University of Michigan Retirement Research Center

# The Retirement Behavior of Federal Civil Service Workers

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## Executive Summary

An issue of central importance to Social Security is the effect of financial incentives on retirement behavior. Researchers have taken a wide variety of approaches to examining the impact, with varying degrees of success. A significant hurdle faced in previous studies is that Social Security is almost universal in coverage, leaving little program variation to analyze. In addition, sufficient information is often not available to accurately compute the financial incentives from pension plans.

In this *Issue in Brief*, we report on a study that uses a large data set of Department of Defense (DoD) workers who are in the Civil Service Retirement System (CSRS) to examine retirement behavior. These workers provide an interesting population for studying retirement for three reasons. First, they face relatively simple financial incentives because the CSRS is a typical defined benefit program and they are not covered by Social Security; this simplicity suggests that workers are more likely to understand the financial incentives they face. Second, key ages in the CSRS differ from the key ages in Social Security, allowing us to study retirement in a much different environment. Third, our data set contains high quality administrative data, so that we can accurately compute an individual's financial incentives. Relying on an option value framework, our main results suggest that federal civil service workers respond to their retirement

incentives in a manner that is very similar to the behavior that others have found when analyzing much different retirement systems. We also find that the reduced-form models capture the age-specific retirement rates better for the civil service workers than previous authors have found with other populations and no evidence of "excess retirement" at age 62 and 65, key ages in the Social Security system.

## Civil Service Retirement System

The federal civil service is one of the largest groups of employees in the United States, representing over three percent of total civilian wage and salary disbursements in 1996. Until 1987, the primary retirement system covering these workers was the Civil Service Retirement System (CSRS). Importantly, workers covered by CSRS do not contribute to Social Security.

CSRS is a typical defined benefit retirement plan with a relatively simple benefit structure. Benefits are vested after 5 years of service. Benefits are determined based on an individual's highest 3 years of earnings and his or her years of service (YOS). After retirement, retirement benefits are adjusted by the CPI, fully protecting the annuitant from inflation. The age at which individuals qualify for full benefits, the normal retirement age, is determined by ones age and YOS. To be eligible for normal retirement, an individual must be at least 55 years old with at least 30 YOS or at least 60 years old with at least 20 YOS. Those who separate before their normal retirement age can claim an annuity beginning at age 62 if they have at least 5 YOS. However, this annuity is still based on their highest three years of earnings at the time of separation, and consequently, the annuity of those who leave early can be substantially delayed and eroded by inflation. This formula creates a strong incentive to stay in the civil service until the normal retirement ages, particularly for those who would have qualified for retirement at age 55.

## Data

We use data on permanent civil service employees who worked at the Department of Defense from 1980 to 1996. These data represent administrative personnel records for the entire population of permanent DoD workers during this time frame, and therefore include millions of records.

We restrict our attention to individuals who we observe turning 50 and follow them to retirement. We also exclude those who are likely to be covered by additional pension plans. For example, we exclude those with less than 15 years of service at age 50 because they are likely to have had jobs that were covered by Social Security before joining the Department of Defense. Even after these sample restrictions, these data provide information on almost 200,000 workers, many more than is typically available in surveys.

## Summary of Major Findings

- Our reduced-form results suggest that civil service workers increase their retirement probability by 4 percent when offered an additional $10,000 of pension wealth. This estimate is very similar to those found in previous studies of much different retirement plans, including the Social Security system.

- We also find that the reduced-form models capture the age-specific retirement rates better for civil service workers than previous authors have found studying other retirement systems, and we find no evidence of "excess retirement" at key ages of the Social Security system (62 and 65).

- Methodologically, we present estimates from several empirical models that are commonly used to study retirement, including the structural option value model. These results suggest our conclusions are robust to a wide variety of specifications.

- Finally, we use the option value framework to evaluate the cost-effectiveness of offering an early retirement package to various workers. Our results suggest that it is beneficial to offer the package to younger workers.

## Conclusion

It is of immense interest to understand how retirement behavior responds to financial incentives, and numerous studies have focused on many different aspects of these incentives. We examined the retirement behavior of federal civil service workers in the DoD. These workers provide an interesting case study because their retirement system is much different than the systems that are usually studied. Our empirical results indicate that the CSRS participants react to financial incentives in a manner that is very similar to the reactions found in previous studies, providing important evidence about the generality of such estimates.

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