

IRET *Congressional Advisory*

INSTITUTE FOR RESEARCH ON THE ECONOMICS OF TAXATION

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**Testimony of
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President and Executive Director
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before the

**Joint Economic Committee
hearing on
Tax Reform Options: What Changes Would Generate
The Greatest Growth For The Money**

November 17, 2011

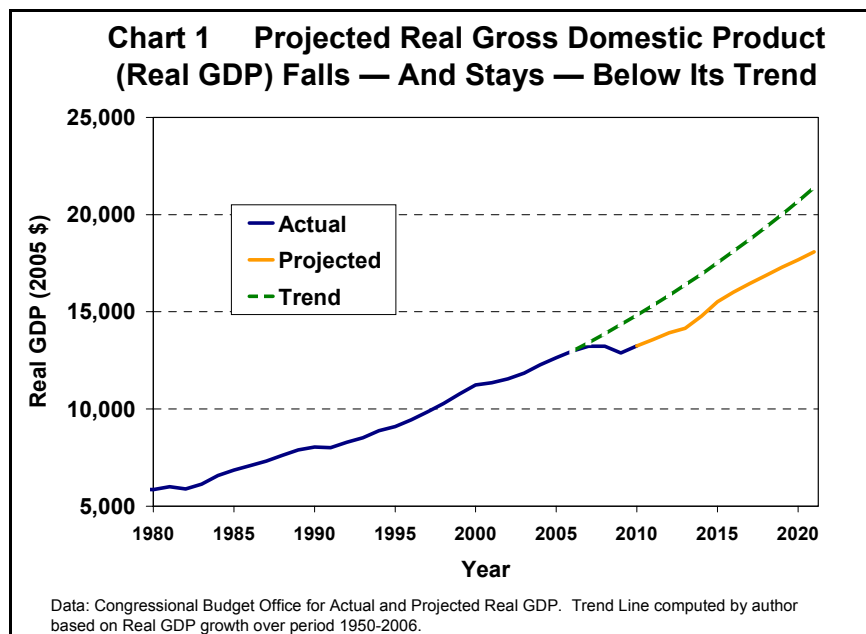
Chairman Casey, Vice Chairman Brady, and Members of the Committee, my name is Stephen J. Entin. I am President of the Institute for Research on the Economics of Taxation. Thank you for the opportunity to testify today on the subject of tax changes that would generate the greatest growth for the economy while being affordable for the federal budget.

I hope to address two issues in the hearing title. First, how do various tax changes affect the economy, people's employment opportunities, capital formation, and incomes? Second, what are the consequences for the federal budget of various types of tax changes? If we look only at the federal budget effects of tax proposals, and forget about the economic consequences, we will miss what is most important — the public welfare — and we will get the budget numbers wrong.

Let me state some important conclusions up front:

- Taxes affect the economy by altering incentives to work, save, and invest, not by handing out money to spend or taking it away.
- The income tax is heavily biased against saving and investment.
- The burden of higher taxes on capital formation falls largely on labor in the form of lower wages and hours worked.
- Increasing the double taxation of corporate income by raising tax rates on capital gains and dividends would dramatically reduce capital formation and wages, and would not raise the expected revenue.
- Keeping the current treatment of gains and dividends while cutting the corporate tax rate would raise GDP, employment, and wages. It would increase, not decrease, federal revenue over time.
- The definition of the tax base (taxable income) is at least as important as the tax rate. Overstating business income by undercounting investment expenses (depreciation) leads to less investment and lower wages. Expensing is the right approach, and gains revenue over time.
- We should not repeat the Tax Reform Act of 1986, which tried to perfect the "broad-based income tax"; rather, we should adopt a different tax base that is more neutral in its treatment of saving and investment relative to consumption.
- Higher marginal tax rates on any group, especially those already paying the highest rates, would reduce GDP and income across the board, not just for the people paying the initial tax bill.

It is important that any tax reform promote economic growth, because lack of growth is the source of lower incomes, higher unemployment, and much of the current deficit. Chart 1 projects the GDP as if it had continued beyond 2006 at the trend rate of real growth since 1950. We are now some 12 percent below



that level, due to the recession and the financial industry debacle. CBO does not envision a recovery to that trend line in its forecast under current policy. That is a shame, because the lower levels of GDP mean lower levels of income and employment for all. CBO assumes reductions in unemployment largely by assuming workers become discouraged and leave the labor force. There is more at stake than the federal budget. As for the budget, the shortfall is responsible for about 40 percent of the deficit. The jump in spending as a share of GDP since the recession adds about 13 percent more. With those two issues resolved, the deficit would be a more manageable 4 percent of GDP instead of nearer 8.5 percent.

Current tax system is biased against saving and investment.

Federal and state tax systems hit income that is saved harder than income used for consumption. At the federal level there are at least four layers of possible tax on income that is saved.

1) Income is taxed when first earned (the initial layer of tax). If one uses the after-tax income to buy food, clothing, or a television, one can generally eat, stay warm, and enjoy the entertainment with no additional federal tax (except for a few federal excise taxes).

2) But if one buys a bond or stock or invests in a small business with that after-tax income there is another layer of personal income tax on the stream of interest, dividends, profits or capital gains received on the saving (which is a tax on the "enjoyment" that one "buys" when one saves). The added layer of tax on these purchased income streams is the *basic income tax bias against saving*.

3) If the saving is in corporate stock, there is also the corporate tax to be paid before any distribution to the shareholder, or any reinvestment of retained after-tax earnings to increase the value of the business. (Whether the after-tax corporate income is paid as a dividend, or reinvested to raise the value of the business, which creates a capital gain, corporate income is taxed twice — *the double taxation of corporate income*.)

4) If a modest amount is left at death (beyond an exempt amount that is barely enough to keep a couple in an assisted living facility for a decade), it is taxed again by *the estate and gift tax*.

An additional problem is that depreciation understates costs, overstates income, and effectively raises the tax rate on investment returns. Depreciation makes businesses wait to claim part of the cost of their investment. The delay reduces the value of the write-offs due to the time value of money and inflation.

Real tax reform would end these biases and over-statements or double counting of capital income by taking a few key steps. They would fundamentally shift the tax base from "broad-based income" to "consumed income" or "cash flow".

- Step 1: Give all saving the same treatment received by pensions; either defer tax on saving and its returns until the money is withdrawn for consumption, or tax the saving up front and do not tax the earnings.
- Step 2: Adopt expensing instead of depreciation; alternatively, adjust the depreciation allowances for the time value of money (index unused portions by an appropriate discount rate) to preserve their present value.
- Step 3: Tax income in the corporate sector either at the level of the firm or at the level of the shareholder, but not both; that is, integrate the corporate and personal income taxes.
- Step 4: Eliminate the estate tax.
- Step 5: Move to a territorial tax system.

The broad-based income tax was designed by its intellectual godfathers, Professors Robert Haig and Henry Simons, to redistribute income at the expense of thrift and production, not to foster economic growth. (Although even Haig and Simons thought the corporate tax on top of the personal tax was going too far.) Simons acknowledged that his tax proposals would dampen saving and reduce GDP. We do not need more of that. Perfecting the income tax by broadening the base by double or triple taxing the same income is not the answer to our tax problems.

