



Taxpayers' responses to tax-based incentives for retirement savings: Evidence from the Saver's Credit notch[☆]

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ABSTRACT

This paper uses the Saver's Credit to analyze taxpayers' understanding of, and responses to, tax incentives. The Saver's Credit is a tax credit designed to encourage retirement savings among low and middle income households; however, the credit's structure creates "notches", or discontinuous jumps, within a household's budget constraint. These notches provide an incentive to manipulate adjusted gross income to fall just below the level where the credit decreases. I use Public Use Tax Files from the Internal Revenue Service to test whether taxpayers bunch their income at the notch created by the Saver's Credit. I find strong evidence that bunching occurred in response to the credit, which implies that taxpayers claiming the credit understood the incentives for bunching and indeed manipulated their incomes accordingly. I then exploit the discontinuity in credit rates to analyze the credit's impact on retirement contribution behavior using a regression discontinuity approach, and find that the credit failed to generate a statistically significant effect on the level of retirement contributions. These results imply that the Saver's Credit is more effective at providing transfers to low and middle income taxpayers than at increasing retirement contributions.

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1. Introduction

The Saver's Credit is one of many provisions in the US tax code intended to encourage individuals to save for retirement.¹ The credit is structured so that the credit rate received for making contributions decreases as income increases to target low and middle income households. But the extent to which individuals respond to tax-based retirement incentives through changes in savings behavior is still an open question that has generated a large body of literature. This paper seeks to shed some new light on this question by analyzing changes in retirement contribution behavior in response to the Saver's Credit.

When tax incentives are used to motivate a desired behavior, they often induce unintended responses in the process. The Saver's Credit is no exception. Although the credit is meant to subsidize retirement savings, its design also effectively subsidizes people to adjust their income. In particular the program allows for some taxpayers to lose as much as \$600 in credit by reporting just one extra dollar of income.

To provide the largest benefit for those with the lowest incomes, the amount of credit falls discontinuously as adjusted gross income (AGI) increases for a given amount of contributions. The resulting discontinuity, or notch, in an individual's budget constraint fosters a strong incentive to forego that extra dollar of income, either by altering labor supply or by altering reported income through evasion and/or avoidance.

The presence of notches in the Saver's Credit incentivizes a behavioral response that is potentially costly to the program. For example, if individuals adjust their income to ensure eligibility, then the program could transfer income to taxpayers who would have otherwise been ineligible. An additional cost may also come from individuals who are eligible for the credit but adjust their income below the notch to receive a larger credit. In fact, households with larger contributions have a stronger incentive to lower their income and bunch at the notch since the credit rate applies to every dollar of contribution (up to a cap). This implies that any observed bunching could also have implications for contribution behavior. If bunching is found, then people who report incomes below the notch to receive a higher credit rate may also have higher marginal propensities to save. For instance, an individual that has a strong preference for saving and thus contributed the maximum amount also has an increased incentive to bunch as he/she has the most to gain from a higher credit rate. This makes disentangling the policy's influence on retirement contributions difficult. Thus, the magnitude of bunching found in the data is itself a parameter of interest. In particular, bunching has implications for both evaluating the total cost of the program that accounts for the unintended behavioral response as well as for evaluating the total

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¹ Income saved within a qualified retirement savings plan typically receives a tax deduction or an exclusion from gross income as well as a tax deferral on accumulated earnings. Alternatively, savings plans such as Roth Individual Retirement Accounts are funded using after-tax dollars, but allow for tax free disbursements.

benefit of the program that is measured in terms of changes in contribution behavior.

This paper exploits the discontinuous structure of the Saver's Credit to investigate two questions: conditional on receiving the Saver's Credit, do households adjust their income in order to receive a higher credit rate? and: do households that receive a higher credit rate contribute more? To analyze how households respond to the Saver's Credit, I use the IRS Statistics of Income (SOI) Individual Public Use Tax Files spanning 2002 through 2006. The data contain information obtained directly from individual tax returns, which I use to estimate the effects of the Saver's Credit. I provide graphical evidence that documents the existence of bunching, which in turn has implications for estimating credit's impact on contribution behavior. The nature of the program makes the regression discontinuity research design seem ideal for studying the effect of the credit rate changes on savings contribution levels. However, the bunching complicates these estimates by potentially violating the identification assumption necessary for estimation. Despite this bunching, I am able to place bounds on the estimated treatment effect, which account for the possible bias. Ultimately I find that, conditional on taking the Saver's Credit, there is no statistically significant evidence that receiving a higher credit rate increased individual savings contributions for the marginal person. The overall impact of the Saver's Credit appears to be that taxpayers taking the Saver's Credit understand and respond to the incentive to bunch at the notch, but their savings contributions are unresponsive to a change in price.

