

Revised March 16, 2001

MARGINAL TAX RATE REDUCTIONS AND THE ECONOMY: WHAT WOULD BE THE LONG-TERM EFFECTS OF THE BUSH TAX CUT?

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Some proponents of the proposed Bush tax plan argue that it will significantly raise economic growth rates by cutting marginal tax rates. For example, a recent Heritage Foundation report argued, “Because of steep personal income tax rates, highly productive entrepreneurs and investors can take home only about 60 cents of every dollar they earn, not including state and local taxes or other federal taxes. This reduces the incentive to be productive. Lower tax rates will reduce this ‘tax wedge’ and encourage additional work, savings, investment, risk-taking, and entrepreneurship.”²

The logic of this argument is that reducing marginal tax rates increases the incentives to work, to take risks, and to save, all of which can expand the economy. The crucial question, however, is the *size* of these effects. The most recent academic evidence suggests that marginal tax rate reductions would have only modest effects on future economic activity.

Tax cuts, furthermore, have an important downside from an economic standpoint: they reduce national saving. Dissipating the projected budget surpluses through tax cuts results in lower national saving than if the surpluses were saved (since funds used for the tax cuts would primarily result in increased consumption, while funds used to pay down debt primarily increase savings). The fundamental benefit of higher national saving — achieved by preserving a substantial portion of the projected budget surpluses — is that it will expand economic output in the future. Higher national saving leads to higher investment, which means that future workers have more capital with which to work and are more productive as a result. The increased productivity generates a larger economy and higher national income.³

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² Daniel Mitchell, “Reducing Tax Rates Across the Board: A Cornerstone of Pro-Growth Tax Relief,” Heritage Foundation Report No. 711, January 16, 2001.

³ Higher national saving today increases future output if the increase in national saving is absorbed either through higher domestic investment or through future receipts from abroad (which would occur if the increase in national saving is absorbed through higher net lending to foreigners).

In evaluating the impact of tax cuts on the economy, one must include both any potential positive effects from reducing marginal tax rates *and* the negative effects from reducing national saving. The overall impact of a tax cut on the economy thus is not necessarily positive. As Sebastian Mallaby, a member of *The Washington Post* editorial page staff and a former correspondent for *The Economist*, recently explained in a column in *The Washington Post*: “it’s quite possible that this loss of savings more than outweighs the modest increase in labor that you get from a tax cut, with the result that the total impact on economic output could actually be negative.”⁴

This analysis raises the possibility that President Bush’s proposed tax rate reductions may produce no significant increase in future GDP and could produce a small *decline* in future GDP, relative to a course of action of saving the projected surpluses. In other words, preserving the projected surpluses might be, if anything, *more* beneficial in terms of expanding the economy in the future than the proposed tax reduction.⁵ To determine whether tax cuts would raise or lower national productive capacity, one must look at estimates of the size of these offsetting effects.

The Evidence on Marginal Tax Rate Reductions

Marginal tax rate reductions could affect a variety of activities important to the economy, including work behavior, saving and investment, and risk-taking. The available evidence, however, generally suggests that any positive effects would be quite modest.

The historical evidence, for example, is not consistent with the belief that taxes have a large effect on economic growth. There is no clear link between periods of low taxes and high growth. The strongest period of growth in U.S. history was the 1960s — when the top marginal rate was 70 percent or higher. More recently, as discussed below, economic growth in the 1990s was quite strong, despite the 1993 increase of the top marginal tax rate from 31 percent to 39.6 percent.⁶ More detailed economic research also finds no evidence that countries with lower tax rates or higher levels of government spending experience stronger economic growth.⁷

⁴ Sebastian Mallaby, “Goodbye to Reaganomics,” *Washington Post*, February 19, 2001, page A33.

⁵ This analysis focuses only on the expected effects on output in the future. It does not undertake a full social cost-benefit analysis of the proposed tax reductions.

⁶ The increase in the marginal tax rate was actually larger than this increase in statutory income tax rates, since the 1993 budget deal also applied the Medicare payroll tax rate to an unlimited amount of earnings. Before 1993, the Medicare payroll tax (2.9 percent of earnings) applied only up to a given level of earnings.

⁷ See, for example, Joel Slemrod, “What Do Cross-Country Studies Teach About Government Involvement, Prosperity, and Economic Growth?” *Brookings Papers on Economic Activity* (No. 2, 1995), pages 373-431.

