Increasing the Social Security Payroll Tax Base: Options and Effects on Tax Burdens

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Summary

According to the Social Security Trustees, assets in the two Social Security trust funds will be exhausted by 2041, and, thereafter, Social Security payroll tax revenues will cover about 72% of promised benefits. Over the past decade several proposals have been put forward which could help to close the Social Security program's long-term financing gap. One proposal would increase the Social Security payroll tax base so that 90% of covered earnings are taxable—the same proportion as in 1982. This policy would increase the payroll taxes paid by higher-earning workers and not affect workers earning less than the current Social Security maximum taxable limit of $106,800.

Some analysts have proposed raising the Social Security payroll tax base and reducing the payroll tax rate. This policy would increase the taxes paid by higher-earning workers and reduce taxes paid by low- and middle-income workers. This policy proposal could raise revenue for the Social Security program or be revenue neutral.

Although the legislated Social Security payroll tax rate is 12.4%, the average Social Security payroll tax is slightly progressive throughout the bottom 80% of the income distribution in that lower-income families pay a lower proportion of income in payroll taxes than higher-income families. At the higher-income levels—the top 20%—the payroll tax is regressive in that the proportion of income paid in payroll taxes falls as income rises. The richest 1% of American families pay a smaller proportion of their income in payroll taxes than the poorest 20% of families.

Three policy options, which raise the payroll tax base, are examined; two of the policies also provide tax relief to low- and middle-income workers. Each of the three policies reduces the regressivity of the payroll tax at the upper end of the income distribution. Currently, less than 10% of families contain a worker earning more than the maximum taxable limit. Consequently, over 90% of families would be unaffected by increasing the maximum taxable limit. And if this change were combined with a payroll tax rate reduction, over 90% of families would pay lower payroll taxes.

It has been argued that the revenue increases from raising the payroll tax base would be significantly less than expected because of indirect behavioral changes by workers. These predicted behavioral effects would reduce taxable earnings, the proportion of family income subject to payroll taxes, and tax revenue. But recent research raises doubts concerning this position and suggests these behavioral effects would likely be negligible.

This report will not be updated.

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The payroll tax for Social Security and Medicare is the largest federal tax many lower-income families pay. The Congressional Budget Office (CBO) estimates that the poorest 20% of U.S. households paid about 8% of their income on social insurance payroll taxes in 2004.[1] In contrast, these lower-income households paid negative income taxes because of the refundable earned income and child tax credits. Indeed, a justification for the earned income credit (EIC) is "to provide work incentives and relief from income and Social Security taxes to low-income families who might otherwise need large welfare payments."[2]

The tax rate under current law on covered earnings is 12.4% for Social Security and 2.9% for Medicare.[3] Half of the tax rate is paid by the employee and the other half by the employer; the self-employed are responsible for the entire amount.[4] The tax rate for Social Security applies only on covered earnings below the maximum taxable limit, which is $106,800 for 2009.[5] The Medicare tax rate applies to all covered earnings.

The Social Security Trustees project that the assets in the two Social Security trust funds will be exhausted in 2041, and after that, Social Security payroll tax revenue will cover about 72% of promised benefits.[6] To help close Social Security's long-term financing gap, some analysts have proposed increasing the Social Security tax base by raising the maximum taxable limit so that 90% of aggregate covered earnings are taxable (the percentage in 1982).[7] CBO estimates that the maximum taxable limit would have to increase to $186,000 in 2008, almost double the current limit, so that 90% of covered earnings are taxable. It is estimated that this policy could increase payroll tax revenues by $221 billion over the 2008-2012 period.[8] Since 1982, the ratio of taxable earnings to covered earnings has fallen from 90%, reaching 83.3% in 2006.

Although most analysts advocate raising the maximum taxable limit to increase revenues for the Social Security program, some would use the increased revenues for other purposes. For example, one analyst suggested reducing the payroll tax rate and keeping it revenue-neutral by raising the maximum taxable limit.[9] This change would provide payroll tax relief to low- and middle-income workers.

