September 2019

Research Summary: Does front-loading taxation increase savings? Evidence from Roth 401(k) introductions

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Recommended Citation
Available at: https://scholarsarchive.byu.edu/marriottstudentreview/vol3/iss2/9

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Cover Page Footnote

This article is available in Marriott Student Review: https://scholarsarchive.byu.edu/marriottstudentreview/vol3/iss2/9
DOES FRONT-LOADING TAXATION INCREASE SAVINGS?

Evidence from Roth 401(k) Introductions

Article Review by Parker Gardner*

Retirement is an important phase in life. We spend most of our adult lives working and saving money so we can maintain a comfortable standard of living throughout our golden years. However, the problem many Americans face is that they are incredibly behind in their savings for retirement. The Center for Retirement Research at Boston College recently published a report measuring retirement savings in 401(k)s across different age groups. Table 1 illustrates their findings. Notice how the 401(k) balances for workers between the ages of 35-64 are decreasing rather than increasing over time.

Clearly, Americans need to be better prepared for retirement. But how can the federal government incentivize them to do so? In the article being reviewed, Dean Brigitte Madrian of the BYU Marriott School of Business, along with professors John Beshears (Harvard), James Choi (Yale), and David Laibson (Harvard), explore the saving habits of American workers and found these habits to be mostly consistent, regardless of whether workers are saving with a traditional 401(k) or a Roth 401(k). This begs the question whether employees would rather pay taxes now, or pay taxes later, on their retirement savings.

TABLE 1
The Difference Between 40 and 2016 by Age Group

Source: Munnell, Alicia H., and Anqi Chen. 401(K)/IRA Holdings in 2016: An Update from the SCF. PDF. Center for Retirement Research at Boston College, October 2017.

To understand the significance of these findings, one must first understand the difference between a traditional 401(k) and a Roth 401(k). A traditional 401(k) is a retirement account that permits workers to contribute a percentage of their pre-tax income without paying taxes on that income until it is pulled out of the account during retirement. At that point, the income—and any interest made on it—are both taxed. A Roth 401(k) is different in that it allows workers to contribute a percentage of their after-tax income as opposed to their pre-tax income. When a qualified withdrawal is made from a Roth 401(k), this money—both what was originally invested, and any interest made—are not taxed.

The key tax difference between a normal 401(k) and a Roth 401(k) means those who invest in a Roth 401(k) see that their “take-home pay declines [but] the amount of retirement consumption being purchased increases.” Take-home pay decreases because employees pay taxes on their would-be retirement savings before putting it into the Roth 401(k). Purchasing power in retirement increases because employees pull out money from their retirement account without paying taxes on their savings (because they already paid taxes on it), nor do they pay taxes on the interest made from their savings.

So clearly a dollar invested into a Roth 401(k) is worth more in retirement dollars than a dollar invested into a traditional 401(k). This begs the question whether employees would rather invest their money in a Roth 401(k) or a traditional 401(k). Dean Madrian and her research partners sought to find the answer.

The researchers targeted eleven large U.S. companies, each having between 10,000 and 100,000 employees, and reviewed their retirement savings data. All these companies began offering a Roth 401(k) savings plan in addition to a traditional 401(k) plan between 2006 and 2010. They examined 11 months of employee contributions from two specific employee segments: (1) those hired twelve months prior to the introduction of the Roth and (2) those hired a year later, in the month immediately following the introduction of the Roth. Their findings show only a slight difference between contribution rates of these two groups during the 11-month period. The research team concluded: “We find no evidence that introducing a Roth 401(k) option decreases total 401(k) contribution rates. This means that the total amount of retirement consumption being purchased via the 401(k) increases after the Roth is made available.”