Studies examining the specific effects of marginal tax rates on work, saving, and entrepreneurship similarly tend to find modest effects:

- **Work.** A reduction in marginal tax rates may encourage work by allowing workers to retain more of the earnings from their last hour of work. But economic theory suggests that such a reduction also may *discourage* work, by increasing the after-tax income of workers and therefore potentially inducing them to reduce their work effort (since they can achieve the same amount of after-tax income with less work effort). This countervailing force may be one explanation for why studies have generally found only a quite modest effect on work from reducing marginal tax rates. Numerous economic studies have found that lower tax rates do little to encourage work effort among working-aged males — who already are generally working full time — but do provide some additional incentives for women to enter the labor force or men to delay partial or full retirement.⁸ As economists Joel Slemrod and Jon Bakija of the University of Michigan have written, “Nearly all research concludes that male participation and hours worked respond hardly at all to changes in after-tax wages, and therefore to marginal tax rates. There is evidence that female labor-force participation, and male retirement decisions, are somewhat responsive, but those responses do not contribute enough to total labor supply to alter the conclusion that, overall, labor supply is not greatly affected by taxes.”⁹
- **Private Saving.** A reduction in marginal income tax rates may encourage private saving, since interest and dividend income is taxed as income. But again, economic theory raises questions about even the direction of the effect: If you save to achieve a fixed goal for retirement or education, for example, a reduction in tax rates could encourage you to save *less*, since the rate of return you earn would be higher and thus you could accomplish your goal with a lower saving rate.¹⁰ The evidence generally suggests only a modest effect, if any, on private saving from reduced marginal tax rates, although a few studies have found larger effects. As economists Douglas Bernheim of Stanford University and Karl Scholz of the University of Wisconsin at Madison write, “Although the evidence is mixed, most of the studies that have relied on macroeconomic data conclude that

⁸ The evidence is surveyed in Jerry Hausman, “Taxes and Labor Supply,” *Handbook of Public Economics: Volume I*, 1985.

⁹ Joel Slemrod and Jon Bakija, *Taxing Ourselves: A Citizen’s Guide to the Great Debate over Tax Reform* (MIT Press: Cambridge, 1996), page 106.

¹⁰ See discussion in Leonard Burman, *The Labyrinth of Capital Gains Tax Policy: A Guide for the Perplexed* (Brookings Institution Press: Washington, 1999), page 56.

saving is not very responsive to the after-tax rate of return.”¹¹ It is also important to remember that even if the proposed tax cut were to raise private saving modestly, it very likely would *reduce* overall national saving, since the increase in private saving would be smaller than the decrease in public saving. (The increase in private saving would be smaller because a substantial share of the resources provided in a tax cut would be consumed rather than saved; if the resources were used instead to pay down more of the debt, the amount saved would be larger.¹²)

- ***Entrepreneurship.*** The theory and evidence on the impact of reducing marginal tax rates on entrepreneurship are similarly unclear. Many observers note that the income tax reduces the returns to entrepreneurship. But to some degree, the income tax system also shares in the risks undertaken by entrepreneurs. For example, an individual starting a new business pays lower taxes if the venture fails, partially mitigating the after-tax loss. Such risk-sharing may actually encourage entrepreneurship.¹³ Perhaps in part because of such offsetting effects, the evidence on the relationship between the income tax and entrepreneurship is weak. As Slemrod and Bakija write, “Entrepreneurship is hard to measure and therefore poorly understood, so there is little evidence to contradict the claims that are made about the deleterious effects of the tax system in this area...Yet there is also no hard evidence demonstrating that the potential economic benefits in this area are large.”¹⁴

Rather than examining the effect of marginal tax rates on specific activities, such as work or entrepreneurship, some analysts have focused on the overall relationship between tax rates and income. Although some earlier studies found large effects, the most recent studies find only modest effects from tax rate reductions.

¹¹ B. Douglas Bernheim and John Karl Scholz, “Saving, taxes and,” in Joseph Cordes, Robert Ebel, and Jane Gravelle, eds., *The Encyclopedia of Taxation and Tax Policy* (Urban Institute Press: Washington, 1999), page 326.