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[1] CBO, *Historical Effective Federal Tax Rates: 1979 to 2005*, December 2007. Social insurance payroll taxes include Social Security and Medicare payroll plus Unemployment Insurance payroll taxes.

[2] U.S. Congress, Joint Committee on Taxation, *General Explanation of the Revenue Act of 1978*, joint committee print, 96th Cong., 1st sess., Mar. 12, 1979 (Washington: GPO, 1979), p. 51.

[3] Covered earnings are earnings from employment covered by the Social Security and Medicare programs. Most workers in the United States are covered by the Social Security and Medicare programs. Some federal, state, and local workers, however, are not covered by these programs.

[4] Most economists agree that workers ultimately bear the full burden of the payroll tax. Employers typically pass on their share of the payroll tax to employees through paying lower wages. See CBO, *Effective Federal Tax Rates, 1979-1997*, October 2001.

[5] The maximum taxable limit is adjusted annually to keep pace with changes in average earnings. Covered earnings below the maximum taxable limit are referred to as taxable earnings.

[6] This projection is based on the Trustees' intermediate cost assumptions. Under the low cost assumptions, Social Security does not face long-term financial problems, and under the high cost assumptions, the Social Security trust funds will be depleted in 2031. See The Board of Trustees, *The 2008 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds*, April 10, 2008 (Washington: GPO, 2008).

[7] Provisions in the 1977 amendments to the Social Security Act were designed to increase the percentage of covered earnings subject to the payroll tax to 90% by 1982.

[8] CBO, *Budget Options*, February 2007, p. 308.

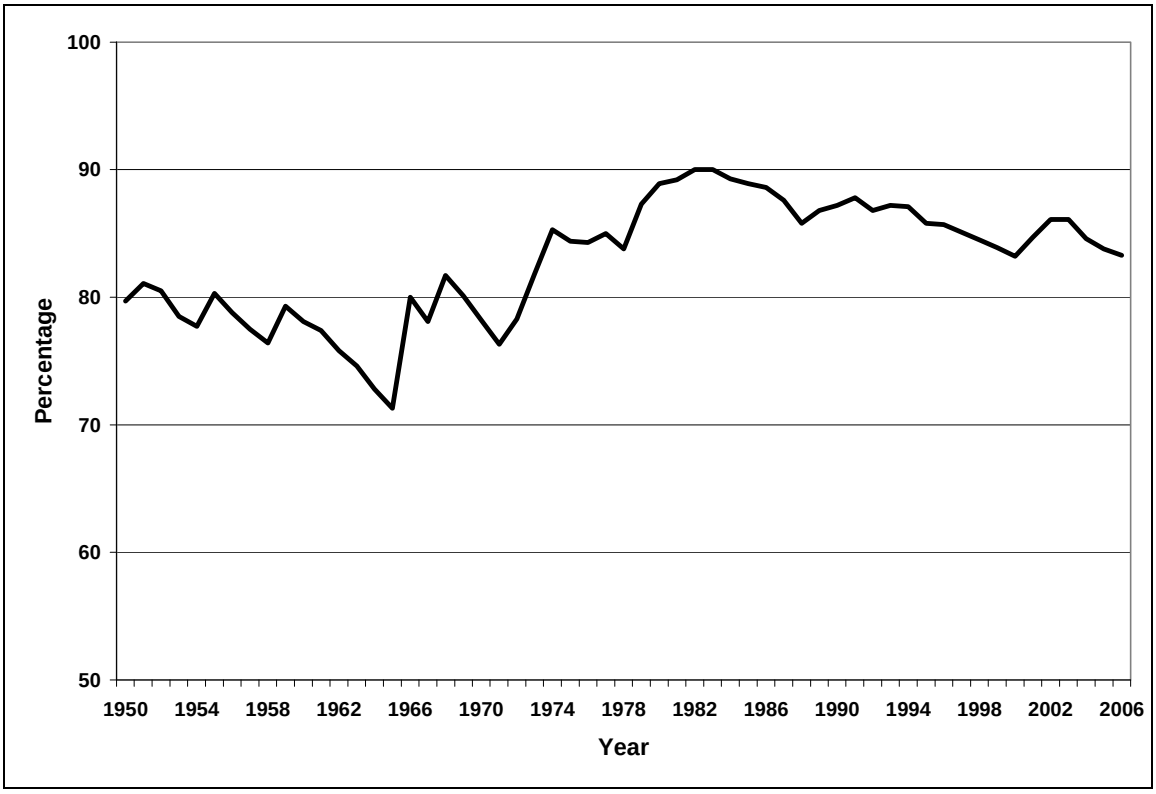
[9] Dalton Conley, "Turning the Tax Tables to Help the Poor," *New York Times*, Nov. 15, 2004, p. A21.

