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Do Low-Income Workers Benefit from 401(k) Plans?

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Introduction

401(k) plans – the main retirement savings vehicle for millions of workers – allow participants to save on a tax-deferred basis. This tax incentive is more valuable to workers in high-income families than workers in low-income families because they face higher marginal income tax rates. Not surprisingly, then, studies of the distributional effects of 401(k)s find that they mainly benefit high-income workers. However, these studies assume that employer contributions to 401(k)s do not affect the total compensation that each worker receives – that is, every worker "pays for" employer contributions in the form of lower wages. This *brief* challenges this assumption, testing whether employer contributions may actually *increase* total compensation for low-income workers, who may be more reluctant than high-income workers to accept wage reductions in exchange for retirement saving contributions.

The *brief* is organized as follows. The first section provides background on 401(k)s, specifically their tax treatment and the rationale for employer contributions. The second section explores the traditional theory of how fringe benefits affect workers' total compensation and why the theory might not uniformly hold for employer contributions to 401(k)s. The third section describes an experiment to test this theory and presents the results. The final section concludes that additional employer 401(k) contributions appear to reduce wages only modestly for low-income workers, resulting in higher total compensation for these workers. These results suggest that traditional analyses may understate the benefits that 401(k)s provide for rank-and-file workers.

401(k)s and Employer Contributions

Qualified defined contribution retirement plans, predominantly 401(k)s, allow participants to defer paying taxes on assets in their account. Both employer and worker contributions to 401(k)s are exempt from income tax and the investment earnings on 401(k) contributions accrue tax free until withdrawal.[1] Withdrawals from 401(k)s are subject to ordinary income tax rates.[2] The main tax benefit is the deferral of taxes on 401(k) contributions and earnings. But since an individual's income usually declines after retirement, a secondary benefit of 401(k)s is that withdrawals are

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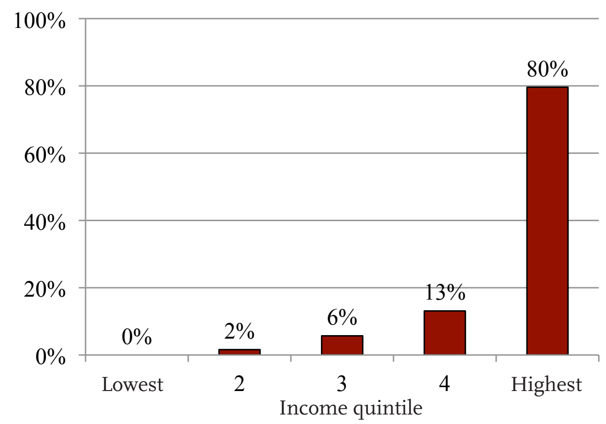
often taxed at a lower marginal rate than the rate that would apply to contributions. Given the design of the 401(k) tax preference and the progressive structure of the income tax code, high earners have a greater incentive to participate in the plans for two reasons.[3] First, they face higher marginal tax rates than low earners during their working years, so the tax deferral offered by 401(k)s is more valuable. And, second, they are more likely to drop into a lower tax bracket at retirement than low earners who may already be taxed at the lowest marginal rate during their working years.[4]

Concerned that 401(k) benefits would become overly concentrated among high earners, the federal government made 401(k)s subject to non-discrimination rules that require broad levels of participation by rank-and-file workers. The law provides employers with a number of ways to satisfy the non-discrimination requirements. One common method permits employers to offer a "safe harbor" plan, in which they make specified levels of contributions to every participant's 401(k) account. These employer contributions can take the form of either a match or an automatic contribution regardless of any worker contribution.

Not surprisingly, in 2012, households in the top fifth of the income distribution received an estimated four-fifths of all of the tax benefits from 401(k)s and other qualified pension plans (see Figure 1).

Figure 1. Distribution of Tax Benefits from Qualified Pension Plans among Households, by Income Quintile, 2012



Source: Toder, Harris, and Lim (2011).

Wages vs. Benefits

Employers compensate their workers with wages and fringe benefits, both of which are generally tax-deductible for employers. Given this similar tax treatment, economists generally assume that employers are indifferent between paying wages and fringe benefits and choose the compensation mix that enables them to attract and retain the best workers per dollar of labor cost. Thus, from the viewpoint of employers, wages and fringe benefits are generally perfect substitutes, so that an additional dollar of wages should substitute for an additional dollar of fringe benefits and vice versa. Assuming such a one-for-one tradeoff, workers indirectly pay for fringe benefits such as employer 401(k) contributions in the form of lower wages.

