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on
How Does the Taxation of Capital Affect Growth and Employment

Mr. Chairman and Members of the Committee, I am Jane Gravelle, a Senior Specialist in Economic Policy in the Congressional Research Service of the Library of Congress. I would like to thank you for the invitation to appear before you today to discuss the effect of taxation of capital income on growth and investment.

I would like to focus my attention largely on the corporate income tax. Other taxes such as those on capital gains and dividends are much smaller as a percent of output.[1] Moreover, most evidence suggests that the response of savings to changes in tax

[1] Revenues from capital gains are about 0.5% of output, and revenues from dividends about 0.1%, while corporate tax revenues are 2%. See data on capital gains from the Congressional Budget Office at http://www.cbo.gov/publication/42913, data on the corporate tax from *The Budget and Economic Outlook: Fiscal Years 2012 to 2022* http://www.cbo.gov/sites/default/files/cbofiles/attachments/01-31-2012_Outlook.pdf, and data on the size of dividends (using 2006, a more typical year) at Internal Revenue Service Statistics of Income, Individual Income Tax Returns http://www.irs.gov/taxstats/indtaxstats/article/0,,id=96981,00.html. A considerable amount of dividend and capital gain income is not taxed because it is not realized or is in tax-exempt form. Interest income was probably negatively taxed, or at least negligibly taxed, in the economy as a whole, since only 25% of personal interest income in the National Income Accounts (Table 7.11 http://www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=288&Freq=Year&FirstYear=2009&LastYear=2010) appears on tax returns (IRS data referenced above), while most interest is deducted by businesses or mortgage holders.

rates is small and even uncertain in direction.[2] Thus, altering these taxes is unlikely to alter the stock of capital and, through this effect, economic growth. Changes in the corporate tax, even though they may not affect domestic saving, could affect investment and the capital stock due to the effect of taxes on international capital flows, an effect that does not apply to individual income taxes on dividends, capital gains, and interest.

The first section of this testimony discusses the effect of cutting corporate tax rates on output, national income, and wages. The second section discusses the potential effects on revenues, including feedback effects and the feasibility of offsetting rate reductions with base broadening provisions. This discussion also addresses real economic effects of crowding out for a corporate rate cut whose revenue cost is not offset. The final section discusses the costs of economic distortions, the principal reason for economists' criticism of the corporate tax.

Effects on Output, Income and Wages

Much has been claimed for the economic benefits of lowering the corporate rate in a global economy. Lowering the rate would attract capital from abroad and discourage U.S. capital from flowing out of the country, increasing the capital stock and output in the United States. However, the consequences for economic growth and labor income are likely to be modest. My estimates suggest that that a ten percentage point reduction in the corporate tax rate (from 35% to 25%) would induce an increase in U.S. output of less than 2/10 of 1%.[3] Even the most generous set of assumptions would lead to an increase

[2] See CRS Report R42111, *Tax Rates and Economic Growth*, by Jane G. Gravelle and Donald J. Marples, for a review of these savings effects.
[3] Unless otherwise noted, the estimates in this testimony are from CRS Report R41753, *International Corporate Tax Rate Comparisons and Policy Implications*, by Jane G. Gravelle.

of no more than ½ of 1%. Labor income would be projected to rise by the same proportion.

It is possible that the estimate is too large because it does not take into account debt finance, which could easily turn a small output increase into a reduction. Because debt finance is subsidized at the firm level, lowering the corporate income tax would reduce the subsidy. Assuming that debt is more mobile across countries than equity, the lower rate could reduce capital inflows into the United States.[4] A second reason the output effect may be overstated is that other countries might react by lowering their own tax rates, offsetting the initial effects. Finally, these estimates measure effects after the capital stock has adjusted (the long run) and would not be achieved in the short run.

These numbers are small, but they should be no surprise, because the corporate tax is small as a percent of U.S. overall output. This revenue loss from this rate reduction is only 6/10 of 1% of output. Why would we expect such a small change to have broad implications for production?

The gain in output is small, but the gain in income to U.S. citizens is even smaller. This result follows because part of the gain is income to the foreign suppliers of capital, and part of it is already income to multinationals who might bring some of their foreign capital back to the United States. The basic net gain for the United States is the taxes collected on the induced capital flows that would otherwise not be collected, but that amount is offset by the loss on the existing stock. Overall, this net gain is estimated to be less than 10% of the output gain, or 2/100 of 1% of total U.S. output.

[4] This effect was found in a model simulation Harry Grubert and John Mutti. (1994).“International Aspects of Corporate Tax Integration: The Role of Debt and Equity Flows.” *National Tax Journal*, vol. 47, 1994, pp. 111–133.

Concerning the effects of corporate income tax rate reductions on workers, the results focus on the effects on labor income rather than on jobs. In the long run, there is no need to undertake policies to produce jobs, as the economy will create jobs naturally. Increased capital accumulation would, however, increase labor income.

