

Do Tax Incentives Increase 401(k) Retirement Saving? Evidence from the Adoption of Catch-Up Contributions

Matthew S. Rutledge
Center for Retirement Research at Boston College

April Yanyuan Wu
Mathematica Policy Research

Francis Vitagliano
Center for Retirement Research at Boston College

17th Annual Joint Meeting of the Retirement Research Consortium

August 6-7, 2015
Washington, DC

The NBER Retirement Research Center, the Center for Retirement Research at Boston College (CRR), and the University of Michigan Retirement Research Center (MRRC) gratefully acknowledge financial support from the Social Security Administration (SSA) for this conference. The findings and conclusions are solely those of the authors and do not represent the views of SSA, any agency of the federal government, the NBER Retirement Research Center, CRR, or MRRC. The authors are indebted to the indispensable data analysis of Qi Guan, and would also like to thank Robin Jensen for excellent research assistance. The authors are grateful to Kelly Trageser, Gary Benedetto, Holly Monti, and Martha Stinson for helping us access the SIPP synthetic data and re-running our code on the actual data.

Introduction

The Joint Committee on Taxation estimates that the tax-deferred treatment of defined contribution (DC) plans like 401(k)s cost the U.S. federal government \$61.4 billion in lost revenue in 2014. But researchers have not come to a consensus on whether the tax incentives to save in 401(k)s induces additional retirement saving overall, or even additional 401(k) saving.

The increase in the maximum tax-deferred 401(k) contribution for participants age 50 and older provides a natural experiment in whether savers respond to a change in the tax incentives. Starting in 2002, individuals age 50 and over were allowed to make “catch-up contributions” over and above the tax-deferred maximum. In 2015, the contribution limit is \$18,000, but older workers can contribute an extra \$6,000 per year. The higher limit provides an incentive for workers previously constrained by the maximum to increase their tax-deferred savings, but does not change the incentives to save for workers unconstrained by the limit. The impact of the catch-up provision on 401(k) saving has received little attention; the few existing studies are limited to descriptive analyses conducted shortly after its adoption.

This study evaluates the response in 401(k) saving to the change in tax incentives using demographic characteristics from the *Survey of Income and Program Participation* (SIPP) linked to administrative data on tax-deferred earnings from the U.S. Social Security Administration (SSA). Evaluating the effect of the catch-up provision on 401(k) saving requires accounting for three factors: the fundamental differences between maximum contributors (who faced a change in incentives) and participants contributing a lower amount (who faced no change), the growth in 401(k) contributions over time, and the potential increase in saving with age. This study adopts a triple-differences framework, comparing the change in 401(k) contributions for maximum contributors just after age 50 to similar participants just under age 50, within a tight window around the policy change. The identification assumption is that maximum contributors at ages 50-53 are (conditionally) identical to maximum contributors at ages 46-49, except that the older group faces a higher deferral limit. In that event, the differential increase in contributions for this older group from just before 2002 to just after is due to the adoption of the catch-up provision.

401(k) Deferral Limits

Under defined contribution plans such as traditional 401(k)s, contributions are pre-tax, up to a deferral limit, and are only taxed at withdrawal. The contribution limits have long been adjusted for inflation but, in 2001, the federal government increased the limits at a faster rate through 2005. They also introduced a catch-up provision, establishing a higher contribution limit for workers age 50 and over. The idea behind the provision is that individuals, who may postpone saving for retirement when they are younger, need to step up their saving as their retirement age starts to loom larger. The basic contribution limit rose from \$10,500 in 2001, just before the new law took effect, to \$14,000 in 2005 while the allowable catch-up contribution increased from \$0 to \$4,000 during this period.

For most people, contributing the maximum amount to a 401(k) in any year is not an easy task. Only about 9 percent of individuals in this paper's sample have 401(k) contributions within 10 percent of the deferral limit. The difference in mean earnings and wealth between max and non-max contributors is dramatic: max contributors earn about \$163,000 and have a net worth of \$439,000, compared to \$57,000 and \$200,000, respectively, for the full sample.

Data and Methodology

This study uses the SIPP Synthetic Beta (SSB), a data product that allows users to link the SIPP household survey to administrative earnings records without requiring access to the restricted data. The SIPP includes demographic and economic characteristics usually not available in an administrative dataset alone. The SSA administrative data to which the SIPP is linked provides information about total earnings and 401(k) contributions that are likely to be more accurate than self-reported information alone.

The sample includes any individual matched to the SSA earnings records who was age 46-53 at some point between 1999 and 2005, excluding individuals with inconsistent work history over this period or who have a work-limiting health condition. Restricting the sample to this age range assures that differences in saving over the life-cycle are minimized. Analyzing a short window before the adoption of the catch-up provision (1999-2001), the year of its adoption (2002), and three years after its implementation (2003-2005) similarly minimizes differences over time due to the secular growth of 401(k) saving.

The dependent variables in the regressions are, separately, annual total tax-deferred earnings in 2005 dollars, or the contribution rate, i.e., the ratio of total deferred earnings to total earnings in that year. The regression is a linear triple-differences model, including the full combination of interactions of three indicator variables: whether the catch-up provision is in effect; whether an individual is age 50 or older; and whether an individual has made near-maximum contributions in any prior year. A positive and statistically significant coefficient on the triple interaction between these variables indicates that previously constrained participants increase their contributions at age 50 by more than maximum-contributors under 50 after the adoption of the catch-up provision.