¹² It is also worth noting that a reduction in marginal tax rates *reduces* the incentive to save within a tax-preferred account.

¹³ See discussion in Joseph Stiglitz, *Economics of the Public Sector* (W.W. Norton and Company: New York, 1988), pages 553-555. The limited deductibility of losses, combined with a progressive income tax system, attenuates the risk-sharing provided by the tax system. Stiglitz notes that the overall effect of the tax system on risk-taking is therefore unclear.

¹⁴ Joel Slemrod and Jon Bakija, *Taxing Ourselves: A Citizen’s Guide to the Great Debate over Tax Reform*, op. cit., page 117. One recent paper does find a significant relationship between marginal tax rates and entrepreneurship. See Robert Carroll, Douglas Holtz-Eakin, Mark Rider, and Harvey S. Rosen, “Entrepreneurs, Income Taxes, and Investment,” in Joel Slemrod, ed., *Does Atlas Shrug? The Economic Consequences of Taxing the Rich* (Harvard University Press: Cambridge, 2000).

During his time as an academic, Lawrence Lindsey — now President Bush’s chief economic advisor — wrote that the marginal income tax rate reductions in the 1981 Reagan tax cuts produced large gains in income.¹⁵ Martin Feldstein, another prominent conservative economist who served as chairman of the Council of Economic Advisers under President Reagan, has similarly argued that the marginal rate reductions enacted in 1986 generated significant increases in income.¹⁶

The fundamental point of such analyses is that the individuals whose marginal tax rates were reduced the most were the ones who subsequently experienced the most rapid growth in income, perhaps suggesting that the marginal tax rate reductions *caused* the rapid income growth for such individuals. If so, the logic would suggest that reducing marginal tax rates would expand the overall economy.

The problem with this approach to evaluating the effects of marginal tax rate reductions is that under both the 1981 and 1986 tax legislation, marginal tax rates were reduced the most for the highest income individuals, who were experiencing rapid income growth for other reasons. As Austan Goolsbee, an economist at the University of Chicago, recently wrote: “If there were non-tax related trends in income inequality, however, driving up the income of the rich relative to other groups over this time period, there will be clear bias upward in the estimates” that Feldstein and Lindsey produced.¹⁷

To address this potential problem, Goolsbee examines a wide array of tax changes from decades other than the 1980s. He concludes that estimates from the 1980s were highly unusual: “The lowest estimates...based on the 1980s data exceed even the highest estimates from data on any previous tax change.” In other words, the responsiveness of incomes to marginal tax changes appeared to be much higher in the 1980s than during other periods. He adds that in almost all time periods except the 1980s, the responsiveness of incomes to marginal tax changes is “relatively modest.”

Another recent paper by economists Jonathan Gruber of MIT and Emmanuel Saez of Harvard explores the effects of marginal tax rate reductions using a broader array of individual-level data and more sophisticated statistical techniques than earlier papers.¹⁸ Even though

¹⁵ Lawrence Lindsey, “Individual Taxpayer Response to Tax Cuts: 1982-1984, with Implications for the Revenue Maximizing Tax Rate,” *Journal of Public Economics*, 33: 173-206.

¹⁶ Martin Feldstein, “The Effect of Marginal Tax Rates on Taxable Income: A Panel Study of the 1986 Tax Reform Act,” *Journal of Political Economy*, 103: 551-72.

¹⁷ Austan Goolsbee, “Evidence on the High-Income Laffer Curve from Six Decades of Tax Reform,” Brookings Panel on Economic Activity, September 1999, page 9.

¹⁸ Jonathan Gruber and Emmanuel Saez, “The Elasticity of Taxable Income: Evidence and Implications,” NBER Working Paper 7512, January 2000.

Gruber and Saez focus only on the 1980s, they find only modest effects on “broad income” (which is the closest measure in concept to Gross Domestic Product in their paper).