Labor income would be projected to rise by a similar proportion as output, less than 2/10 of 1%. This calculation indicates that labor receives about 20% of the revenue loss from the rate reduction.[5] Labor income, however, will be responsible for most of the feedback effect on revenues discussed in the next section so labor will receive a smaller share of the net revenue loss. Moreover if consideration of debt or of other countries' cutting their own rates are taken into account, the labor benefit would be smaller, or the rate cut could cause labor income to fall.

Revenue Effects, Revenue Feedback Effects, and Use Of Corporate Form as a Tax Shelter

A reduction in the corporate tax rate would cost over $100 billion a year and thus involves a significant revenue cost.[6] Based on the analysis of output increases, additional

[5] The actual percentage increase is 0.15 %, which if multiplied by the labor share of income (76%) and divided by the tax cut as a percent of output (0.6%), results in 20%. The same result is estimated directly in the model simulations for eliminating corporate taxes. There have been a number of studies that have claimed a larger share of the burden falls on labor. The maximum share given the size of the United States economy under assumptions of infinite substitutability of products and portfolios would be about 70%, but evidence suggests that these assumptions are unrealistic. The empirical studies, some of which found implausible shares, in some cases have had serious flaws, in some cases don't find a statistically significant negative effect on labor, and in some cases are measuring rent sharing which is largely unimportant in the United States. These studies are discussed in CRS Report RL34229, *Corporate Tax Reform Issue for Congress*, by Jane G. Gravelle and Thomas L. Hungerford.

[6] The CRS report estimated a loss of $116 billion per year over a ten year period, based on multiplying 10/35 by projected revenues, with increases to account for the fact that the tax is after credits, to at least $120 billion. The CBO budget options study reports Joint Committee on Taxation estimates that suggest smaller effect based a one percentage point increase, which would be, adjusting for one partial year and multiplying by 10 of $104 billion. See Congressional Budget Office *Reducing the Deficit: Spending and*

revenues on the induced output would offset about 5% to 6% of the revenue loss. Most of these taxes are not increased corporate taxes, but increased individual taxes (income and payroll) on wage income, which would increase by the same percentage as output. These effects would also be expected to be overstated based on the same factors that may overstate the output effects (debt, other countries' reactions, and adjustment periods). In addition, most of the feedback comes from labor income and may be overstated to the extent that increased labor income could include non-taxable sources, such as fringe benefits or deductions.

There are empirical studies that have claimed to find much larger feedback effects on revenue, although the results are fragile on several grounds. These studies suggest a revenue maximizing tax rate of around 30% which would imply that cutting corporate tax rates would have little effect on revenues or slightly raise them. These relationships are sometimes referred to as Laffer curves. One study found this effect only for small countries with large trading sectors and suggested that the rate for the United States would be more like 60%. A CRS report that reviewed this research found that results of these studies were no longer statistically significant when certain methodological problems were addressed.[7]

That CRS report also demonstrates that it is not feasible to have a revenue maximizing corporate tax rate below about 80%, based on real capital flows. If there are significantly larger revenue feedbacks, they would arise not from capital flows but from profit shifting. However, international profit shifting does not seem large enough to offset

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Revenue Options http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12085/03-10-reducingthedeficit.pdfp. 173. It is possible that increases and decreases are not symmetric due to the interaction with credits.

[7] CRS Report RL34229, *Corporate Tax Reform Issues for Congress*, by Jane G. Gravelle and Thomas L. Hungerford.

more than about 15% to 20% of the revenue loss even under the optimistic assumption that profit shifting declines proportionally with the tax rate. Companies, however, tend to shift profits to very low tax jurisdictions, as the cost of profit shifting does not depend on the rate differential. As an illustration, the "double-Irish, Dutch sandwich" arrangement that Google set up for its European operations not only moved the operation from the United States to Ireland, with a 12.5% tax rate, but also took advantage of a provision in Irish law to move the profits to Bermuda, with a 0% tax rate.[8] Thus, lowering the U.S. rate from 35% to 25% may not have much effect.

Another source of artificial profit shifting might occur within the United States, as the lower corporate rates cause higher income individuals to reorganize their businesses in the corporate form. If the individual top tax rate is 35% or 39.6% and the corporate rate is 25%, then unincorporated businesses may shift into the corporate form.[9] This sheltering already exists to some extent for small firms due to the graduated rates of the corporate tax, but a lower rate would make this form attractive for large partnerships and Subchapter S firms. Individuals with a large income who can retain profits in a corporation could see their taxes lowered by 10 to 15 percentage points.

The protection of the individual tax base from this type of manipulation has, historically, been a major justification for a corporate tax. There are rules for preventing

[8] This arrangement involves the U.S. parent setting up two Irish subsidiaries, a holding company and a sales subsidiary, with a Dutch subsidiary sandwiched in between the holding and sales companies to avoid Irish withholding taxes on royalties. This arrangement also largely avoids Irish corporate income taxes by eventually passing most of the profits (as royalties) to the Irish holding company which has a Bermuda domicile based on management and control of the holding company in Bermuda as permitted under Irish law. See Jesse Drucker, "Google 2.4% Rate Shows How $60 Billion Lost to Tax Loopholes," *Bloomberg,* Oct. 21, 2010, posted at http://www.bloomberg.com/news/2010-10-21/google-2-4-rate-shows-how-60-billion-u-s-revenue-lost-to-tax-loopholes.html.