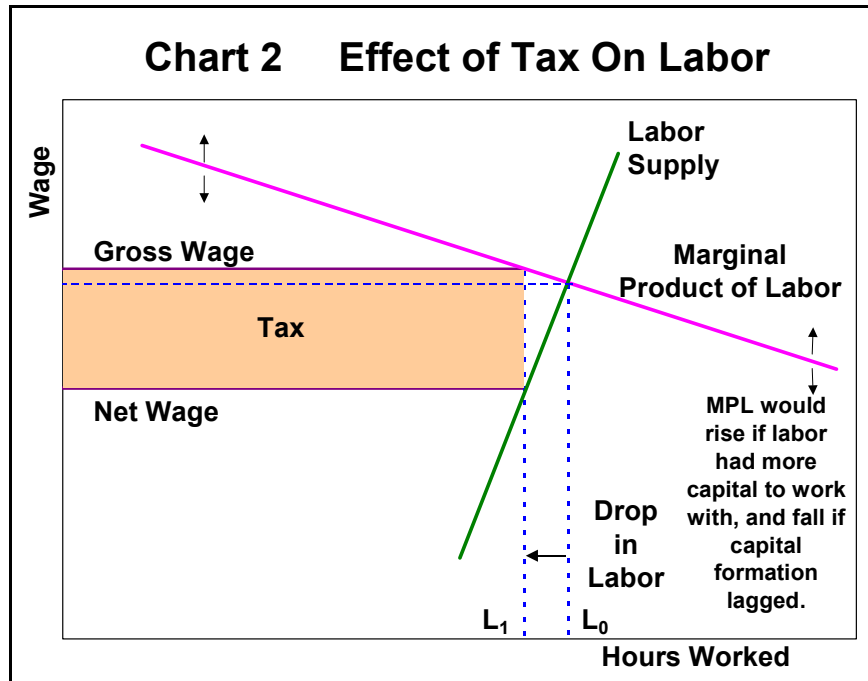
There are several less-biased, more growth-friendly tax alternatives, such as the cash flow in the Report of the tax President's Panel on Tax Reform — the Bush panel — or the Flat Tax, various versions of the USA Tax, or the Bradford "X" tax, or the straightforward inflow-outflow tax developed by Norman Ture (available at http://iret.org/pub/inflow_outflow.pdf). Real tax reform would move toward one of these systems. Other saving consumption neutral tax systems include the VAT and the national sales tax. These are somewhat less visible to the taxpayer, and are more of a change from the current system, but are equally less damaging to growth and income.

How taxes affect the economy: Effects of marginal income tax rates on labor and capital.

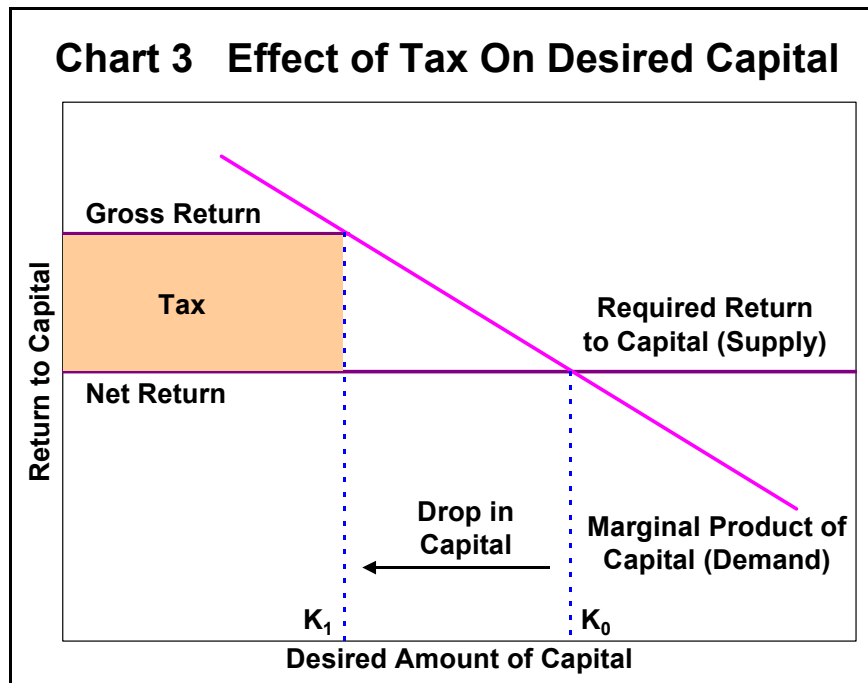
Taxes at the margin on incremental labor and capital force up the cost of labor and capital, and reduce the quantity offered and employed. The supply of labor is not very elastic. Consequently, much of any tax imposed on labor is borne by the workers. (See Chart 2.) Most people must work to have a satisfactory income, and many must conform their hours of work to the requirements of their employers. Moving across national borders is less of an option for labor than for capital. (Workers have some choices — to take or reject overtime, to contribute a second family earner to the labor force, how long to vacation, and when to retire.)

The quantity of capital is more sensitive to taxes than is the quantity of labor. When a tax is imposed on capital, the quantity of capital employed falls until the rate of return rises to cover the

tax, leaving the after-tax return about where it was before the tax. The tax is largely shifted to users of capital and those who work with it. (See Chart 3.) Capital is easily reproduced (elastic supply) and it takes a large change in the quantity to make much of a change in its rate of return. As for people's willingness to finance capital formation, people can always consume instead of save, or invest abroad instead of in the United States, if the rate of return on saving and investment is driven down by rising taxes.



The size of the capital stock and the level of investment depend on the service price of capital. The service price is the before-tax rate of return that an investment must earn to pay the taxes owed, cover its cost (depreciation), and yield a normal after-tax return to its owner. A tax increase on capital income raises the service price, and renders impractical any investment projects that cannot meet the higher service price. A tax reduction on capital income lowers the service price, and makes additional investment projects possible.



Each percentage point reduction in the service price of capital increases the capital stock over time by about 1.5%. The resulting increase in the productivity of labor increases the demand for

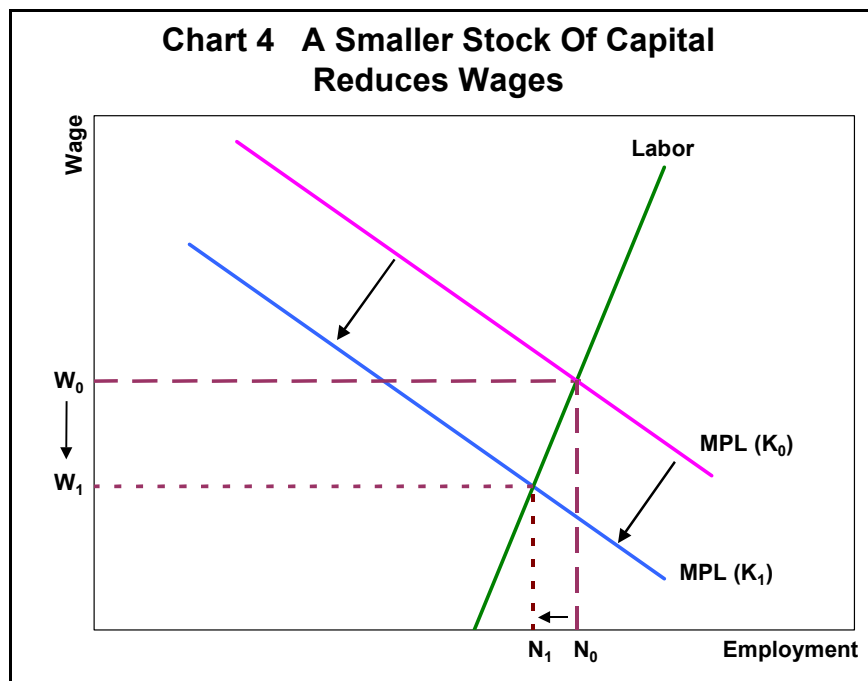
labor, and raises the total wage bill by a roughly similar percent. Private sector GDP rises by about 1.5%, with about two-thirds going to labor income and about one-third going to capital income, pre-tax. Various layers of government take a bit over 30% of the increase in income as taxes, a revenue gain of about \$40 billion to \$50 billion a year. Increases in the service price have the opposite effect on incomes and tax revenues. Failure to account for the changes in GDP and incomes, particularly labor incomes, seriously distorts the estimated revenue consequence of changes in taxation of capital.

