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Earnings Responses to Increases in Payroll Taxes

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Social Security is financed with a 12.4 percent payroll tax, assessed on earnings up to a limit that is indexed annually. The limit is $94,200 in 2006. Earnings above $94,200 – which make up about 14 percent of total earnings by workers who are covered by Social Security – are exempt from this tax. Among the policy options for improving the financial sustainability of the Social Security system is to raise this earnings threshold. This study considers the likely impact of raising the taxable maximum on earnings and on government revenues. Specifically, to what extent would an increase in the earnings threshold discourage earnings among those affected (those with earnings above the current limit), thereby reducing both the intended revenue gains for the Social Security system and the tax revenues that are being collected already through income taxes and the Medicare payroll tax?

The methodological approach to the project is to identify variations in the marginal tax rate paid by people in similar circumstances, and then to evaluate the extent to which work decisions appear to be affected by those variations in tax rates. For example, individuals just below the Social Security payroll tax threshold have a marginal tax rate on earnings that is 12.4 percent higher than individuals just above the threshold. Yet despite this discontinuity in tax rates, the distribution of taxpayers around the taxable maximum is quite smooth. The lack of any strong behavioral pattern around this tax rate variation is inconsistent with a high degree of earnings responsiveness to taxes under the basic static model of labor supply. We find this to be true for the entire population as well as for the self-employed – who presumably have a higher-than-average amount of control over their earnings levels.

We also examine the earnings behavior of taxpayers at different points in the income distribution around the time of the 1986 tax reform (which reduced marginal tax rates for high earners) and the 1993 tax reform (which increased marginal tax rates for high earners). In this case, the discontinuity is a result of the change in policy over time, with one marginal tax rate being applied before the reforms, and a lower or higher marginal tax rate being applied after the reforms. So the question is how much is earnings behavior affected as these tax rate reforms take effect. The earnings trends that existed before the reforms seem to continue smoothly leading into, through, and after the reforms took effect. This too is inconsistent with a high degree of earnings responsiveness to taxes.

While these findings are suggestive, the precise quantitative impact of tax rates on behavior is uncertain. In particular, the available sample sizes of higher earners are small and the underlying economic trends are so great that it is difficult to isolate the effect of tax changes . So the final component of our study is a simulation analysis of how different behavioral responses would impact Social Security finances and tax revenues more generally. Our policy simulations suggest that with an earnings elasticity of 0.5, lost income and Medicare tax revenue and increased deadweight loss would significantly outweigh any benefits from the increase in payroll tax revenue. With an earnings elasticity of 0.2, however, the ratio of the gain in revenue to deadweight loss would be much greater. So the advisability of raising the earnings maximum for the Social Security payroll tax is quite sensitive to the behavioral response.

The full working paper is available on our website www.nber.org/programs/ag/rrc/books&papers.html as paper NB04-06.

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