This assumption of a full offset between fringe benefits and wages is commonly adopted in studies of the distributional effects of tax preferences for fringe benefits.[5] As a result, studies of 401(k)s assume that employer contributions do not affect total compensation, and their analysis focuses only on the direct tax benefits. They find that 401(k)s disproportionately benefit high-income workers because they have higher participation and contribution rates than low-income workers and, as noted above, they receive higher tax benefits for each dollar of contribution.

Clearly, the direct benefits of 401(k)s appear highly concentrated among high-income workers. But if the assumption that wages and fringe benefits are equivalent does not hold for all workers, traditional analyses of 401(k)s may not account for all of the benefits of these plans. If low-income workers place a much lower value on 401(k) contributions than high-income workers, they would be less willing to accept lower wages in return. The most obvious reason is that low-income workers are more likely to prefer income to meet their immediate needs rather than additional saving. Another reason is that low-income workers who have no income tax liability or are in the 10-percent tax bracket gain much less from the availability of tax-free accrual in a 401(k) than high-income workers.[6]

In theory, employers could respond to worker preferences by structuring compensation differently for low- and high-income workers. They could pay low-income workers relatively more in wages and less in fringe benefits and vice versa for high-income workers. However, in the case of 401(k)s, employer behavior is influenced by the non-discrimination rules. Employers who wish to contribute to 401(k)s to attract high-income workers may be unable to reduce wages to low-income workers in exchange for the 401(k) contributions. The following section describes an empirical test of this hypothesis.[7]

Testing the Effect of Employer 401(k) Contributions on Wages

The objective of the analysis is to test the hypothesis that employer 401(k) contributions reduce the earnings of low-income workers less than high-income workers. The analysis estimates the effects of increased employer contributions on earnings, holding constant other measures of job characteristics and "worker quality."

Data and Methodology

The main data source for this analysis is the *Survey of Income and Program Participation* (SIPP), a nationally-representative longitudinal survey of households conducted by the U.S. Census Bureau. The SIPP provides data on demographic characteristics of workers and job characteristics, such as whether workers are offered a pension plan and whether and how much employers contribute to a plan. The analysis uses data that matches the 2004 and 2008 panels of the SIPP with longitudinal Social Security administrative earnings data from the Summary Earnings Records and Detailed Earnings Records.

One advantage of using the administrative earnings data is that their precision allows for a much better adjustment for worker quality than could be obtained using only the self-reported SIPP data. Worker quality is important because, if not controlled for properly, it could be difficult to determine whether some workers receive more total compensation than others simply because they are perceived as more valuable.[8] The worker quality measures used in this analysis include number of work years and earnings in prior jobs.[9]

The sample consists of workers offered a 401(k) plan who have held their current job for one to five years and also had a prior job.[10] The goal is to determine the effect of employer 401(k) contributions on earnings and whether the effect differs for low-income and high-income workers, controlling for other factors that could influence earnings.[11] The basic equation is:

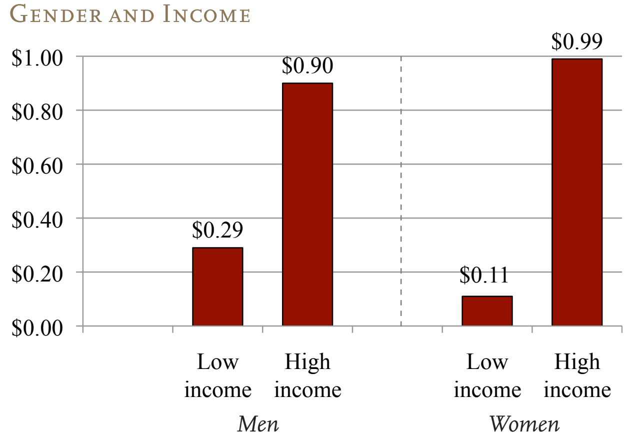
Worker's earnings/average earnings = *f* (demographic characteristics, job characteristics, employer 401(k) contributions/worker's earnings)

Separate equations are estimated for male and female workers, and for male and female workers in low-income households (defined as the bottom 40 percent of the income distribution) and in high-income households (defined as the top 40 percent of the income distribution).