Every tax bill relating to capital income and cost recovery that Congress considers should be examined for its effect on the service price of capital. The Joint Committee on Taxation, in conjunction with the Congressional Budget Office, should develop or borrow the software to conduct that calculation, and report the result to the Finance and Ways and Means Committees along with the (static) revenue estimate. If the bill increases the service price, it will reduce investment and GDP, which will reduce or eliminate the expected revenue from the provision. If the bill lowers the service price, it will raise GDP, which will provide some revenue reflow. If you are comparing two tax provisions, and one raises the service price more than the other relative to the amount of revenue expected to be raised, then that bill will do more economic damage, per dollar of revenue raised, than the other.

The tax treatment of capital hurts labor.

The more there is of any one type of factor, the higher will be the productivity and incomes of the other factors that work with it and gain from its presence. A tax that reduces the quantity of capital lowers the productivity of labor, the demand for labor, and the wages of labor. Labor thus bears much of the burden of the tax on capital. (See Chart 4.) Because capital is more sensitive to taxation than labor, a tax on capital will have a relatively large adverse impact on the quantity of capital, which will then cause a relatively large drop in the marginal product and compensation of labor.

Consider a small trucking company with five vehicles. Suppose that the rules for depreciating trucks for tax purposes change, with the government demanding that the trucks be written off over five years instead of three. The owner has had enough business to run four trucks flat out, and a fifth part time. He is barely breaking



even on the fifth truck under old law. It is now time to replace one of the trucks. Under the new tax regime, it does not quite pay to maintain the fifth truck. The owner decides not to replace it, and his income is only slightly affected. But what happens to the wages of the fifth truck driver? If he is laid off, who bears the burden of the tax increase on the capital?

The differences in the elasticities of supply and demand for labor and capital suggest that there is an economic advantage to moving away from the so-called broad-based income tax, which taxes income used for saving and capital formation *more heavily* than income used for consumption, to various taxes that are saving-consumption neutral.

Several studies in the economic literature illustrate that a zero tax rate on capital income would raise the after-tax income of labor, in present value terms, even if labor must pick up the tab for the lost tax revenue.¹ Productivity and wages would be higher (Chart 4 in reverse), leaving workers with higher gross wages and more after-tax income.

Simulating tax increases on upper income taxpayers.

Under current law, the two top tax rates of 33% and 35% will revert to 36% and 39.6% in 2013. The top 15% tax rate on capital gains will revert to 20%. The top tax rate on dividends, now linked to the capital gains rate, will revert to ordinary income tax rates. At the same time, the health reform act will impose a 3.8% tax on capital income, effectively extending a Medicare-related payroll tax to capital income for the first time. The two top brackets begin fairly close to the often-mentioned thresholds of \$250,000 for joint filers and \$200,000 for single filers who are to be subjected to higher taxes as a deficit reduction measure. The President has recommended extending the 2001 and 2003 tax cuts for lower income brackets. It seems likely that the link between the dividend and capital gains rates may also be extended.

I have run five potential variations of the pending tax increases on upper income taxpayers through a simple model of the economy and a tax calculator geared to 2008 income levels.² The results are displayed in Tables 1 and 2. The model is driven by the effect of the tax changes on marginal tax rates on labor income and on the service price of capital. Raising the top tax rates on capital gains and dividends would have a very significant effect on GDP, enough to eliminate any projected revenue gains. Raising the tax rates in the top two tax brackets would also have a significant effect, although not as great as an increase in capital gains and dividend taxation. The top rate increases would lose about 40 percent of the anticipated revenue.

- Case 1: Raise the top tax rates on ordinary income to 36% and 39.6%. Leave the top tax rates on capital gains and dividends at 15%.

This tax increase on wages, interest, and non-corporate business income would knock half a percent off private sector output and labor income across the board (not just in the upper tax brackets), and cut a percent off the capital stock. The service price rises primarily for non-corporate businesses. (See Table 1). The reduced income and economic activity would reduce federal revenue

TABLE 1
EFFECT OF RAISING TWO TOP TAX RATES ON GDP, CAPITAL STOCK, LABOR
INCOME, SERVICE PRICE, AND FEDERAL REVENUE
(Effects and revenue estimates are modeled at 2008 income levels.)

Tax options for two top brackets	1*	2*	3*	4*	5*
GDP	-0.47%	-1.19%	-1.63%	-6.09%	-2.10%
Private sector GDP	-0.50%	-1.23%	-1.71%	-6.33%	-2.18%
Capital stock	-1.05%	-3.24%	-4.20%	-15.68%	-5.68%
Wages	-0.26%	-1.01%	-1.25%	-5.04%	-1.79%
Hours worked	-0.25%	-0.22%	-0.47%	-1.36%	-0.40%
Service price					
Corporate	-0.02%	3.00%	2.95%	15.12%	5.36%
Non-corporate	1.90%	-0.09%	1.79%	1.54%	-0.16%
Total	0.55%	2.08%	2.60%	11.09%	3.72%
Static revenue (\$ billions)	\$37.7	\$38.0	\$75.9	\$100.1	\$66.3
Dynamic revenue (\$ billions)	\$22.5	\$0.4	\$22.8	-\$98.7	-\$1.1
% revenue loss to economic change	-40.2%	-98.9%	-69.9%	-198.6%	-101.6%
GDP loss per \$ of revenue gain	\$3.01	\$418.66	\$10.33	N/A**	N/A**
Cost of \$1 of govt. spending	\$4.01	\$419.66	\$11.33	N/A**	N/A**

* Tax options:

- 1: Raise top tax rates on ordinary income to 36% and 39.6%.
Leave top tax rates on capital gains and dividends at 15%.
- 2: Leave top tax rates on ordinary income at 33% and 35%.
Raise top tax rates on capital gains and dividends to 20%.
- 3: Raise top tax rates on ordinary income to 36% and 39.6%.
Raise top tax rates on capital gains and dividends to 20%.
- 4: Raise top tax rates on ordinary income to 36% and 39.6%.
Raise top rates on capital gains to 20%; tax dividends as ordinary income.
- 5: Leave top tax rates on ordinary income at 33% and 35%.
Raise top tax rates on capital gains and dividends to 23.8%.