This report examines changes in the distribution of the tax burden of three policies involving raising the Social Security maximum taxable limit.

Taxable and Covered Earnings

The portion of Social Security-covered earnings subject to the payroll tax has fluctuated since its inception. Taxable earnings as a percentage of covered earnings was 92.4% in 1940 and dropped as low as 71.3% in 1965. The trend in this percentage since 1950 is displayed in **Figure 1**. Prior to 1972, the Social Security maximum taxable limit was updated periodically by Congress, which contributed to the dramatic and abrupt fluctuations in the 1950s and 1960s. After 1972, the maximum taxable limit was automatically updated as annual average earnings increased, which moderated the fluctuations somewhat. In response to Social Security funding problems, the 1977 amendments to the Social Security Act increased the Social Security tax base by raising the maximum taxable limit so that 90% of covered earnings were taxable by 1982. This change explains the increase in the proportion of covered earnings that are taxable from 84% in 1976 to 90% in 1982. After 1982, the maximum taxable limit was automatically updated as annual average earnings increased.

Figure 1. Taxable Earnings as a Percentage of Social Security Covered Earnings, 1950-2006



Source: Social Security Administration, 2007 Annual Statistical Supplement to the Social Security Bulletin, Table 4.B1.

Although the maximum taxable limit is updated annually in response to increases in average wages, the proportion of covered earnings subject to the payroll tax is not constant—it has fallen

since 1983. A primary reason is an increase in wage inequality. Wages have become more unequally distributed since the early 1980s, mostly due to wage gains at the top of the income distribution.[10] Consequently, a larger share of earnings of high-wage workers will be above the maximum taxable limit.

The Distribution of Tax Burdens

The distribution of tax burdens is simulated for three policy options, two of which have been proposed by various policy analysts. The base year for the simulation is 2007, the last year for which appropriate data is available.[11] The policy options compared in this report are:

- **Policy Option 1**. This policy would increase the maximum taxable limit to $213,900 (up from the 2007 limit of $97,500), which is the maximum taxable limit required so that 90% of covered earnings would have been subject to the payroll tax in 2007.[12] The additional tax revenues are targeted to help close Social Security's projected long-term financing gap. Consequently, the payroll tax rate remains at 12.4%.
- **Policy Option 2**. This policy would also raise the maximum taxable limit to $213,900 but reduce the payroll tax rate to 11.5% so payroll tax revenues remain unchanged. In essence, the additional payroll tax revenues from increasing the maximum taxable limit are used to offset the reduction in the payroll tax rate.
- **Policy Option 3**. This policy option would raise the maximum taxable limit to $213,900. However, half of the additional revenue is targeted to reduce the projected long-term financing gap and the other half is used to offset a payroll tax rate reduction. The payroll tax rate is reduced to 11.9%.

Simulation results of the average Social Security tax rate for families with workers in different parts of the income distribution are reported in **Table 1**. The average tax rate is the total payroll tax (employee and employer shares) of each worker in the family and divided by total family income. Total family income includes wages, dividends, farm income, retirement income, royalties, and government cash transfers, among others. It does not include capital gains and in-kind government transfers such as food stamps and housing assistance. The average tax rate is reported for all families, each income quintile (20% of families), the richest 10% of families, the richest 5%, and the richest 1% of families.[13]

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[10] Robert G. Valletta, *Computer Use and the U.S. Wage Distribution, 1984-2003*, Federal Reserve Bank of San Francisco Working Paper 2006-34, October 2006.