Marginal tax rates and economic performance during the 1990s

The history of the 1990s raises further questions about the impact of marginal tax rates on the economy. In 1993, as noted above, the top marginal tax rate increased from 31 percent to 39.6 percent. When these marginal tax rate increases were passed as part of the 1993 budget agreement, many prominent conservatives predicted an economic disaster would result. For example, then-Senator William Roth stated that the marginal tax increase would “flatten the economy.”¹⁹ Then-Representative Newt Gingrich stated that the “tax increase will kill jobs and lead to a recession, and the recession will force people off of work and onto unemployment and actually increase the deficit.”²⁰ Professor Martin Feldstein of Harvard University wrote of the “harmful effects of higher marginal tax rates on the economy” and warned that many higher earners “are asking themselves whether life wouldn’t be better if they worked a little less and enjoyed a bit more leisure.”²¹

History has betrayed these predictions, raising questions about the significance of marginal tax rates on economic performance. Instead of a recession, the economy experienced its longest economic expansion in history during the 1990s. Real GDP grew by an average of 4 percent per year from 1993 through 2000, almost 50 percent faster than the average from 1973 to 1993. Since 1995, productivity growth has averaged 3 percent per year, roughly double its average of 1.4 percent per year between 1973 and 1993. Unemployment and poverty rates have declined substantially.

Furthermore, under the logic of the studies that examined the impact of marginal tax rates during the 1980s, the increase in marginal tax rates during the 1990s should have discouraged work among top earners and therefore caused incomes at the very top of the income distribution to grow less rapidly than incomes for workers lower in the income distribution.²² But after-tax

¹⁹ Congressional Record, August 6, 1993.

²⁰ *Atlanta Journal-Constitution*, August 6, 1993.

²¹ Martin Feldstein and Kathleen Feldstein, “How the Rich Will Botch Clinton’s Plan,” *Los Angeles Times*, March 21, 1993.

²² An early study by Martin Feldstein and Daniel Feenberg suggested that high-income taxpayers reacted to the 1993 marginal tax increases by reducing their work effort and their taxable incomes. In particular, Feldstein and Feenberg claimed that the reported taxable incomes of very high-income taxpayers fell by 8 percent in 1993. But they failed to take into account the shifting of some income from 1993 into 1992 by high earners who anticipated the tax increase after the 1992 election. Correcting for this income shifting significantly affects the results. See Martin Feldstein and Daniel Feenberg, “The Effect of Increased Tax Rates on Taxable Income and Economic Efficiency: A

income gains were significantly larger in the 1990s among the top five percent of tax filers — the only group affected by the increase in marginal tax rates in the early 1990s — than among the rest of the population.²³ As the Congressional Budget Office recently noted, "the income of households facing the higher rates [from the 1990 and 1993 increases] rose much more rapidly over the decade than did overall income."²⁴

In particular, from 1989 to 1998, the average after-tax income of the top one percent of tax filers rose by a robust 40 percent, increasing by \$171,000 per taxpayer over this period, after adjustment for inflation.²⁵ For those between the 95th and 99th percentiles of the income spectrum (that is, those in the top five percent except for the top one percent), after-tax income climbed a healthy 18 percent. As one moves further down the income spectrum, the average after-tax income gain continues to diminish. The bottom 90 percent of tax filers experienced a relatively modest after-tax income gain of five percent over this nine-year period. To be sure, other forces (such as technological changes) may have caused the pre-tax income of high earners to grow more rapidly than lower earners, which could then produce the differences in after-tax income growth. That fact, however, highlights the fundamental flaw in the studies that focus solely on the 1980s.

To be sure, some may argue that economic growth would have been even more rapid, and income gains among top earners even more dramatic, were it not for the 1993 marginal tax rate increases. But the evidence in support of such a proposition is weak, and on its face it seems implausible. The upshot is that the experience of the 1990s, which is not reflected in most of the studies mentioned above, provides yet another reason to remain skeptical that marginal tax rates have dramatic effects on the economy.

Estimating the Impact on the Economy of the Bush Marginal Tax Rate Reduction

Preliminary Analysis of the 1993 Tax Rate Increases," in James Poterba, ed., *Tax Policy and the Economy* (MIT Press: Cambridge, 1996). See also the discussion in Joel Slemrod and Jon Bakija, *Taxing Ourselves: A Citizen's Guide to the Great Debate over Tax Reform*, op. cit., pages 127-128.

²³ Isaac Shapiro, "The Latest IRS Data on After-Tax Income Trends," Center on Budget and Policy Priorities, February 26, 2001.

²⁴ Congressional Budget Office, "Budget Options," February 2001, page 376.