The model also includes year dummies; demographics; educational attainment; earnings; net worth; presence of minor and college-aged children; and pension coverage during the SIPP sampling window. Some specifications include individual fixed effects, or separate indicators for each age from 47 to 53.

Results

The main estimates are summarized in Figure 1. The two bottom bars cover the workers not constrained by the deferral limit; both of these groups increase contributions by only a small, but statistically significant amount (\$237-248) after the adoption of the catch-up provision.

As expected, the story is much different for those workers near the maximum (the top two bars). Max workers under age 50 contribute a statistically significant \$917 more after 2001 than non-max contributors in the same age group, for a total additional contribution of \$1,166. This increase reflects that the contribution limit was increasing faster than inflation for all ages.

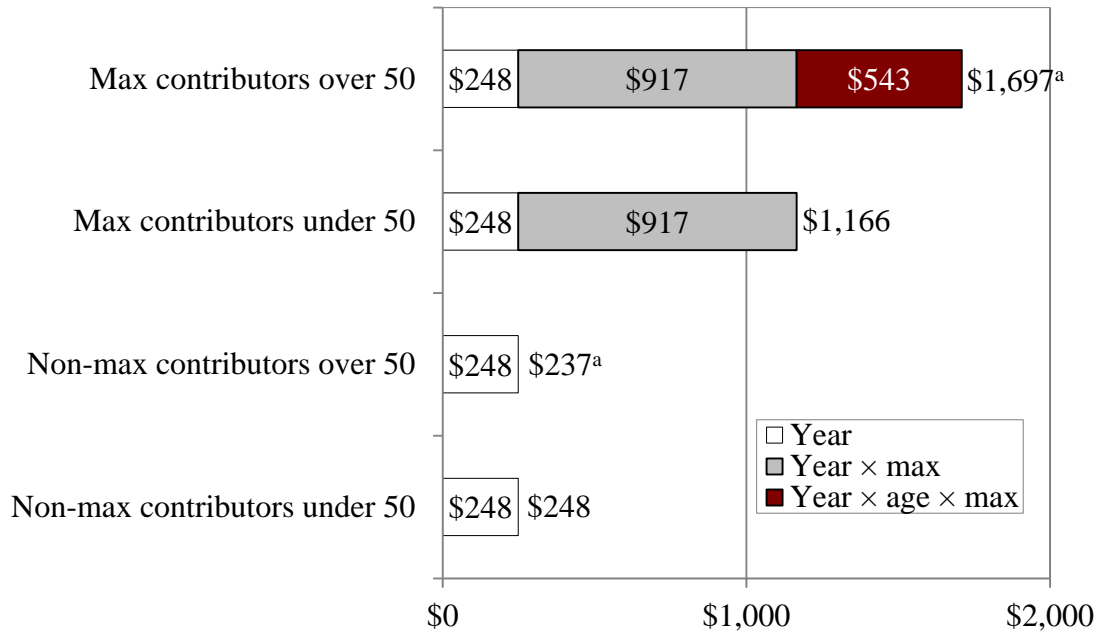
The largest effect was for those max contributors who were 50 and over. Their total contribution increased by \$1,697, or a statistically significant \$543 more than similar workers just under age 50. This increase is 4.6 percent of the average maximum deferral level before the catch-up provision was adopted – about \$11,700. Adjusting for inflation, the deferral limit increased by 33 percent per year for participants age 50 and over, or 22 percentage points faster than the simultaneous increase in the limit for participants under age 50 (11 percent). The 4.6 percent increase in contributions represents 21 percent of the 22-percentage-point rise in the limit for the 50+ group; that is, the implied elasticity of retirement savings to the tax incentive is 0.21. Models with separate indicators for each age, or with individual fixed effects, estimate larger

differences between max contributors 50 and over relative to similar individuals under 50. While this group does not increase their contributions all the way up to the new limit, they appear to be somewhat sensitive to tax incentives to increase their 401(k) saving.

Conclusion

These results suggest that contributors near the maximum have excess capacity for further tax-deferred saving and appear to respond to changes in the statutory limit. But further work is needed to fully understand the implications of this increase in 401(k) contributions induced by the catch-up provision among previously constrained older workers. Researchers have reported conflicting evidence on the extent to which saving through private-sector DB and DC plans crowds out private saving. While this study finds that contributors near the maximum are somewhat sensitive to the maximum deferral, whether the increase in 401(k) contributions is a substitution from other accounts or an increase in total saving remains unclear. Furthermore, the increases in the tax-deferred maximum affect mostly high-income households; though this group is sensitive to these incentives, lower-income households are more constrained, so changing 401(k) limits would not likely provide a broad-based solution for low saving rates.

Figure 1. *Predicted Increase in 401(k) Contributions from 1999-2001 to 2002-2005, 2005 \$*



^a For simplicity, the figure does not depict the impact of the (Year)(Age) interaction. This interaction reduces the predicted total increase in contributions by \$11 for each of the two groups that include individuals age 50 and over. *Source:* Authors' estimates from the *SIPP Completed Data Files (1999-2005)*.