[11] The data source for the simulations is the Annual Social and Economic Supplement of the March 2008 Current Population Survey (CPS). For this survey, the Census Bureau collects survey information for over 200,000 people living in almost 100,000 households. The survey is representative of the civilian noninstitutionalized population in the United States. The March supplement includes detailed information on family and individual income for the previous year.

[12] The earnings estimate was provided by the Office of Chief Actuary at the Social Security Administration. Earnings in the CPS are top-coded or cut-off at $200,000 to protect the identity of high-income households. The Census Bureau replaces top-coded earnings with the average earnings of those with earnings above $200,000. For individuals with actual earnings between $200,000 and $213,900, taxable earnings could be overstated by up to 7%. Less than 1% of individuals have earnings that are top-coded.

[13] Families are assigned to income quintiles based on equivalence-adjusted total family income (total family income (continued...)

The first column of numbers in **Table 1** shows the average tax rate under current law. The average tax rate for all families is 9.7%, which is less than the 12.4% payroll tax rate on earnings. This occurs because only earnings are subject to the payroll tax while income from other sources is not. In addition, only the first $97,500 earned in 2007 was subject to the payroll tax while earnings above $97,500 were exempt.

Table 1. Average Social Security Payroll Tax Rates

	Current	90% of Covered Payroll is Taxable		
		Policy Option 1	Policy Option 2	Policy Option 3
All	9.67%	10.45%	9.67%	10.06%
Quintile 1	10.55	10.55	9.77	10.16
Quintile 2	10.72	10.72	9.92	10.32
Quintile 3	10.92	10.92	10.11	10.52
Quintile 4	11.02	11.12	10.29	10.70
Quintile 5	8.44	9.94	9.20	9.57
Top 10%	7.31	9.36	8.66	9.01
Top 5%	5.97	8.59	7.95	8.27
Top 1%	3.62	6.86	6.35	6.60

Source: Author's analysis of the March 2008 Current Population Survey.

Note: The sample includes only families that contain at least one worker.

The average tax rate, however, varies across the income distribution. Families in the poorest income quintile (that is, the poorest 20% of families) have an average tax rate of 10.6%. The average tax rate slightly increases in moving from the poorest quintile to the fourth quintile. Throughout the bottom 80% of the income distribution, the Social Security payroll tax is slightly progressive in that higher-income families pay a larger proportion of their income in payroll taxes than lower-income families.

The average tax rate for families in the richest income quintile, however, is 8.4%.[14] The rate falls in moving up through the upper part of the income distribution. The richest 10% of families pay a smaller share of income in payroll taxes than the poorest 20%, while the share of the richest 1% is about a third that of the poorest 20%. Above the 80th percentile, the payroll tax is a regressive tax in that the average tax rate falls as income rises.[15]

(...continued)

divided by an equivalence scale). The equivalence scale is the one proposed by the National Research Council. See Constance F. Citro and Robert T. Michael, eds., *Measuring Poverty: A New Approach* (Washington, DC: National Academy Press, 1995).

[14] The average tax rate for high-income families may be artificially high because income components are top-coded (that is, cut-off at a particular amount) in the CPS by the Census Bureau to prevent identification of high-income individuals.

[15] The results are broadly consistent with an analysis by CBO. Any differences are due to differences in the unit of analysis (family versus household), income definition and data source. See CBO, *Historical Effective Federal Tax Rates: 1979 to 2005*, December 2007.

The second column of numbers shows the simulated average tax rates for policy option 1—raising the maximum taxable limit and maintaining the current legislated tax rate. For all families, the average tax rate rises by almost 0.8 percentage points (an 8% increase) to reach over 10%. This policy option, however, only affects workers whose earnings are above $97,500. Families in the bottom two income quintiles contain no workers earning more than $97,500, and about 0.2% of the families in the middle income quintile (quintile 3) contain such workers. Consequently, the average tax rates for the bottom three quintiles are largely unaffected by this policy option.