²⁵ Some of this increase was due to capital gains, and capital gains tax rates were reduced during the 1990s. Even excluding capital gains, however, the differential in income growth rates between top earners and lower earners during the 1990s was dramatic. (It should be noted that the recent surge in capital gains income began well before capital gains tax rates were reduced in 1997. As CBO noted in its recent report on the budget and the economy, "Between 1994 and 1998, realizations of capital gains nearly tripled, with most of that increase occurring before the cut in tax rates for them in 1997.")

The Bush tax plan would reduce the average statutory marginal tax rate (that is, the average tax rate applying to the last dollar earned in the economy) by roughly three percentage points relative to the current distribution of tax rates. Estimating the impact on the economy of this reduction in marginal tax rates is subject to substantial uncertainty. Nonetheless, one reasonable approach applies the results from the Gruber and Saez study mentioned above. The Gruber-Saez study is perhaps the most comprehensive and rigorous recent study available. As explained in the Appendix, the results from this study are likely biased toward finding *large* effects on GDP. The analysis in the Appendix, based on this study, suggests that a reduction in marginal rates such as President Bush has proposed would raise GDP in the long run by slightly less than 0.4 percentage points. Other changes in the Bush tax plan would have only minimal effects on GDP in the future, perhaps amounting to about 0.1 percentage points.

The Bush tax plan also would reduce national saving relative to the Congressional Budget Office baseline, under which all the surpluses are assumed to be saved. As explained in the Appendix, the reduction in national saving caused by the tax cut could reduce GDP in 2012 by between 0.6 and 0.9 percentage points.

The table below presents the net effect of the Bush tax cut on the economy, relative to the baseline assumption of saving the surpluses. As the table shows, the overall effect is likely to be a small *reduction* in GDP in 2012, because the benefits of the marginal tax rate changes are too small to offset the costs of the fall in national saving.

It is worth emphasizing that these estimates are highly uncertain. Nonetheless, they raise serious questions about whether a tax cut should be expected to produce a large gain to the economy in the long run. They also suggest that at the margin, scaling back the tax cut and undertaking more national saving would likely be beneficial from the perspective of raising future GDP.

| | Percentage Point Effect on GDP in 2012 |
|---|---|
| Positive effect from tax reductions | +0.4 to +0.5 percent |
| Minus: Negative effect from reduced national saving | -0.6 to - 0.9 percent |
| OVERALL EFFECT | -0.1 to -0.5 percent |

Conclusion

The most recent academic evidence suggests only modest economic gains should be expected from reducing marginal tax rates. Indeed, the gains from reduced marginal tax rates are likely to be so modest that future output may well be *higher* if the funds devoted to President Bush’s proposed tax cut were saved rather than being spent on the tax cut. The results similarly suggest that providing a tax cut but scaling back its size and saving the funds instead may well raise future output more than a larger tax cut would. The promise of substantial long-term

economic gains if the tax cut is enacted is likely to prove illusory and should not be used as a basis for granting the proposal a stamp of approval.

Appendix

The Bush tax plan would reduce the average statutory marginal tax rate by roughly three percentage points relative to the current distribution of tax rates.²⁶ The reason that the Bush tax cut reduces marginal tax rates, on average, by only three percentage points despite larger changes for some taxpayers is that at least 30 percent of total income is earned by taxpayers in the 15 percent marginal tax bracket who would face *no* reduction in marginal tax rates under the Bush plan (in other words, their income is above the threshold for the proposed 10 percent bracket but below the threshold for the 28 percent bracket, and their last dollar earned would therefore continue to be taxed at a 15 percent marginal rate).²⁷

Estimating the impact of this reduction in marginal tax rates is subject to substantial uncertainty. Nonetheless, one reasonable approach applies the results from the Gruber and Saez paper. Since the Gruber-Saez study provides more comprehensive analysis than earlier studies, its estimates appear to provide the best available basis for estimating the impact on future GDP of the Bush marginal tax rate reductions.

