Active vs Passive Decisions and Crowd-out in Retirement Savings Accounts: Evidence from Denmark

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Do retirement savings policies – such as tax subsidies, employer-provided pensions, and savings mandates – raise total wealth accumulation or simply induce individuals to shift savings across accounts? In this paper, we revisit this classic question using a panel dataset with 50 million observations on savings in both retirement and non-retirement accounts for the population of Denmark. We analyze the impacts of price subsidies and automatic contributions on savings behavior using Danish income tax records. These data provide administrative information on the value of assets and liabilities of all Danish citizens from 1994-2009. The Danish data have two advantages over datasets used in prior work on retirement savings. First, they offer administrative information for a very large population. Second, there were a series of sharp reforms in Denmark that enable us to analyze the impacts of policy changes on behavior.

We divide our empirical analysis into two sections. First, we analyze the impacts of employer- provided pensions and government mandates, both of which are "automatic contributions" in the sense that they affect savings levels even if individuals take no action. Looking at individuals who switch firms, we find that individuals' total savings rates rise immediately by 86 cents when they move to a firm with $1 larger employer-provided pension contributions. Most individuals do not change their voluntary pension contributions or their savings in taxable accounts when they switch firms, consistent with passive behavior. The passive behavior and the resulting effects on total saving are evident, even when the employer-provided contribution differences between the two firms are very large.

We also analyze the impacts of a mandatory savings plan (MSP) that required all Danish citizens to contribute 1% of their earnings to a retirement savings account from 1998 until 2003. We find sharp increases in total savings in 1998 and sharp reductions in total savings in 2004. The MSP raised total savings even for individuals who were previously saving more than 1% of their earnings in voluntary retirement savings accounts, which are nearly a perfect substitute for MSP. We conclude that automatic contributions generate relatively little crowd-out and increase total wealth accumulation significantly, suggesting that many individuals are passive savers.

In the second part of our analysis, we study the impacts of subsidies for retirement savings. In 1999, the Danish government reduced the tax subsidy for contributing to capital pension retirement savings accounts – analogous to 401(k) plans in the United States – by approximately 30% for those with incomes above US $45,000 (the top income tax bracket). Individuals below the top income tax bracket were unaffected by the reform. We find that the total amount of capital pension contributions fell sharply for individuals in the top income tax bracket but remained virtually unchanged for individuals just below that bracket. However, the aggregate reduction in contributions for higher income households was accounted for entirely by just 15% of prior contributors. The other 85% of prior contributors did not change their capital pension contributions, despite the change in policy. This result again supports the view that the majority of individuals are passive savers whose savings can be affected by automatic savings mechanisms, but not by financial incentives alone.

We also found that most of the reduction in capital pension contributions for the 15% of active savers is offset by increases in contributions to other types of retirement savings accounts and increases in non-retirement savings. On average, a $1 reduction in capital pension savings due to the reduction of the tax subsidy is associated with only a 10 cent reduction in total savings, and the elasticity of total savings with respect to the net-of-tax subsidy for retirement savings is only 0.07. Hence, tax subsidies have much less impact on total savings than automatic contributions.

Taken together, we find that policies such as tax subsidies that rely upon individuals to take an action to raise savings have small impacts on total wealth. In contrast, policies that raise savings automatically even if individuals take no action – such as employer-provided pensions or mandated savings contributions – increase wealth accumulation substantially.

The U.S. spent $125 billion on the tax subsidy for retirement savings in 2010. To the extent that our findings in Denmark apply more generally to policy in the U.S. and other countries, these findings suggest that this policy may not be effective in raising total savings in the U.S. for two reasons. First, roughly 85% of individuals are passive individuals who do not respond at all to price subsidies. Second, individuals who respond largely do so by reallocating savings from one account to another. Company policies that match worker contribution to retirement plans may be ineffective for similar reasons. Instead, features of retirement accounts such as automatic payroll deduction of savings contributions and default contribution rates may be more effective tools.

The full working paper is available on our website, www.nber.org/programs/ag/rrc/books&papers.html, as paper NB12-04.

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