The average tax rate for the families in the top 40% of the income distribution, however, rises under policy option 1. The tax rate increases slightly for families in the fourth income quintile (from 11.02% to 11.12%) since only about 4% of these families contain a worker earning more than $97,500. The families in the top quintile, however, experience an 18% percent, or 1.5 percentage point, increase in their average tax rate. The average tax rate increases by 2.0 to 3.2 percentage points for families in the top 10% of the income distribution.

Policy option 2 raises the maximum taxable limit but reduces the tax rate so that total tax revenues remain unchanged. Since the policy is revenue neutral, the average tax rate for all families is the same as for current law (see the first row of **Table 1**). The average tax rate for most families, however, does change. The average rate falls for families in the bottom 80% of the income distribution (quintiles 1 to 4), and increases for families at the top. In general, workers earning less than $105,314 will pay less in payroll taxes than they do under current law; workers earning more than this will pay more in payroll taxes.

The final option, policy option 3, is a blend of the first two policy options. Half of the increased revenue from raising the maximum taxable limit is used for financing the Social Security program and the other half offsets a payroll tax rate reduction. As was the case with policy option 2, this policy option reduces the average tax rates for families in the bottom 80% of the income distribution and increases it for families in the top income quintile. For the richest 1% of families, this option raises the average tax rate by 3.0 percentage points, a 82% increase. The poorest 20% see their average tax rate fall by 0.4 percentage points, or by about 4%.

Table 2 provides an alternate view of the effects of the three policy options by reporting the simulated average dollar change in Social Security payroll taxes paid by families in different parts of the income distribution. The reported dollar amounts include the change in both the employee's and employer's portion of the payroll tax. It is important to keep in mind that a family may contain more than one worker.

The dollar changes are consistent with the changes in the average tax rates reported in **Table 1**. The first policy option increases the payroll tax for the average family by $548. This policy option does not affect families in the bottom two income quintiles and increases the tax payments for families in the middle quintile by only $2, on average. The average family in the richest income quintile would pay $2,194 more in taxes, and the richest 1% of families would pay, on average, $14,133 more in payroll taxes under this policy.

Table 2. Average Change in Annual Social Security Payroll Taxes

	Policy Option 1	Policy Option 2	Policy Option 3
All	$548	$0	$275
Quintile 1	$0	-$111	-$55
Quintile 2	$0	-$240	-$120
Quintile 3	$2	-$394	-$196
Quintile 4	$67	-$530	-$232
Quintile 5	$2,194	$1,112	$1,653
Top 10%	$3,903	$2,579	$3,241
Top 5%	$6,448	$4,879	$5,664
Top 1%	$14,133	$11,915	$13,024

Source: Author's analysis of the March 2008 Current Population Survey.

Note: The sample includes only families that contain at least one worker.

The second policy option is revenue neutral; consequently, the average tax change is zero. Families in the bottom four income quintiles would pay between $111 and $530 less in taxes, on average. Families in the top quintile would pay higher taxes (about $1,112, on average) and the richest 1% of families would pay $11,915 more.

The impact of policy option 3 on payroll tax payments follows the same patterns as policy option 2, but the amounts are larger. On average, families will pay $275 more in payroll taxes under this policy. However, families in the bottom 80% of the income distribution will pay lower taxes, on average. High-income families (the top quintile) pay $1,653 more in taxes, while the richest 1% pay about $13,000 more in payroll taxes.

Behavioral Effects of Tax Changes

It has been argued that the revenue increases from raising the payroll tax base would be significantly less than expected because of indirect behavioral changes by workers. Based on this interpretation, workers may respond to having more earnings subject to the payroll tax, which in effect is a reduction in earnings, by reducing their work effort (a labor supply effect) or shifting their income to forms that are not subject to the payroll tax (a taxable income effect). These behavioral effects would thus reduce taxable earnings, the proportion of family income subject to payroll taxes, and tax revenue.[16] As discussed below, however, recent research raises doubts concerning this position and suggests these behavioral effects would likely be negligible.