Despite being the most recent, rigorous study available, the Gruber-Saez study may well *overstate* the impact of the Bush tax rate reductions on future GDP for three reasons. First, the Gruber-Saez study examines only the 1980s, a period during which the responses to changes in tax rates appear atypically large. Second, the Gruber-Saez study focuses on “broad income,” not GDP. Broad income may well respond to tax changes even when GDP does not. For example, if reductions in marginal tax rates cause shifting between health care benefits (which are not included in broad income) and wages (which are included in broad income), broad income would rise even though GDP may not change. Alternatively, broad income may rise with no change in GDP if reductions in personal income taxes cause more small business income to be counted as individual income rather than corporate income. Evidence suggests that such shifting may occur to a significant degree, which would mean that the Gruber-Saez results for broad income would

²⁶ This figure weights each individual’s marginal tax rate by his or her income. It is derived from “Individual Income Tax Rates and Shares, 1997,” *Statistics of Income*, Spring 2000, Table 1. It assumes that taxpayers in the 15, 28, and 31 percent marginal income tax brackets face a 15.3 percent marginal *payroll* tax rate, and that taxpayers in the 36 and 39.6 percent marginal income tax brackets face a 2.9 percent marginal payroll tax rate. It excludes the relatively small effect of the phase-out of itemized deductions (which applies to married taxpayers with adjusted gross income of more than \$128,950 in 2000) and of personal exemptions (which applies to married taxpayers with adjusted gross income of more than \$193,400 in 2000). This figure assumes that 25 percent of the income currently taxed at a 15 percent marginal income tax rate would instead be taxed at the 10 percent rate proposed as part of the Bush plan. This assumption is likely an overestimate, so that the overall marginal tax rate would not fall as much as assumed in this analysis (and therefore GDP would not rise as much).

²⁷ Note that the three percentage point reduction is predicated on the 1997 distribution of taxpayers. Over time, income growth in excess of inflation tends to push taxpayers into higher marginal tax brackets. The reduction produced by the Bush tax cut may therefore be somewhat higher under the distribution of taxpayers in 2011.

overstate the impact on GDP.²⁸ Finally, the Gruber-Saez results were not statistically significant, suggesting that the true effect of tax rate reductions (even for broad income alone) may be zero. For these reasons, using the Gruber-Saez results is likely to *overstate* the impact of tax reductions on future GDP.

Using the Gruber-Saez results, the three percentage point reduction in marginal tax rates would be expected to raise "broad income" by 0.6 percent in the long run.²⁹ Broad income, however, represents only about 63 percent of GDP.³⁰ The increase in overall GDP would therefore be 0.36 percent.³¹ Given the substantial uncertainty surrounding the estimates, the true effect may be somewhat smaller or somewhat larger than this 0.36 percent figure. But that figure should nonetheless provide some insight into the potential effects.³²

This estimate applies only to the statutory income tax rate changes in the Bush package. Some of the other components of the tax package also may affect work incentives, but the overall effect of these changes is likely to be small.

²⁸ See, for example, the discussion in Roger Gordon and Joel Slemrod, "Are 'Real' Responses to Taxes Simply Income Shifting Between Corporate and Personal Tax Bases?" in Joel Slemrod, ed., *Does Atlas Shrug? The Economic Consequences of Taxing the Rich* (Harvard University Press: Cambridge, 2000).

²⁹ The Gruber-Saez paper suggests an elasticity of broad income with respect to the net tax factor of 0.12. That is, Gruber and Saez suggest that broad income would rise by 0.12 percent for every one percent reduction in the net tax factor (which is defined as one minus the tax rate). The weighted-average marginal tax rate, including payroll taxes, is currently 38 percent; it would decline to 35 percent under the Bush plan. The 0.6 percent figure is therefore computed as $0.12 * (\ln(1-.35) - \ln(1-.38)) = 0.006$. Note that Gruber and Saez also find that the elasticity is higher for higher-income taxpayers and lower for lower-income taxpayers. Applying their income-specific elasticities (see Table 8 of their paper) to each class of income produces a similar overall result.

³⁰ In 1998, the Gruber-Saez definition of "broad income" would have amounted to slightly more than \$5.4 trillion. GDP was \$8.66 trillion. Broad income thus was 63 percent of GDP.

³¹ Gruber and Saez emphasize that their estimate is highly uncertain, and that the "true" effect could be zero: Their estimate is not statistically significantly different from zero. The estimates here therefore are also uncertain and are effectively not statistically significantly different from zero.

