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The Growth in Social Security Benefits Among the Retirement Age Population from Increases in the Cap on Covered Earnings

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This paper investigates how changes in the maximum level of earnings subject to the payroll tax have affected Social Security taxes and benefits. We use data from the Health and Retirement Study to isolate the changes in taxes and benefits resulting from changes in the cap on earnings subject to the payroll tax from the effects of other complex changes that have occurred contemporaneously with the rise in the cap. Our strategy is to ask what benefits and taxes would have been for members of the HRS cohort ages 51 to 56 in 2004 if they faced the same maximum earnings subject to the payroll tax that applied to members of cohorts who were 12 and 24 years older.

An increase in maximum covered earnings has an immediate effect on payroll tax revenues. But unlike an across the board increase in the payroll tax rate, an increase in maximum covered earnings restricts the tax increase to those with highest earnings. It has no effect on many workers, raising tax costs only for those with earnings at or above the new effective cap.

In addition, as opposed to an increase in the payroll tax rate, raising the tax ceiling creates a leak in the (future) finances of the system in the form of an increase in future obligations to be paid to those at the top of the earnings distribution. Those who have earnings above the old cap have more of their total lifetime earnings covered by Social Security when the cap is increased. As a result, they are entitled to higher benefits.

From 1951 through 2004, maximum taxable earnings increased from $3,600 to $87,900, an increase of 24.4 times. Over the same period average annual covered earnings increased from $2,799 to $35,649, an increase of 12.7 times. Thus the rate of increase in maximum taxable earnings has been about twice the rate of increase of average earnings

Our empirical analysis takes as an earnings baseline the covered earnings for the youngest cohort thus far included in the Health and Retirement Study (HRS), the Early Boomer Cohort. We estimate how the benefits of the younger cohort would have changed had they faced the lower ceiling on taxable earnings that faced members of the original HRS cohort, who are 12 years older, and the ceiling for the CODA (Children of the Depression) cohort, who are 12 years older than that.

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Section II of the paper discusses the cap on earnings subject to the payroll tax and describes more fully how that cap has changed over time. Section III uses HRS data for the Early Boomer cohort to summarize changes in Social Security benefits due to the change in the maximum level of covered earnings between the Early Boomer cohort and those in cohorts 12 and 24 years older. In Section IV we examine the effects on both benefits and taxes of increases in the ceiling on taxable earnings for those with earnings at or above the earnings cap throughout their lifetimes. Section V uses HRS data to apply these calculations to members of the Early Boomer cohort, while Section VI discusses the implications of our findings.

We find that for those in the Early Boomer cohort of the Health and Retirement Study, ages 51 to 56 in 2004, that after adjusting for nominal wage growth, the present value of benefits was increased by 1.5 percent because of the increase in the payroll tax ceiling compared to the cohort 12 years older, and by 3.7 percent over the benefits under the payroll tax ceiling for the cohort 24 years older. The present value of tax receipts is increased by 5.3 and 10.6 percent over tax receipts that would have been collected under the tax ceilings that applied to the cohorts 12 and 24 years older respectively. Our analysis suggests that about 22 percent of the additional tax revenues created by the increase in the payroll tax cap between the Early Boomer cohort and those 12 years older is used to increase benefits. Similarly, about 27 percent of the additional tax revenues created by the increase in the payroll tax cap between the Early Boomer cohort and those 24 years older is used to increase benefits.

Results are presented separately for men and women and for those in the top quartile of earners. There are two basic findings from these results. First, as expected, most of the increases in the present values of taxes and benefits are concentrated in the men who fall in the top quartile of earners. Their taxes are increased by 12.6 percent (406,893/361,456) over the taxes of those in a cohort 12 years older, and by 26.4 percent (406,896/321,863) relative to the taxes of those who are 24 years older. The comparable increases for their benefits are 3.9 percent (196,633/189,273) and 10.2 percent (196,633/178,393). Overall, the ratio of the increase in benefits to the increase in taxes for men falling in the top quartile of earners is 16 percent and 21 percent compared to those in cohorts 12 and 24 years older.

In sum, there are two important differences between the effect of raising a given amount of tax dollars by increasing the payroll tax rate, as compared to increasing the maximum earnings subject to the payroll tax. First, because increasing the maximum income subject to the payroll tax increases both tax revenues and benefit payments, an increase in the ceiling on income subject to the payroll tax that generates the same addition to taxes as does an increase in the payroll tax rate, nevertheless generates less net revenue. Second, since both the tax increase and benefit increase from raising the ceiling on earnings subject to the payroll tax applies only to those in the top income brackets, distributional differences result in both tax payments by income group and benefit receipt by income group.

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