** Tax rate increase depresses GDP to the point of losing revenue.

TABLE 2
EFFECT OF INCREASES IN TOP TWO TAX RATES ON MARGINAL TAX RATES
BY TYPES OF INCOME (2011 tax rates at 2008 income levels)

Case 1*				
Federal Marginal Tax Rates on:	2011 rate	Alternative	Point Incr.	% Increase
AGI	22.76%	23.43%	0.66%	2.92%
Wages	21.71%	22.10%	0.39%	1.78%
Dividends	12.28%	12.28%	-0.01%	-0.05%
Interest Income	23.41%	24.42%	1.01%	4.31%
Business Income	27.44%	29.41%	1.97%	7.17%
Long-term Capital Gains	13.48%	13.46%	-0.02%	-0.16%
Case 2*				
Federal Marginal Tax Rates on:	2011 rate	Alternative	Point Incr.	% Increase
AGI	22.76%	22.64%	-0.12%	-0.51%
Wages	21.71%	21.56%	-0.16%	-0.72%
Dividends	12.28%	14.90%	2.61%	21.28%
Interest Income	23.41%	23.40%	-0.01%	-0.04%
Business Income	27.44%	27.37%	-0.08%	-0.28%
Long-term Capital Gains	13.48%	16.72%	3.23%	23.98%
Case 3*				
Federal Marginal Tax Rates on:	2011 rate	Alternative	Point Incr.	% Increase
AGI	22.76%	23.30%	0.54%	2.37%
Wages	21.71%	21.96%	0.24%	1.12%
Dividends	12.28%	14.87%	2.58%	21.02%
Interest Income	23.41%	24.38%	0.97%	4.14%
Business Income	27.44%	29.32%	1.88%	6.84%
Long-term Capital Gains	13.48%	16.66%	3.17%	23.54%
Case 4*				
Federal Marginal Tax Rates on:	2011 rate	Alternative	Point Incr.	% Increase
AGI	22.76%	23.10%	0.34%	1.50%
Wages	21.71%	21.46%	-0.26%	-1.18%
Dividends	12.28%	27.06%	14.78%	120.29%
Interest Income	23.41%	25.01%	1.60%	6.83%
Business Income	27.44%	29.14%	1.69%	6.17%
Long-term Capital Gains	13.48%	16.73%	3.25%	24.09%

* Tax options:

- 1: Raise top tax rates on ordinary income to 36% and 39.6%.
Leave top tax rates on capital gains and dividends at 15%.
- 2: Leave top tax rates on ordinary income at 33% and 35%.
Raise top tax rates on capital gains and dividends to 20%.
- 3: Raise top tax rates on ordinary income to 36% and 39.6%.
Raise top tax rates on capital gains and dividends to 20%.
- 4: Raise top tax rates on ordinary income to 36% and 39.6%.
Raise top rates on capital gains to 20%; tax dividends as ordinary income.

from all types of taxes by about 40% of the expected static revenue gain. The loss of GDP and the tax payment to the government would cost the public \$4 for each \$1 collected in tax. Government spending funded in this manner must be worth a great deal more than its apparent budget cost of \$1 to justify the outlay. The marginal tax rate increase on non-corporate business income is particularly high. (See Table 2.)

- Case 2: Leave the top tax rates on ordinary income at 33% and 35%. Raise the top tax rates on capital gains and dividends to 20%.

This is a tax increase that falls very hard on capital, and on the sector where the tax is doubled up at the business and shareholder level. It is particularly hard on growth and employment. The tax increase on capital gains and dividends would lower private sector output by 1.23%, and trim labor income across the board (not just in the upper tax brackets) by the same amount. It would reduce the capital stock by 3.24%, mainly by increasing the service price in the corporate sector. (See Table 1). The reduced income and economic activity would reduce federal revenue from all types of taxes by almost 99% of the expected static revenue gain; that is, it would raise virtually no revenue while costing income and jobs. The loss of GDP and the tax payment to the government would cost the public \$420 for each \$1 collected in tax. Nothing the government buys is worth that much. The marginal tax rate increase on dividends and capital gains is very large. (See Table 2.)

The 15% top tax rate on capital gains and dividends is a step toward fundamental tax reform. It may be thought of as mitigating the double taxation of corporate income. Alternatively, it may be viewed as offsetting some of the basic income tax bias against saving, in effect extending to more saving about half of the tax relief given under Roth IRAs.

The tax on capital gains is a double tax even for the non-corporate sector. The current value of a share of stock or a non-corporate business is the present (discounted) value of its future after-tax earnings. If for any reason (reinvested earnings, discovery of a better mousetrap, etc.) future earnings are expected to rise, the current value of the business or price of the stock will rise. If the future income does rise, that added income will be taxed when earned. To also tax the associated increase in the present value of the business is to double tax the future income.

- Case 3: Raise the top tax rates on ordinary income to 36% and 39.6%. Raise the top tax rates on capital gains and dividends to 20%.

Combining the first two cases makes the GDP and job destruction worse. Output and income are down 1.7% in the private sector. About 70% of the expected revenue is lost. A dollar of government spending costs the country about \$11 in lost income and tax payments.

- Case 4: Raise the top tax rates on ordinary income to 36% and 39.6%. Raise the top rates on capital gains to 20%; tax dividends as ordinary income.

Allowing the tax rate on dividends to revert to ordinary income tax rates raises the marginal tax rate by 120%. (See Table 2.) It greatly increases the service price and the damage to the economy compared to keeping the dividend tax in line with the tax rate on capital gains at 20% as other rates rise (case 3). The drop in GDP and labor income would be about 6%. The capital stock would fall more than 15%. This economic damage would offset nearly 200% of the expected static revenue; that is, revenue would fall instead of rise, and by a large amount.

- Case 5: Leave the top tax rates on ordinary income at 33% and 35%. Raise the top tax rates on capital gains and dividends to 23.8%, including the health reform tax on capital gains and dividends. (The tax increase on interest income from the health reform tax was not modeled.)

This case goes beyond the increase in the capital gains and dividends tax rate in case 2 due by adding the 3.8% tax imposed by the health care reform act. It would further reduce GDP by and labor income by about 0.9% compared to case 2. The added economic damage would fully eliminate the projected revenue gain from the two capital tax increases.

Other tax increases on upper-income earners are possible. One could add another tax bracket beginning at higher incomes than where the current top rate begins, perhaps a million dollars for a true "millionaire's surtax" or some lower figure. That would require a decision as to whether that number should be \$1 million for single filers and \$2 million for couples, or the same for both, continuing the marriage penalty that still exists in the upper brackets. In any case, narrowing the income range subject to higher tax rates would require raising the tax rate even more to make up for the reduced amount of income subject to the higher tax. That would make the economic damage more intense, destroy more jobs, lower wages further, and cause even more of the expected static revenue gains to be lost.

Payroll taxes, the personal exemption, and the standard deduction.

The current and proposed temporary payroll tax holidays should have a minor effect on GDP because business investment is slow and the demand for labor is weak. Even if the payroll tax were reduced permanently, it would have limited effect on the GDP because the supply of labor is rather inelastic. Increases in the personal exemption and standard deduction have limited effect on marginal tax rates and GDP. They lower the tax on additional income only if they drop a taxpayer from one tax bracket to another, or off the tax rolls entirely. None of these tax reductions boost "demand" and consumption spending in the aggregate because the government has had to borrow additional money to cover the reduction in revenue, reducing other private sector spending. There are no initial or first order Keynesian demand effects from a tax cut or government spending increase. There are no magic "multipliers". Demand rises only if output and income rise first due to increased productive activity incentivized by higher expected after-tax returns to labor and capital.

