

## **SUBSIDIES VS. NUDGES: WHICH POLICIES INCREASE SAVINGS THE MOST?**

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Subsidies for retirement savings are among the largest tax expenditures in the United States and other developed economies. This fiscal year, the estimated cash-flow expenditure on retirement savings accounts such as 401(k)'s and IRA's exceeded \$100 billion in the U.S. (JCT 2012). The goal of these subsidies is to increase national saving and income security in retirement. Our study evaluates whether these subsidies accomplish this goal. Do tax subsidies encourage families to save more or do they induce them to shift money they would have saved anyway into tax-advantaged retirement accounts, with no net increase in savings?

Despite extensive research over the past three decades, we do not have a conclusive answer to this question because of a lack of high quality data on household wealth in the U.S. (Bernheim 2002). We therefore turn to data from Denmark, where we obtain 41 million observations on household balance sheets from administrative tax records. The Danish data provide useful insights for policy in the U.S. for two reasons. First, the structure of retirement savings plans in Denmark is broadly similar to the U.S. Second, savings decisions *within* retirement accounts – where good data are available in the U.S. – are similar across the two countries. Hence, we expect savings decisions outside retirement accounts – where the Danish data are of much higher quality – to be similar as well.

We begin by studying a reform in 1999 that sharply reduced the tax subsidy for contributing to retirement accounts for those in the top income tax bracket in Denmark. We find that the subsidy change had small impacts on total savings for two reasons. First, only 15% of individuals reduced retirement savings when the subsidy was reduced; the remaining 85% of individuals did not change their pension contributions at all. Second, the 15% who reduce pension contributions shifted nearly all the money they withdrew from pensions to other non-retirement accounts. Combining these two effects, we estimate that each \$1 of government tax expenditure on retirement savings raises total national saving by 1 cent.

If subsidies have little impact on retirement saving, are there other policies that are more effective? Recent studies have shown that “nudges” such as automatic enrollment or defaults – which have no fiscal cost to the government – increase pension contributions (e.g., Madrian and Shea 2001, Thaler and Sunstein 2008). Again, however, it is unclear whether automatic contributions raise total savings or just induce individuals to save more in pensions while running down their balances in non-retirement accounts, leaving total saving unchanged.

We study the impacts of automatic contributions on total savings using two quasi-experimental approaches. First, we track individuals' savings rates when they switch to jobs with higher or lower employer retirement contributions. These contributions are automatic in that they require no active choices by individuals. We find that increases in employer contributions substantially increase total savings: most individuals do not change their savings in non-retirement accounts at all when their employers contribute more to their pensions. Second, we study the impacts of a mandatory government savings plan that required everyone to automatically contribute 1% of their earnings to a retirement savings account from 1998-2003. Again, we find that this policy raised total pension savings and did not reduce savings in other accounts.

Why are automatic contributions so much more effective at raising savings than price subsidies? We find that there are two types of people in the economy: 15% are “active” savers who plan for retirement and respond to incentives, while 85% are “passive” savers who are not focused on their retirement savings and do not pay attention to policy changes. Price subsidies induce active savers to shift assets across accounts but have no impact on passive savers' behavior. In contrast, automatic contributions raise the savings of passive savers. Passive savers tend to be less wealthy and financially prepared than active savers. As a result, automatic contributions not only have larger effects on aggregate savings than price subsidies, but also do more to increase the savings rates of those who are least prepared for retirement.

In sum, the findings of our study call into question whether tax subsidies are the most effective policy to increase retirement savings. Automatic enrollment or default policies that nudge individuals to save more could have larger impacts on national saving at lower fiscal cost.

## Works Cited

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