³² A recent paper by Eric Engen and Jonathan Skinner suggests the effects of marginal tax rate reductions may be larger than this estimate, albeit still relatively modest. See Eric Engen and Jonathan Skinner, "Taxation and economic growth," *National Tax Journal*, December 1996. Their estimates, however, are based on international comparisons and on combining a variety of microeconomic studies. Under either of these approaches, the negative effects of reduced national saving may also be larger than estimated below. It is not clear whether the overall effect of reduced marginal tax rates *and* reduced national saving would be any different under the Engen and Skinner approach. Similarly, some estimates of the effects of tax reductions use dynamic or "endogenous growth" models. In such models, both tax reductions and reduced saving would typically generate larger effects than shown here, but it is unclear whether the net effect of a tax reduction and reduced saving would be significantly different.

For example, the second-earner deduction reduces marginal tax rates for some married couples.³³ Some evidence does suggest that second earners are more responsive to marginal tax rates than primary earners.³⁴ The *aggregate* effect from the second earner deduction is still likely to be quite modest, however. According to data from the Institute on Taxation and Economic Policy Tax Model, married couples represent less than half of all taxpayers and married couples with incomes below \$614,000 account for slightly more than half of total income. The effect on the average marginal tax rate is thus muted, especially since the marginal tax reduction applies only to the secondary earner and not the primary earner. Furthermore, for some married couples (those in which the secondary earner earns more than \$30,000), the second earner deduction will reduce *average* tax rates, but not marginal tax rates. For these couples, the second earner deduction would provide incentives for *less* work, rather than more work, since the couple could keep after-tax income constant even while working somewhat less.³⁵ One rough estimate of the potential aggregate effect of the second earner deduction, which is again likely to exaggerate the increase in GDP for the reasons discussed in the footnote, suggests that it could raise GDP in 2012 by perhaps 0.05 to 0.1 percentage points.³⁶

Some proponents of the tax cut argue that eliminating the estate tax would significantly affect the economy. Both the theory and the evidence in favor of this proposition are weak, however.³⁷ A 1998 Treasury Department paper noted that there was no empirical evidence

³³ The deduction reduces taxable income by only 10 percent of the second earner's income (up to a maximum income of \$30,000, thereby providing a maximum deduction of \$3,000). For a family in the 15 percent marginal bracket (most of whom will have one spouse earning less than \$30,000), the second earner deduction reduces the marginal tax rate for the secondary earner by 1.5 percentage points. It does not reduce the marginal tax rate for the primary earner.

³⁴ See, for example, Nada Eissa, "Taxation and Labor Supply of Married Women: The Tax Reform Act of 1986 as a Natural Experiment," NBER Working Paper 5023, February 1995. Eissa finds that labor force participation rates among high-income married women are particularly responsive to marginal tax rates.

³⁵ Similarly, for many couples, the proposed increase in the child credit will reduce average tax rates but not marginal rates — and therefore could reduce work incentives. The change in the phase-out range of the child credit will reduce marginal tax rates for some families and raise them for others. The net effect from the child credit changes is, if anything, likely to be a reduction in labor supply.

³⁶ Eissa finds that the elasticity of labor supply with respect to the after-tax wage rate is between 0.6 and 1.0 for very high-income women. If we assume an elasticity of 0.7 for the entire population of married women (which is likely to be too high and therefore to exaggerate the effect of the tax reduction) and also assume that the secondary earner deduction reduces the marginal tax rate for second earners by two percentage points on average and that secondary earners earn an average of \$30,000 in nominal dollars in 2012 (which also may be too high and therefore may overstate the effect on GDP), the implied increase in GDP in 2012 is roughly \$20 billion, or 0.1 percentage points of projected GDP. The assumed elasticity of 0.7 may be much too high for the married female population as a whole, however. With an elasticity of 0.35 rather than 0.7, the predicted increase in GDP is 0.05 percentage points.

³⁷ See William Gale and Maria Perozek, "Do Estate Taxes Reduce Saving," forthcoming in William Gale, James Hines, and Joel Slemrod, eds., *Rethinking Estate and Gift Taxation* (Brookings Institution Press: Washington, 2001).

concerning the effects of the estate tax on work effort and savings among those who leave estates, and that the estate tax may well *encourage* work among the heirs of estates: Large inheritances, for example, appear to accelerate retirement among the recipients.³⁸

The rest of President Bush's proposed tax package — the components that do *not* reduce statutory marginal income tax rates — thus seems unlikely to have a significant effect on future GDP. To be conservative, we allow the other components of the tax package to raise future GDP by 0.05 to 0.15 percentage points (most of which would likely come from the second earner deduction). This suggests the total tax package, with a cost of between \$2 trillion and \$2.5 trillion when the cost of added interest payments on the debt and the cost of addressing the Alternative Minimum Tax are taken into account,³⁹ would raise future GDP by perhaps 0.4 percent to 0.5 percent. (It is worth emphasizing that these estimates are, if anything, an overestimate, for the reasons described above.)