Relatively few families would be negatively affected by the three policy options examined. Of the families with at least one worker, about 10% contain a worker earning more than the maximum taxable limit (see **Table 3**). Families in the bottom two income quintiles contain no workers earning more than the maximum taxable limit ($97,500 in 2007). And few families in the next two quintiles contain high-earning workers—0.2% of the families in the middle quintile and

[16] D. Mark Wilson, *Removing Social Security's Tax Cap on Wages Would Do More Harm Than Good*, Heritage Foundation, Center for Data Analysis Report #01-07, Oct. 17, 2001.

about 4% of the fourth quintile. About one-third of the families in the richest income quintile contain workers earning more than the maximum taxable limit. The percentage is significantly higher for the richest 10% of families. Consequently, most of the 10% of families with high-earning workers are at the top of the income distribution—64% are in the richest 10% of U.S. families.

Table 3. High-Earning Workers and Taxable Earnings by Quintile, 2007

	Percentage of Families with at Least One Worker Earning More than Maximum Taxable Limit	Taxable Earnings as a Percentage of Total Family Income
All	9.9%	78.0%
Quintile 1	0.0	85.1
Quintile 2	0.0	86.4
Quintile 3	0.2	88.1
Quintile 4	4.4	88.9
Quintile 5	36.3	68.1
Top 10%	56.7	59.0
Top 5%	79.7	48.1
Top 1%	98.2	29.2

Source: Author's analysis of the March 2008 Current Population Survey.

Note: The sample includes only families that contain at least one worker.

For the few families with high-earning workers, changing the payroll tax rate can affect labor supply in two possible ways. The first is the direct effect in which tax changes affect the wage received by the worker. Reducing wages could lead to a reduction in work effort (that is, labor supply). The empirical evidence indicates that men's labor supply is relatively inelastic (that is, changes in the wage have little effect on labor supply) with estimated elasticities close to zero.[17] In the past, women's labor force behavior differed significantly from that of men. This was especially true for married women. But recent research indicates a convergence in the labor force behavior of the sexes. A recent study suggests that over the past two decades, women's labor supply elasticities have fallen and converged with that of men.[18] One study, specifically examining the effect of the payroll tax on women's labor supply, concludes there is a work disincentive effect for women over 50.[19] Since about 2% of women over 50 earn more than the maximum taxable limit, few would potentially be affected by the three policy options analyzed. Furthermore, this study is based on labor force data from the 1970s—a time when women's labor supply was more responsive to wage changes.

[17] Mark R. Killingsworth, *Labor Supply* (New York: Cambridge University Press, 1983), and Richard Blundell and Thomas MaCurdy, "Labor Supply: A Review of Alternative Approaches," in Orley Ashenfelter and David Card, eds., *Handbook of Labor Economics* (Amsterdam: Elsevier, 1999), pp. 1559-1695.

[18] Francine D. Blau and Lawrence M. Kahn, *Changes in the Labor Supply Behavior of Married Women: 1980-2000*, National Bureau of Economic Research, Working Paper no. 11230, March 2005.

[19] Therese A. McCarty, "The Effect of Social Security on Married Women's Labor Force Participation," *National Tax Journal*, vol. 43, no. 1 (March 1990), pp. 95-110.

The second effect is an indirect effect in which a change in the wage of one spouse affects the labor supply of the other spouse. Empirical studies, however, suggest married men are largely unresponsive to changes in their wives' wages with estimated elasticities close to zero.[20] While women's labor supply, however, is thought to be responsive to changes in their husband's wage, recent research suggests women's responsiveness has declined over the past two decades.[21]

The cited studies suggest that raising the maximum taxable limit will have little effect on workers' labor supply. Relatively few workers earn enough to be affected by such as policy change (about 7% of all workers earn more than the maximum taxable limit). Additionally, men's labor supply appears largely unaffected by changes in their own wage and their spouse's wage. And women's labor supply behavior has increasingly become like that of men, and consequently they too appear largely unaffected by changes in their own wage and their spouse's wage.