Table 3 shows three additional model runs (Cases 6-8), a 2% and 4.1% reduction in the payroll tax, and a 10% increase in the personal exemptions and the standard deduction. The payroll tax cuts return only about 13% of their static revenue cost through economic growth. The exemption

Table 3			
EFFECT OF CUTTING PAYROLL TAXES AND RAISING PERSONAL EXEMPTION AND STANDARD DEDUCTION ON GDP, CAPITAL STOCK, LABOR INCOME, SERVICE PRICE, AND FEDERAL REVENUE			
(Effects and revenue estimates are modeled at 2008 income levels.)			
Tax options	6*	7*	8*
GDP	0.64%	1.31%	0.10%
Private sector GDP	0.73%	1.49%	0.11%
Capital stock	0.67%	1.40%	0.15%
Wages	-0.03%	-0.04%	0.02%
Hours worked	0.75%	1.54%	0.10%
Million jobs	1.06	2.15	0.14
Service price			
Corporate	0.06%	0.09%	-0.02%
Non-corporate	0.05%	0.11%	-0.08%
Total	0.06%	0.09%	-0.04%
Static revenue (\$ billions)	-\$147.2	-\$301.7	-\$14.0
Dynamic revenue (\$ billions)	-\$127.2	-\$262.4	-\$10.7
% revenue regained from economic change	13.6%	13.0%	23.9%
GDP gain per \$ of net revenue loss	\$0.73	\$0.72	\$1.40
Cost of \$1 of govt. spending	\$1.73	\$1.72	\$2.40
* Tax options:			
6: Cut payroll tax 2% (reflects 2011 reduction)			
7: Cut payroll tax 4.1% (reflects recent proposal)			
8: Raise personal exemption and standard deduction 10%			

and deduction change returns about 24%. The GDP increases are quite small, especially compared to the high static and dynamic revenue costs of reducing taxes in this manner. For example, the 4.1% payroll tax cut, (Case 7) costs \$302 billion on a static basis (at 2008 income levels) and raises GDP by 1.3%, regaining 13% of the revenue, leaving a dynamic cost of \$262 billion. Compare that to a static cost of only \$38 billion for keeping the 15% caps on the tax rate on capital gains and dividends instead of letting them rise to 20%, which generates nearly the same additional GDP, but which returns all of the revenue on a dynamic basis after economic growth (Case 2).

Table 4
EFFECT OF EXPENSING FOR EQUIPMENT AND
CUTTING THE CORPORATE TAX RATE ON GDP, CAPITAL STOCK,
LABOR INCOME, SERVICE PRICE, AND FEDERAL REVENUE
(Effects and revenue estimates are modeled at 2008 income levels.)

Tax options	9*	10*	11*	12*
GDP	2.71%	2.33%	2.26%	2.05%
Private sector GDP	2.81%	2.41%	2.34%	2.13%
Capital stock	7.64%	6.54%	6.34%	5.75%
Wages	2.29%	1.97%	1.91%	1.74%
Hours worked	0.51%	0.44%	0.42%	0.38%
Million jobs	0.71	0.61	0.59	0.54
Service price				
Corporate	-5.56%	-5.58%	-5.58%	-4.94%
Non-corporate	-1.94%	0.17%	0.17%	0.15%
Total	-4.49%	-3.87%	-3.87%	-3.43%
Static revenue (\$ billions)	-34.2	-20.2	-51.6	-46.5
Dynamic revenue (\$ billions)	48.7	51.3	19.1	17.7
% revenue regained from economic change	243%	353%	137%	138%
GDP gain per \$ of net revenue loss	n.a.**	n.a.**	n.a.**	n.a.**
Cost of \$1 of govt. spending	n.a.**	n.a.**	n.a.**	n.a.**

* Tax options:
9: 100% expensing of equipment for all businesses
10: 100% expensing of equipment for corporate sector only
11: cut corporate tax rate to 25%
12: cut corporate tax rate to 26% to approx. domestic production credit

** Tax rate decrease raises GDP to the point of gaining revenue.

Expensing and corporate tax rate reduction

Table 4 displays the effect of altering expensing and the corporate tax rate.

- Case 9: The current provision for 100% expensing of equipment would raise GDP by 2.71% over time, if made permanent. Its static revenue cost of \$34 billion would be converted to a dynamic revenue gain of \$49 billion, a 243% reflow of revenue (at 2008 income levels). It focuses the tax reduction on newly acquired capital equipment, and is of particular interest to new or rapidly growing businesses. Eventually, all capital is replaced, so even established businesses gain as their stock of equipment rolls over.

- Case 10: The corporate sector's share of the expensing provision would boost GDP by 2.33%, or about 86% of the total expensing provision. Its static cost is \$20 billion. Growth returns about \$71 billion, or 353% of the static cost, for a net gain of \$51 billion.
- Case 11: A reduction in the corporate tax rate to 25% would generate a 2.26% rise in GDP, about the same as the corporate expensing provision. It would have a higher static cost, about \$52 billion, generate a similar \$71 billion dollar reflow, or 137% of the static cost, and net the government a gain of \$19 billion. The higher static cost is due to the application of the lower corporate tax rate to returns on existing capital as well as new capital. This approach favors established or slow growing businesses, or those with more investment in structures than equipment.
- Case 12: Part of the current corporate tax rate is offset by the manufacturer's deduction which reduces the effective top rate to 32.85% on eligible production. We approximate the effect of the cutting the corporate tax rate but eliminating the manufacturers' deduction in partial exchange by modeling a rate cut to 26% (instead of 25%). GDP would rise 2.05%, with a static cost of \$47 billion and a dynamic gain of \$18 billion.

Giving up corporate expensing in exchange for a lower corporate tax rate in the range shown would yield similar GDP effects, but cost more revenue. It might please established businesses in the short run, but would not be as focused on rapid growth. The trade should not be necessary, because neither provision costs revenue after growth effects are considered. If Congress insists on relying solely on static revenue estimates, a lower short term revenue impact might be had by phasing in the corporate rate cut. If expensing must be altered, it could be replaced by a "neutral cost recovery system" in which the deferred portions of the depreciation write-off are augmented each year by an appropriate interest rate, such as inflation plus the long term real return on capital of about 3%. The present value of the deductible business cost for the investment would be preserved at 100 cents on the dollar.

Response of the economy to changes in the service price.

Historically, tax changes that lower the service price of capital have a major impact on investment, employment, and output. Taxes that have little or no effect on investment incentives do far less. Marginal tax rates on labor and other income matter as well, but are less powerful due to the relatively low labor supply elasticity. Taxes that are not at the margin, or not much at the margin, such as the 1975 Ford tax rebate, the 2001 rebate-like refund reflecting the 10% tax bracket, and the more recent stimulus rebates, make little difference to production and employment.