Results

The results show that, holding other determinants of earnings constant, additional employer contributions do reduce wages and that the size of the reduction does vary by income level. These results are all statistically significant.[12] The question of interest concerns the absolute dollar reduction in earnings associated with an additional dollar of employer 401(k) contributions. The equation is in log form, so another step is needed to present the results in an accessible format. The final calculation shows that, among male workers, an additional dollar of employer 401(k) contributions replaces 90 cents of wages for those with high incomes, but only 29 cents for those with low incomes (see Figure 2). Among female workers, an

Figure 2. Reduction in Wages for an Additional Dollar in Employer 401(k) Contributions, by Gender and Income



Note: "Low income" is defined as the bottom 40 percent of the income distribution. "High income" is defined as the top 40 percent of the income distribution.
Source: Authors' calculations from U.S. Census Bureau, *Survey of Income and Program Participation*, 2004 and 2008 matched to earnings from U.S. Social Security Administration.

additional dollar of employer 401(k) contributions replaces 99 cents of wages for those with high incomes, but only 11 cents for those with low incomes.

These results support the notion that the fringe benefit/wage tradeoff can vary for workers at different income levels. For high-income workers, additional 401(k) contributions are almost fully offset by lower wages. For low-income workers, additional contributions reduce wages only modestly – by just 11 cents to 29 cents per dollar – suggesting that employer contributions increase total compensation for lower-income workers.

Conclusion

This *brief* has examined the distributional benefits of employer contributions to 401(k) plans, with a focus on whether the benefits extend beyond the apparent tax advantages. The findings imply that low-income workers receive a benefit that is separate from the tax deferral: their total compensation rises due to 401(k) contributions from their employers.

These results are preliminary and more research needs to be done. However, they suggest that conventional approaches may overstate the share of benefits from tax-preferred retirement saving plans that go to high-income workers by assuming that employer contributions reduce wages equally for all workers.

Endnotes

1 Employer, but not worker, contributions are also exempt from payroll tax.

2 Tax is deferred until retirement on 401(k) withdrawals that are rolled over into Individual Retirement Accounts. But amounts withdrawn and not reinvested before age 59½ are taxable as income and are also subject to an additional 10-percent penalty tax.

3 The incentive to participate in a 401(k) plan also depends on an individual's investment options outside the 401(k). Burtless and Toder (2010) note that the value of tax preferences for qualified retirement plans has varied over time with changes in marginal tax rates and changes in tax treatment of capital gains and dividends. Over the past 25 years, the value of the tax preferences has declined because of the reduced taxation of income from capital gains and dividends accrued outside of qualified plans.

4 Some low earners may pay no federal income taxes at all, so would receive no tax benefit either from the tax deferral or a lower marginal rate at retirement.

5 See, for example, Burman et al. (2003); Burman, Khitatrakun, and Goodell (2009); Toder, Harris, and Lim (2011); and Burman et al. (2004). The U.S. Treasury Department, the Congressional Budget Office, and the Joint Committee on Taxation also use the same assumption in their distributional analyses. For an exposition of the methodology used by the U.S. Treasury Department, see Cronin (1999).

6 An additional reason, which may not be readily apparent to most workers, is that the exemption of employer contributions from the base for computing Social Security payroll taxes and benefits provides relatively less benefit to low-income than to high-income workers because Social Security benefits are relatively higher per dollar contributed for low-income workers than for their high-income counterparts.

7 For full details on the methodology and results, see Toder and Smith (2011).

8 Previous studies that failed to identify the expected negative relationship between fringe benefits and wages cited insufficient measures of worker quality as a potential explanation. See, for example, Currie and Madrian (1999).

9 Specifically, the analysis includes the number of work years in all jobs prior to the current job, earnings in the five years prior to the current job start year, and employment status in the five years prior to the current job start year.

10 Our sample is limited to new workers to reduce the likelihood that pension characteristics (observed only at the SIPP pension topical module) have changed over the period of employment. We require workers to have a prior job to exploit the earnings on prior jobs as a measure of worker quality.

11 Specifically, earnings equals the log of annual earnings divided by the economy-wide average wage + 0.25. The log transformation adjusts for the fact that the earnings data are highly skewed at the top of the income distribution. Adding 0.25 permits the use of the log transformation for individuals with no earnings in any year.

12 For males, a 1-percent increase in the employer contribution per dollar of worker earnings reduces earnings by 0.41 percent for workers generally, 0.33 percent for low-income workers, and 0.45 percent for high-income workers. The corresponding results for women are a reduction in earnings of 0.42 percent for workers generally, 0.17 percent for low-income workers, and 0.82 percent for high-income workers. See Toder and Smith (2011) for the full regression results.

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