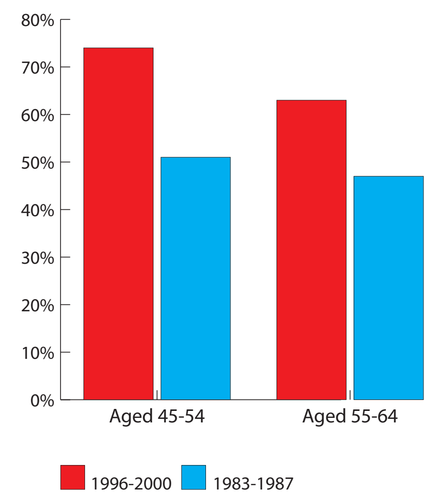
The results for men mirror the tenure information. In each of the early surveys, at age 60, approximately 60 percent of male workers were working for the same employer as they were when they were age 50. After the early 1990s, the picture changes noticeably for men; at age 60 less than 45 percent of male workers are working full time with their age-50 employer. In short, male workers in their fifties appear to be shifting jobs more in a 401(k) world than they did when covered by defined benefit plans.

Retention Rates

The weakness of median tenure data is that they are susceptible to changes in arrival rates – that is, the number of workers beginning new jobs. For example, the surge of married women and baby boomers onto the job market in the 1970s and 1980s would have been expected to reduce median tenure. Similarly, the contention that tenure declined sharply after the early 1990s could be affected by new arrivals of immigrants.

A way around the problem of new arrivals is to look at the retention rate, which is the probability that a worker will have an additional, say, four years of tenure four years in the future. An example will help clarify the calculation. In 1983, of workers aged 35-39, say, 100 had tenure of between 5 and 10 years; in 1987, of workers aged 39-43 – that

Estimated Four-Year Retention Rates for Older Male Workers by Age Group, CPS, 1983-2000



is, the same cohort of workers – 75 had tenure of between nine and 14 years. Thus, the four-year retention rate for this group is 75 percent.

The results show that the retention rates for older male workers were significantly lower in 1996-2000 than in 1983-1987. Therefore, the retention rates and median tenure data tell the same story – older workers became more mobile in the 1990s as coverage under defined benefit plans declined.

Relationship between Tenure and Pension Type

The final exercise uses 1998 and 2003 SIPP data to estimate the relationship between pension coverage and tenure for older workers (aged 45-64). The analysis proceeds in three steps. The first is to regress each worker's years of tenure against a year dummy. The second step is to introduce a host of control variables that might explain the decline in tenure between 1998 and 2003, such as age, gender, education, nature of the firm, nature of the job, union coverage, etc. The third step is to re-estimate the second equation replacing the pension coverage dummy with a variable for coverage under a defined benefit plan only, a defined contribution plan only, or both. The hypothesis is that the decline in tenure is associated with a continued shift from defined benefit to defined contribution plans; so that once this information is introduced into the equation the year dummy no longer has explanatory power.

The results are consistent with this hypothesis. The coefficients of the year variable decline in size and statistical significance as more detailed pension variables are added to the second and third equation. The coefficients of the pension coverage variables show that people with pensions of any sort have longer tenure than those without and the increase in tenure varies by type of plan. Coverage under a defined benefit plan raises tenure by four years compared to no pension coverage; under both a defined benefit and defined contribution plan by 5.8 years; and under a defined contribution plan only by 2.7 years. Thus, for those with pension coverage the shift in coverage from a defined benefit plan to a defined contribution plan implies a reduction in average tenure of 1.3 to 3.1 years, suggesting that the reduction in tenure between 1998 and 2003 and the shift in coverage from defined benefit to defined contribution plans are related.

Chicken or the egg?

Two conclusions emerge from the preceding analysis. First, the labor economists who study mobility in the 1970s and 1980s appear to be correct. Even though the structure of personnel and production systems was changing in the late 1970s and early 1980s, tenure and retention rates were steady during this period. Commentators should delete increased mobility from their list of reasons for the shift to 401(k) plans. Second, after the widespread adoption of 401(k) plans, mobility and tenure patterns changed. And the change occurred among the group that would have been most constrained from moving under a defined benefit regime – namely, older workers with long tenure. It is impossible to prove that the shift in coverage caused the increased mobility, but it appears that the egg came first, then the chicken. **N**

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