Chart 5 tracks the effect of the 2001 and 2003 tax cuts on GDP. There was a very slow "jobless recovery" from the 2000-2001 recession in the first two years after the 2001 tax reduction. The marginal rate cuts were phased in so slowly that there was little initial incentive effect. It was not until the 2003 tax cut that there were significant incentives for saving and investment. In that year, the capital gains and dividend tax rates were reduced to 15%; expensing, introduced in 2002 at 30% of equipment spending, was boosted to 50% of equipment outlays; and the rest of the

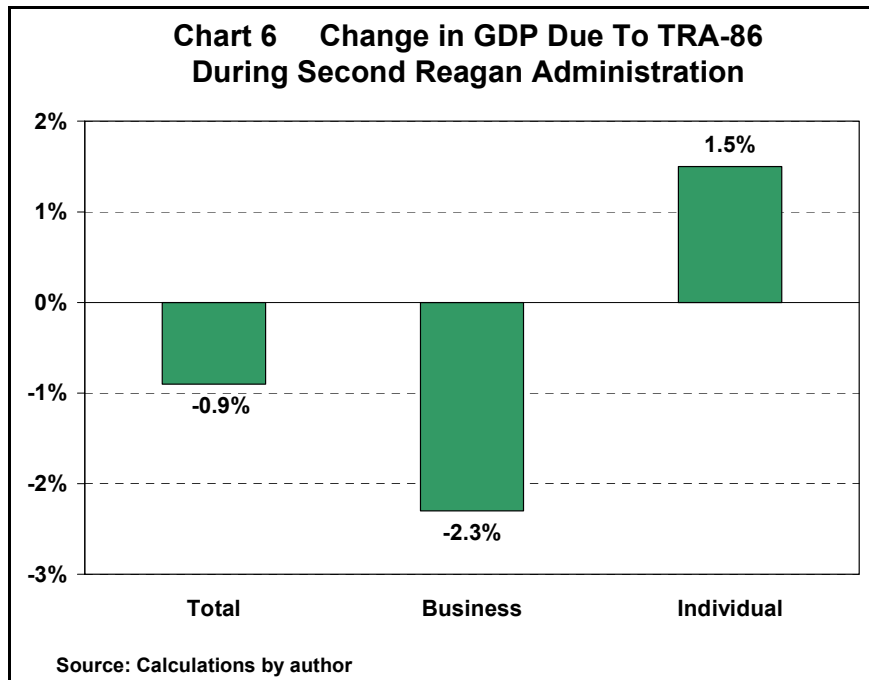
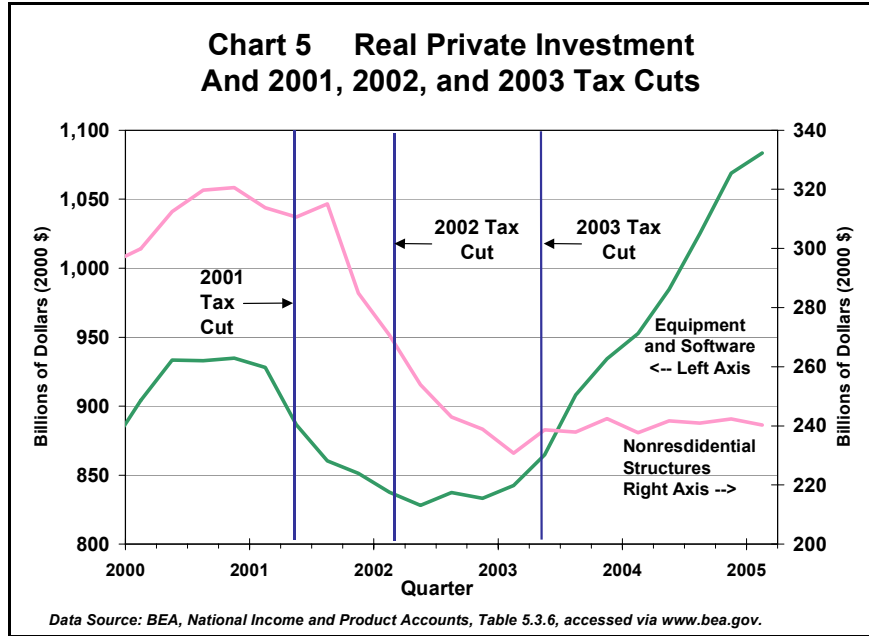
marginal tax rate cuts were brought forward. Estate tax relief helped too. After 2003, investment in equipment rose rapidly, and job growth accelerated.

The Tax Reform Act of 1986 (TRA86)

TRA86 raised the net tax at the margin on capital and reduced it for labor. On balance, it slightly reduced potential output. (Chart 6.) The bill would have been a modest positive for the economy if Congress had followed the Treasury reform plan as submitted, but it did not. Treasury had recommended indexation of depreciation allowances for inflation. That would have helped to reduce slightly the required service price or "hurdle rate of return" that capital must earn in order to be a feasible investment, in spite of longer assets lives and repeal of the investment tax credit under the bill. Congress dropped the indexing provision, and the hurdle rate went up, discouraging investment.

TRA86 cut the corporate rate 12 points from 46% to 34%, but offset about half that reduction by eliminating provisions that were already mitigating some of the corporate tax at the margin (loophole and preference closings). TRA86 cut the top individual tax rates from 50% to 28%, with a 33% rate bubble to recapture the benefits of rates below 28%.

These cuts lowered the top tax rate on dividends to 28% or 33%. However, TRA86 also raised the top tax rates on capital gains from 20% to 28% or 33%. TRA86 raised taxes on capital in other

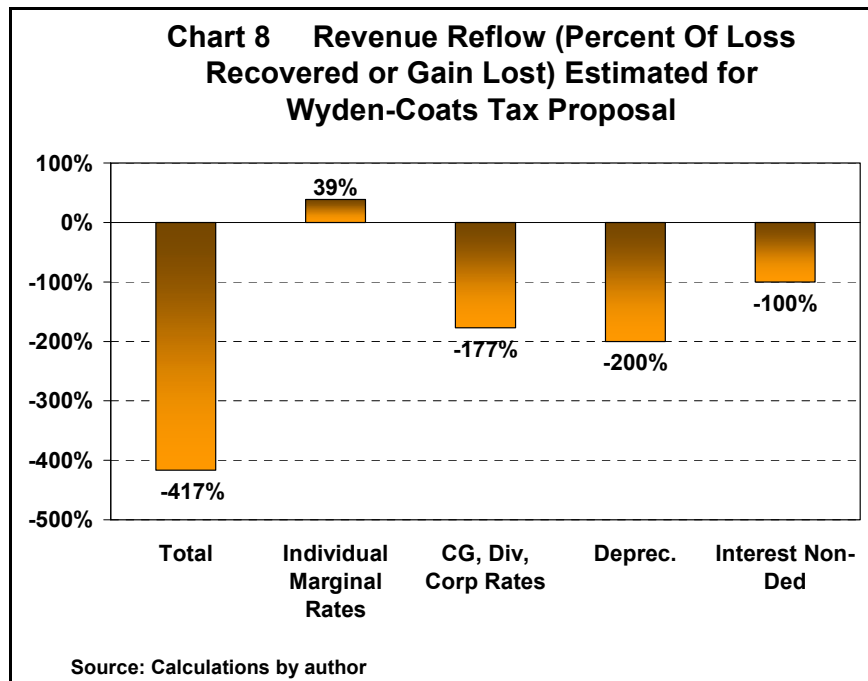
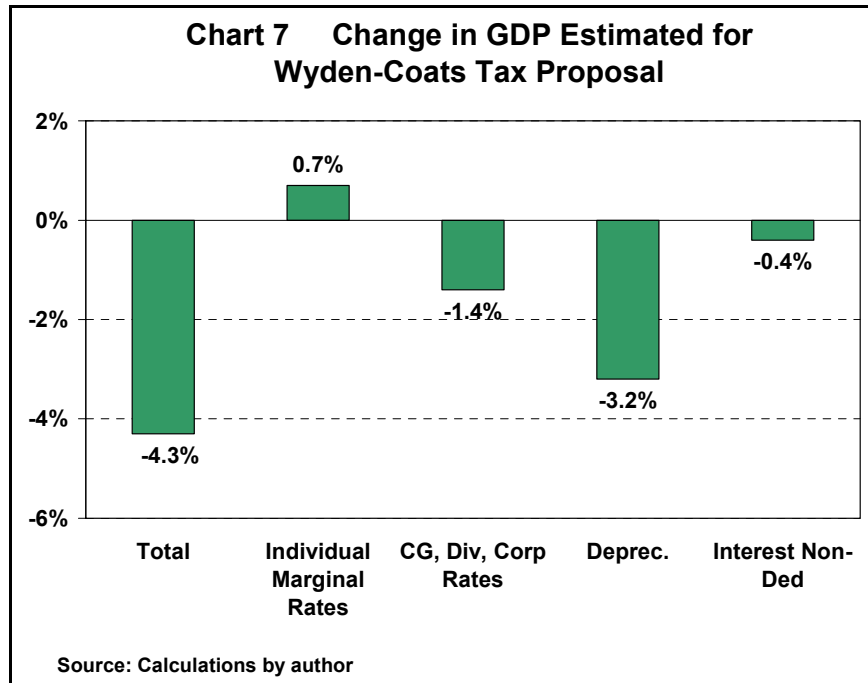