While work effort or labor supply may not be affected by changes in the payroll tax, earnings subject to the payroll tax may be affected. In the aggregate, about three-quarters of U.S. families' income comes from taxable earnings (see the last column of **Table 3**). Of the rest, most comes from earnings above the maximum taxable limit, retirement income (Social Security and pension income), and investment returns (interest, dividends, and rental income). The proportion of family income from taxable earnings is over 80% for the bottom 80% of the income distribution. While the richest 20% of families derive about 68% of their income from taxable earnings. This proportion falls to under 50% for the richest 5% of families, and to about 30% for the richest 1%. Consequently, there may be some opportunities for workers with earnings more than the maximum taxable limit to shift their earnings to a nontaxable form of compensation.

The economics research before 2000 generally suggests taxable income is responsive to changes in marginal tax rates.[22] As marginal tax rates rise, the pre-2000 studies indicate taxpayers reduced their taxable income through tax avoidance strategies or tax evasion. They can do this by increasing deductions to reduce taxable income or by taking compensation in forms that are untaxed (such as stock options, which are untaxed until exercised) or subject to lower tax rates. A recent study, however, concludes that methodological problems lead to the estimated elasticities likely being overstated.[23]

More recent research suggests that the earlier results may have been due to the behavior of a few taxpayers in the extreme upper part of the income distribution.[24] Several recent studies estimate that taxable income is much less responsive to changes in tax rates and suggest that relatively

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[20] Paul J. Devereux, "Changes in Relative Wages and Family Labor Supply," *Journal of Human Resources*, vol. 39 (Summer 2004), pp. 696-722, and Francine D. Blau and Lawrence M. Kahn, *Changes in the Labor Supply Behavior of Married Women: 1980-2000*, National Bureau of Economic Research, Working Paper no. 11230, March 2005.

[21] Francine D. Blau and Lawrence M. Kahn, *Changes in the Labor Supply Behavior of Married Women: 1980-2000*, National Bureau of Economic Research, Working Paper no. 11230, March 2005.

[22] Martin Feldstein, "The Effect of Marginal Tax Rates on Taxable Income: A Panel Study of the 1986 Tax Reform Act," *Journal of Political Economy*, vol. 103, no. 3 (1995), pp. 551-572; and Gerald Auten and Robert Carrol, "The Effect of Income Taxes on Household Behavior," *Review of Economics and Statistics*, vol. 81, no. 3 (1999), pp. 681-693.

[23] CRS Report RL33672, *Revenue Feedback from the 2001-2004 Tax Cuts*, by Jane G. Gravelle.

[24] Robert A. Moffitt and Mark O. Wilhelm, "Taxation and the Labor Supply Decisions of the Affluent," in Joel B. Slemrod, ed., *Does Atlas Shrug? The Economic Consequences of Taxing the Rich* (Cambridge, MA: Harvard University Press, 2002).

large increases in tax rates would lead to relatively small decreases in taxable income.[25] In addition, one study found that tax rate changes have no effect on wages, one component of taxable income.[26] Raising the maximum taxable limit would increase the marginal tax rate on wages, but this recent empirical research suggests that workers' wage earnings would be largely unaffected.[27] This research also suggests that reducing the payroll tax rate (as in policy options 2 and 3) would not affect workers' behavior.

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[25] Jon Gruber and Emmanuel Saez, "The Elasticity of Taxable Income: Evidence and Implications," *Journal of Public Economics*, vol. 84 (2002), pp. 1-32; and Emmanuel Saez, "The Effect of Marginal Tax Rates on Income: A Panel Study of 'Bracket Creep,'" *Journal of Public Economics*, vol. 87 (2003), pp. 1231-1258.

[26] Emmanuel Saez, "The Effect of Marginal Tax Rates on Income: A Panel Study of 'Bracket Creep,'" *Journal of Public Economics*, vol. 87 (2003), pp. 1231-1258.

[27] Workers with earnings above the higher maximum taxable limit of $213,900 would not face an increase in the marginal tax rate after the change—their marginal tax rate would remain at zero.