Dean Madrian and her team explored several reasons as to why employee contribution rates did not change following the introduction of a Roth 401(k) option. As a part of their study, the researchers surveyed 7,000 people who were current participants in a retirement savings plan. These respondents were given a hypothetical situation of a fictitious couple (Jack and Cindy) and asked to specify how much money the couple should allocate to their 401(k) or Roth 401(k). About half of the respondents admitted that they did not know the answers to the withdrawal questions. The researchers determined that “…employee confusion about and neglect of the tax properties of Roth balances, along with partition dependence, prevent contribution rates from falling following a Roth introduction.”

Can the federal government increase private savings by changing how these contributions are taxed by increasing the use of a Roth 401(k) over a traditional 401(k)? Dean Madrian and her fellow researchers conclude that this is a possibility: “Governments may be able to increase after-tax private savings while holding the present value of taxes collected roughly constant by making savings non-deductible up front but tax exempt in retirement, rather than vice versa.”

The federal government can help, but, more importantly, employees must understand the differences between their options.

As you enter the workforce, understand the difference between a traditional 401(k) and a Roth 401(k). This knowledge will empower you to strategically save for the future. Buying more retirement spending power now could lead to greater benefits to come. Neglecting the tax ramifications of your retirement savings puts you at risk; those tax dollars may be indispensable later in life, when you are without a job or steady paycheck. You can make your golden years bright by knowing which kind of retirement account will work best for you. Your future self will thank you for it.
Retirement may seem like the last thing a college student should worry about, but an early start on savings can result in future financial security. Though the options may seem daunting (and there are a lot of them), this guide is meant to give you an introduction to retirement account lingo. This is by no means a comprehensive guide, but it should help with the learning curve when you meet with a Financial Advisor.

**IRA VS. 401(K): WHAT’S THE DIFFERENCE?**

<table>
<thead>
<tr>
<th>IRA</th>
<th>401(K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independently Started</td>
<td>Offered Through Employer</td>
</tr>
<tr>
<td>No Employer Match</td>
<td>Matching Funds</td>
</tr>
</tbody>
</table>

**ROTH VS. TRADITIONAL: WHAT’S THE DIFFERENCE?**

**TRADITIONAL**

Traditional retirement accounts are taxed when you withdraw funds from your account. In most cases there are no eligibility requirements for these types of accounts. They are often less forgiving when it comes to early withdrawals, but the delayed taxation can be useful in certain circumstances.

**ROTH**

Roth retirement accounts are taxed as you contribute to them. Generally, this is the preferred type of account owing to its flexibility. There can be some basic eligibility requirements, but these accounts usually have fewer penalties associated with them. More often than not, this is the type of account for you.

**ACCOUNT COMPARISONS: WHAT’S THE DIFFERENCE?**

<table>
<thead>
<tr>
<th>Traditional 401(k)</th>
<th>Roth 401(k)</th>
<th>Traditional IRA</th>
<th>Roth IRA</th>
</tr>
</thead>
<tbody>
<tr>
<td>When Taxed</td>
<td>On withdrawal</td>
<td>On contribution</td>
<td>On withdrawal</td>
</tr>
<tr>
<td>Employer Match</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Income Limit</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Early Withdrawal</td>
<td>None after 5 years</td>
<td>Taxes + 10% of withdrawal</td>
<td>None after 5 years</td>
</tr>
<tr>
<td>Penalty</td>
<td>None after 5 years</td>
<td>Taxes + 10% of withdrawal</td>
<td>None after 5 years</td>
</tr>
<tr>
<td>Automatic Payroll Deduction</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Breadth of Investment Options</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>

**QUESTIONS TO CONSIDER**

1. **Will your income increase by the time you retire?**
   For most college students, the answer is yes. Any retirement accounts taxed on withdrawal will be taxed according to your income when you retire. Your career path is an important factor when considering retirement options.

2. **What does your current or future employer offer?**
   When applying for a new job, always check to see what retirement options are provided. Many companies offer matching investments (essentially free money). You can also have more than one type of retirement account. Diversifying can certainly pay off in the long run.

3. **What are you eligible for?**
   Some types of accounts have eligibility requirements, investment caps, required distributions, etc. Before making any big decisions, consider meeting with a professional Financial Advisor to make the most of your investments.