ways. It eliminated the investment tax credit. It switched from ACRS (accelerated cost recovery system) to MACRS (modified ACRS), with longer asset lives, especially for long lived structures, which went from 31.5 years to 39 years. Passive loss rules were tightened on real estate, and upper income taxpayers were limited in their access to IRAs. TRA86 is not a good model for creating a pro-growth fundamental tax reform. It moved away from a neutral tax base toward a more-inclusive and more anti-investment version of the broad-based income tax.

Wyden-Coats

The Wyden-Coats bill (formerly Wyden-Gregg) and the Bowles-Simpson Commission emulate TRA86. They would cut tax rates on businesses in exchange for higher tax rates on capital gains and dividends, and much slower tax depreciation of plant, equipment, and structures. They are heavier on the penalties and lighter on the rate reductions than TRA86, and would do even more damage to GDP and employment. They cut taxes where the growth benefits are small, and on balance raise taxes where the adverse effects are large.

Wyden-Coats, in particular, would revert to asset lives of the old Guidelines system from 1961, but make them even worse with straight line depreciation instead of double declining balance. The bill would raise the tax on capital gains and



dividends from a maximum of 15% to 22.75%. Expensing would end for large firms doing most of the nation's investment. Businesses would not be allowed a deduction for the inflation portion of their interest costs, but lenders would be taxed on the full amount of interest received. The bill would increase the standard deduction to 2.5 times its current level. The top individual rate would remain at 35%. The graduated corporate tax rates with a top rate of 35% would be replaced by a flat 24% rate. The depreciation changes and the higher tax rates on capital gains and dividends would make the bill a strong negative for the economy, in spite of the rate cuts and enlarged standard deduction. The service price would soar 11%. The ultimate drop in GDP would be 4.32%. A static revenue increase of \$33 billion would turn into a revenue loss of \$105 billion. (Charts 7 and 8.)

Response of capital gains realizations to higher tax rates.

The revenue estimates tied to changes in the capital gains or dividend tax rates described above are based on the effect of the tax changes on economic performance. The following table deals with a different issue: how do changes in the capital gains tax affect the rate at which people choose to take gains. It offers additional support to the warning that raising these tax rates may lose revenue rather than gain revenue.

Table 5 is from the Department of the Treasury, Office of Tax Analysis. It displays the amount of capital gains realized and the tax paid in dollars, the average effective tax rate, realized gains as a percent of GDP, and the maximum tax rate on long-term gains from 1954 to 2007. The numbers cover all types of capital gains, including those on real estate, corporate stock, non-corporate businesses, bonds, and other assets. The maximum rate includes adjustments for exclusions, surcharges, the minimum tax and alternative minimum tax, and the phase-out of itemized deductions as income rises. These are features of the tax code that have been in place at various times.

There have been four major reductions and two major increases in the capital gains tax rate since 1968.

The Johnson surtax and increases in the Minimum Tax under Nixon and Ford raised the top tax rate on long term gains from 25% in 1967 to nearly 40%. Realizations fell from over 3% of GDP in 1967-69 to about 2% of GDP in 1974-78. The Steiger Amendment lowered the top tax rate most commonly found on long term capital gains in mid- 1978, from just under 40% to 28%. It eliminated capital gains as a preference item under the minimum tax and created a 60% exclusion of long term gains from taxable income. Realizations were 2.20% of GDP in 1978, and rose by about a fourth to between 2.58% and 2.86% of GDP in 1979-1981. The Economic Recovery Tax Act of 1981 reduced the top rate to 20% in the spring of that year. Realizations were 2.77% of GDP in 1982, rising to 3.47% in 1983 and 4.08% in 1985.

The longest and most interesting change occurred following the Tax Reform Act of 1986, which raised the top capital gains tax rate from 20% back to 28%. The rate hike was effective January 1, 1987. To beat the 1987 rate hike, asset holders realized a large amount of capital gains

Table 5
Capital Gains and Taxes Paid on Capital Gains
for Returns with Positive Net Capital Gains, 1954-2005
(dollar amounts in millions)