2. The Saver's Credit

The Saver's Credit targets households who earn below a threshold income level that is determined by filing status.² These individuals may receive a non-refundable tax credit on retirement contributions of up to \$2000 made to both Traditional and Roth Individual Retirement Accounts (IRAs), as well as elective deferrals to plans such as 401(k)s and 403(b)s.³ Because the credit is non-refundable, individuals must have a positive tax liability to receive a Saver's Credit. Details regarding the credit rates for the Saver's Credit are presented in Table 1. The second column of Table 1 calculates the equivalent match rate by interpreting the Saver's Credit like an employer match on elective deferrals.⁴ For example, a taxpayer who contributes \$1 earns a \$0.50 credit that immediately offsets tax liability and puts \$0.50 back in that taxpayer's pocket. That 50% credit rate has an economically equivalent match rate of 100%, since the taxpayer and the government effectively each contribute \$0.50. This calculation allows for a comparison to studies on the success of employer matching as a savings incentive, which I will discuss in more detail in Section 3.

The Saver's Credit can be claimed when individuals file their tax return. For employer-sponsored plans such as 401(k)s this typically takes place after the contribution decisions have been made. But for IRAs, contributions are permitted until April 15th, allowing some individuals to contribute after learning that they qualify for the credit.⁵ Because the Saver's Credit rate changes discontinuously with AGI (for a given amount of savings), taxpayers could face a discrete jump in their after-tax income at the program's income cutoffs. For example, suppose a single filer with a positive tax liability and an AGI of \$15,000

Table 1
Saver's Credit rates by filing status and adjusted gross income,^a 2002–2006.

Credit (%)	Match ^b (%)	Household's adjusted gross income (\$)			Max credit ^c (\$)
		Single	Head of household	Married	
50	100	0–15,000	0–22,500	0–30,000	1000
20	25	15,001–16,250	22,501–24,375	30,001–32,500	400
10	11	16,251–25,000	24,376–37,500	32,501–50,000	200

^a Between 2002 and 2006 these income thresholds were not indexed for inflation, though this changed in 2007 after the passing of the Pension Protection Act of 2006.

^b Effective match rate is calculated by $\frac{s}{r}$, where s is the Saver's Credit rate.

^c The individual maximum credit is a per person amount and thus married couples filing jointly can claim up to \$4000 of credit.

contributes \$2000 to a retirement plan. She will receive a tax credit of \$1000, or 50% of her savings contribution to offset her tax liability. However, if she reports one additional dollar of income, her credit rate falls from 50% to 20%. Since each dollar of her contribution now earns the lower credit rate, her total credit would then fall from \$1000 to \$400, forming a \$600 notch in her budget constraint. Fig. 1 illustrates the specific notches that result from the Saver's Credit seen in the before- and after-tax budget constraint for a married couple filing jointly. The couple's budget constraint with the Saver's Credit policy maintains the same slope, but at the income cutoffs, the couple faces downward jumps in their after-tax income for a fixed retirement contribution. Thus, moving from an income of \$30,000 to \$30,001 strictly lowers utility.

Between 2002 and 2006, roughly 5.3 million credits were filed each year and the average credit payment was around \$190. Following the first year the credit was offered, Koenig and Harvey (2005) found that 34% of eligible taxpayers failed to claim up to \$496 million dollars in credits, and 43% of claimed credits were limited by tax liability. Gale et al. (2005) note that this low participation rate is even more staggering in light of the fact that the Saver's Credit complements employer matching, making the effective match rate as high as 200% for a 50% employer match rate. Although generous, the Saver's Credit has a low-take up rate likely due to its complexity and to the fact that it is non-refundable, which precludes a large portion of its targeted population.

3. Related literature

This paper relates to several themes from past work including the effect of tax-preferred accounts on savings, the effect of employer matches on savings, and how taxpayers respond to discontinuities in their budget constraint. A vast literature questions how effective tax incentives are at inducing people to alter their savings behavior (see Bernheim, 2003 for a review of the literature). Within this literature there is debate as to whether tax-preferred retirement plans stimulate new savings in the form of contributions or whether individuals simply shift where their assets are held (Gale and Scholz, 1995; Gale et al., 1994; Engen et al, 1996; Poterba et al., 1996, 1998). More recent work finds that 401(k) eligibility and participation modestly increase saving, though the effect varies dramatically in magnitude along the income distribution (Benjamin, 2003; Chernozhukov and Hansen, 2004). Although the evidence is mixed, there is some agreement that retirement contributions made by individuals at the lower end of the income distribution are indeed a net addition to their overall savings (Munnell and Sunden, 2004). While this paper is concerned with the impact the Saver's Credit has on contributions along the intensive margin, these past studies imply that contributions made by the credit's target demographic are more likely to increase total household savings.

Given that the Saver's Credit can be interpreted as a government match on contributions, whether or not there exists a response with respect to credit rate is of interest and complements the existing literature on employer matches of employee contributions to retirement plans. Past work analyzing the effects of employer matching has

² After becoming permanent under the Pension Protection Act of 2006, the Saver's Credit was indexed for inflation causing these threshold income levels to rise from 2007 onwards.

³ Couples that are married filing jointly can earn a credit on contributions up to \$4000.

⁴ This follows Duflo et al. (2006) and Gale et al. (2005) who compare the Saver's Credit to employer matching on contributions to a company retirement plan where the credit rate, s , is equivalent to an employer match rate of $\frac{s}{r}$.

⁵ It is also noted that contributions to Traditional IRAs are made using pre-tax dollars, thus contributions can be used to lower AGI, which would in turn impact an individual's eligibility for the Saver's Credit as well as the credit rate he/she is offered.

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