The CBO baseline projections for future GDP, however, assume that the entire budget surplus will be saved. Relative to that baseline, the tax cut will reduce national saving, which will reduce future GDP. The overall effect of the tax cut on the economy therefore depends on the interaction of these two effects: the modest positive effect from reducing marginal tax rates, plus the negative effect from reducing saving (relative to the CBO baseline).

Another recent Center paper examines the impact on future GDP of actions that dissipate the projected budget surpluses.⁴⁰ The methodology is described in detail in an appendix to that paper. Using the same methodology, the impact of dissipating \$2 trillion to \$2.5 trillion of the projected surpluses can be estimated. Assuming that private saving offsets 25 percent of the \$2 trillion to \$2.5 trillion reduction in public saving (in other words, private saving rises by 25 percent of the reduction in public saving), the tax cut would reduce the nation's capital stock at the end of 2011, relative to the baseline, by between \$1.5 trillion and \$1.9 trillion.⁴¹ To translate the reduction in the capital stock into a reduction in GDP, we assume a marginal

³⁸ David Joulfaian, "The Federal Estate and Gift Tax: Description, Profile of Taxpayers, and Economic Consequences," Department of the Treasury, OTA Paper 80, December 1998.

³⁹ For a discussion of the overall cost of the Bush tax cut, see Robert Greenstein, "Cost of the Bush Tax Cut Rises," Center on Budget and Policy Priorities, Revised February 13, 2001, and Richard Kogan and Robert Greenstein, "New Joint Tax Committee Estimates Raise Cost of Bush Tax Plan: Cost Now Well over \$2 Trillion," Center on Budget and Policy Priorities, March 2, 2001.

⁴⁰ Peter Orszag, "The Peril of Zero Debt and the Long-Term Budgetary Outlook: Some Questions Regarding Chairman Greenspan's Recent Testimony," Center on Budget and Policy Priorities, February 22, 2001.

⁴¹ The Council of Economic Advisers (CEA), in February 1994, argued that the private saving offset would be zero. See Council of Economic Advisers, *Economic Report of the President 1994* (Government Printing Office), page 83. The CBO, however, argues that between 20 and 50 percent of increased federal saving is offset by reduced private saving. See CBO, "Description of Economic Models," November 1998. The 25 percent figure reflects a combination of the CEA and CBO views.

product of capital of between 7 and 8.5 percent, which means that an increase in the nation's capital stock of \$100 is assumed to raise GDP by between \$7 and \$8.50. (A recent paper by Martin Feldstein and Andrew Samwick assumes a marginal product of capital of 8.5 percent, but that estimate may be too high.⁴² In this context, an overestimate of the marginal product of capital would overstate the negative impact of the tax cut. We therefore also adopt a somewhat lower estimate than the one adopted by Feldstein and Samwick, as assurance that we are not biasing the results against the tax cut.) The reduction in national saving associated with the tax cut thus reduces GDP in 2012 by \$100 billion to \$160 billion, or by roughly 0.6 to 0.9 percentage points.

The table on page 8 presents the net effects of these changes. The estimates suggest a small reduction in GDP, of perhaps 0.1 to 0.5 percentage points, in 2012 from the proposed Bush tax cut (relative to the CBO baseline).

⁴² See Martin Feldstein and Andrew Samwick, "Allocating Payroll Tax Revenue to Personal Retirement Accounts," *Tax Notes*, June 19, 2000, p. 1645. We also assume that CBO's projected 3.1 percent real growth rate for 2010 and 2011 continues into 2012. Note that it is technically more accurate to examine Gross National Product, rather than Gross Domestic Product, since some of the differentials in capital are likely to manifest themselves in the stock of net foreign investment rather than the stock of domestic capital. Under the assumption that the return on foreign capital is equal to the return on domestic capital, however, this caveat is merely semantic: The benefit to future workers is unaffected.