Year	Total Realized Capital Gains	Taxes Paid on Capital Gains	Average Effective Tax Rate (percent)	Realized Gains as a Percent of GDP	Maximum Tax Rate on Long-Term Gains
1954	7,157	1,010	14.1	1.88	25.00
1955	9,881	1,465	14.8	2.38	25.00
1956	9,683	1,402	14.5	2.21	25.00
1957	8,110	1,115	13.7	1.76	25.00
1958	9,440	1,309	13.9	2.02	25.00
1959	13,137	1,920	14.6	2.59	25.00
1960	11,747	1,687	14.4	2.23	25.00
1961	16,001	2,481	15.5	2.93	25.00
1962	13,451	1,954	14.5	2.29	25.00
1963	14,579	2,143	14.7	2.36	25.00
1964	17,431	2,482	14.2	2.62	25.00
1965	21,484	3,003	14.0	2.98	25.00
1966	21,348	2,905	13.6	2.70	25.00
1967	27,535	4,112	14.9	3.30	25.00
1968	35,607	5,943	16.7	3.91	26.90
1969	31,439	5,275	16.8	3.19	27.50
1970	20,848	3,161	15.2	2.01	32.21
1971	28,341	4,350	15.3	2.51	34.25
1972	35,869	5,708	15.9	2.89	36.50
1973	35,757	5,366	15.0	2.58	36.50
1974	30,217	4,253	14.1	2.01	36.50
1975	30,903	4,534	14.7	1.89	36.50
1976	39,492	6,621	16.8	2.17	39.875
1977	45,338	8,232	18.2	2.23	39.875
1978	50,526	9,104	18.0	2.20	39.875/33.85
1979	73,443	11,753	16.0	2.86	28.00
1980	74,132	12,459	16.8	2.65	28.00
1981	80,938	12,852	15.9	2.58	28.00/20.00
1982	90,153	12,900	14.3	2.77	20.00
1983	122,773	18,700	15.2	3.47	20.00
1984	140,500	21,453	15.3	3.57	20.00
1985	171,985	26,460	15.4	4.08	20.00
1986	327,725	52,914	16.1	7.36	20.00
1987	148,449	33,714	22.7	3.13	28.00
1988	162,592	38,866	23.9	3.18	28.00
1989	154,040	35,258	22.9	2.81	28.00
1990	123,783	27,829	22.5	2.13	28.00
1991	111,592	24,903	22.3	1.86	28.93
1992	126,692	28,983	22.9	2.00	28.93
1993	152,259	36,112	23.7	2.29	29.19
1994	152,727	36,243	23.7	2.17	29.19
1995	180,130	44,254	24.6	2.43	29.19
1996	260,696	66,396	25.5	3.34	29.19
1997	364,829	79,305	21.7	4.39	29.19/21.19
1998	455,223	89,069	19.6	5.18	21.19
1999	552,608	111,821	20.2	5.96	21.19
2000	644,285	127,297	19.8	6.56	21.19
2001	349,441	65,668	18.8	3.45	21.17
2002	268,615	49,122	18.3	2.57	21.16
2003	323,306	51,340	15.9	2.95	21.05/16.05
2004	499,154	73,213	14.7	4.27	16.05
2005	690,152	102,174	14.8	5.46	16.05
2006	798,214	117,793	14.8	5.96	15.70
2007 1/	924,164	137,042	14.8	6.56	15.70

Department of the Treasury
Office of Tax Analysis

January 14, 2010

1/ Preliminary estimate, subject to revision.

in the last months of 1986. Realizations surged from 4.08% of GDP in 1985 to 7.36% in 1986. There was a subsequent drop in realizations in 1987, to 3.13% of GDP.

This two-year rise and fall could have been due to a simple timing shift, moving gains from 1987 to 1986. However, gains remained depressed as a share of GDP for a decade. Realizations continued falling to 1.86% of GDP in 1991 (a recession year), and struggled back only to 3.34% of GDP in 1996, still below the 1985 share. Gains did not recover their 1985 share of GDP until 1997, when the capital gains tax rate was again reduced to 20% by the Taxpayer Relief Act of 1997, effective as of May 8th of that year. This episode of a decade-long depression in realizations and tax revenue simply cannot be dismissed as either short-term timing or a fluke.

Following the 1997 rate cut to 20%, realizations remained elevated until the dot.com stock market crash and economic recession in 2001. The Jobs and Growth Tax Relief Reconciliation Act of 2003 reduced the top rate from 20% to 15%. Realizations rose from 2.95% of GDP to 4.27% in 2004 and to 6.56% in 2007. In each of these years, government revenue estimators under-estimated the rise in the gains and the duration of the increase, and had to revise their projected gains and revenues up in each new year's budget work. Gains have undoubtedly swung widely since the latest recession and stock market crash in 2008.

Treasury, CBO, and Joint Tax Committee revenue estimators acknowledge and try to take account of short run timing effects of tax rate changes in their capital gains revenue estimates. In all these historical cases, however, there appears to have been a longer term response to the lower rates, in addition to a short-run unlocking event after a rate cut or a timing shift in anticipation of a rate hike. This thirty year period indicates that people hold assets longer, and take fewer gains over time, at higher capital gains tax rates than they do at lower rates. This is a permanent realizations effect that government revenue estimators should take into account.

Competitiveness

The United States is part of the global economy. To be competitive, it needs to be a good place in which to produce goods and services. One of the requirements is a tax system that is not anti-investment and anti-growth. Tax differentials matter. Consider two cases.

In 1988 and 1990, Japan mimicked the U.S. 1986 tax reform. It had been exempting interest on most savings from tax, and did not tax capital gains. In the reform, it ended the tax-exempt interest for people below retirement age, and implemented a capital gains tax. Rate cuts were not sufficient to offset the raise in the service price. Japan also raised a national property tax on real estate. The tax increases pricked the stock and real estate "bubbles" and rendered the banking system insolvent. To this day, Japan regards its troubles as a banking problem, not realizing that it was triggered by a misguided move toward a more comprehensive income tax. The result has been a twenty year depression. Japan continues to have the highest corporate tax rate in the developed world.

The People's Republic of China has taken the opposite approach. It has a 25% corporate tax rate, and relies on a VAT for the remainder of its national government income. The VAT incorporates expensing. The income tax is reserved for the provinces. Capital gains on Chinese shares are not taxed, nor is bank interest. There is no estate tax. The Chinese tax system is closer to a consumed-income or saving-consumption-neutral tax base than to a broad-based income tax. China is lifting hundreds of millions of people out of poverty. The Chinese tax system has some other drawbacks, its state-supported industries absorb too much of its investment, and lack of secure property rights and personal freedoms are troubling. But the growth of the Chinese economy in recent years has been remarkable, especially compared to the stagnation in Japan.

Conclusion

The nation needs a change to a better tax system with a better tax base more neutral in its treatment of saving and investment. If the Congress is not able to provide that, it should extend the current tax cuts and stick entirely to spending cuts for deficit reduction.

Tax cuts that reduce the biases in the income tax against saving and investment give the most "bang for the buck". These include expensing or some form of neutral cost recovery for depreciable assets, followed by cuts in the corporate tax rate and elimination of the estate tax. These cuts would not cost revenue after growth effects are factored in. Reductions in the top tax rates for individuals rank next. About 40% of their revenue loss would be recovered. Far less growth and revenue reflow is achieved by increases in personal exemptions or the standard deduction, or cuts in the payroll tax.

Endnotes

1. Martin Feldstein, "Incidence of a Capital Income Tax in a Growing Economy with Variable Savings Rates," *The Review of Economic Studies*, 41(4), 1974, pp. 505-513. Christophe Chamley, "Optimal Taxation of Capital Income in General Equilibrium with Infinite Lives," *Econometrica*, 54, May 1986, pp. 607-22. Kenneth L. Judd, "Redistributive Taxation in a Simple Perfect Foresight Model," *Journal of Public Economics*, 28, October 1985, pp. 59-83. Also, see Kenneth L. Judd, "A Dynamic Theory of Factor Taxation," *American Economic Review*, 77, May 1987, pp. 42-48; H. Greg Mankiw, "The Savers-Spenders Theory of Fiscal Policy," *American Economic Review*, 90(2), 2000, pp. 120-125; and Casey B. Mulligan, "Capital Tax Incidence: First Impressions from the Time Series," NBER Working Paper 9374, National Bureau of Economic Research, Cambridge, MA, December 2002. Andrew Atkeson, V.V. Chari, and Patrick J. Kehoe, "Taxing Capital Income: A Bad Idea," *Federal Reserve Bank of Minneapolis Quarterly Review*, Vol. 23, No. 3, Summer 1999, pp. 3-17.

2. The tax calculator was provided courtesy of Gary Robbins of the Heritage Foundation Center for Data Analysis, who also assisted with modeling advice.