[9] CRS Report R40748 *Business Organizational Choices: Taxation and Responses to Legislative Changes*, by Mark P. Keightley, discusses the evidence that organizational form is sensitive to relative tax levels, noting the shift towards corporate form in the 1980s when individual taxes were lowered relatively more than corporate rates.

excessive accumulation of income in corporations dating from the period when corporate tax rates were significantly lower than individual rates, but these rules have not been very effective. Moreover, if dividends continue to be taxed at 15%, significant distributions could occur while still conferring a tax advantage to the corporate form.[10]

To the extent that this domestic profit shifting occurs, corporate revenues may be offset, but overall revenues losses would be even larger because this profit originally taxed under the individual income tax would now be taxed at a lower rate.

Some revenue feedback could also occur through shifting out of debt and into equity finance. The evidence suggests relatively low substitutability between debt and equity.[11] Moreover, as noted earlier, a rate cut and the reduced corporate demand for debt may reduce inflows of foreign debt capital which appears relatively mobile, with the desired change in ratio from the corporation's viewpoint occurring without actually increasing existing equity capital.

This analysis suggests that revenue feedback effects would be quite small and could even magnify the revenue loss rather than offsetting it. Effects arising from real capital flows are likely to be small and of uncertain direction. Little reduction in international profit shifting would be expected and domestic profit shifting could increase the cost. The effect of debt-equity shifts is likely to be small.

One effect that would be more certain is that the revenue loss itself, if not offset elsewhere, would expand the deficit and reduce the capital stock (as well as increasing costs through accumulated interest.) Over a ten year period, interest costs are estimated to increase effects on the deficit by 25% and after ten years, the crowding out effect is

[10] See CRS Report RL34229, *Corporate Tax Reform Issue for Congress*, by Jane G. Gravelle and Thomas L. Hungerford for further discussion.
[11] *Ibid.*

estimated to reduce output by more than twice as much as the output increase due to international capital flows. This crowding out effect would increase the revenue loss by 15% to 23%.[12]

It is possible to envision some corporate base broadening that would offset the revenue loss from a rate cut. However, even if every corporate tax expenditure were eliminated, this base broadening would probably only finance a rate reduction to between 29% and 30%. In addition, these changes are likely to increase the tax burden on marginal investment, which could reverse the effects of international capital flows. It would, however, be possible to reduce tax rates and induce some capital inflow in a revenue neutral revision by increasing the tax burden on foreign source income. For example, ending deferral of tax on foreign source income and imposing a per country limit on the foreign tax credit would allow a four percentage point reduction and should induce capital flows into the United States both because of the rate reduction and because foreign investment would be less attractive.[13]

Economic Distortions

Economists traditionally criticize the corporate income tax due to the distortions it produces through the misallocation of capital and output, and distortions of financial

[12] CRS Report R41753, *International Corporate Tax Rate Comparisons and Policy Implications*, by Jane G. Gravelle.

[13] See CRS Report R41753, *International Corporate Tax Rate Comparisons and Policy Implications*, by Jane G. Gravelle for a discussion of base broadening options. Also see Statement of Jane G. Gravelle Before the Committee on Finance, United States Senate, March 6, 2012, on Tax Reform Options: Incentives for Capital Investment and Manufacturing for estimates of the effects on tax burdens of offsetting a rate reduction with depreciation http://finance.senate.gov/imo/media/doc/Testimony%20of%20Jane%20Gravelle.pdf. Some types of changes, such as substituting slower depreciation for a rate reduction based on static revenue neutral estimates would likely reduce economic output and perhaps result in a small revenue loss. The revenue neutral substitution of increased taxation of foreign source income for a rate cut would be more likely to induce inflows and a small revenue gain. Neither would likely be large relative to the economy.

deductions (which, in the past, were projected to be a significant share of the revenue collected). The corporate tax causes too much capital to be allocated to incorporated business and housing, affecting productive efficiency and the mix of output. It also favors debt over equity finance, thus affecting the risk-bearing choices in the economy.

The size of these distortions, however, has declined significantly over time, because the corporate tax rate is low by historical standards. In 1953 the corporate tax was 5.6% of output and 30% of revenues; currently, the tax is about 2% of output and 9% of revenues, a decline of about two thirds. Currently, the distortions are estimated to be about ¼ of 1% of output and 10% to 15% of revenues. A reduction in the rate by ten percentage points would be projected to reduce this distortion by about one half.[14]

Most of these tax induced distortions are not related to inefficient production of goods which would arise from distorting capital-labor ratios (lowering them in the corporate sector and raising them in other sectors). Rather most of the cost of distortions arises from distorting risk-taking by investors by encouraging too much debt and substituting non-corporate goods, particularly owner-occupied housing, for corporate goods. About half of the distortion is due to favoring debt over equity finance. It would be possible to reduce or even eliminate this distortion with revenue neutral changes such as reducing the tax rate and disallowing a portion of interest deductions. Reducing deductions for interest has been proposed in the Bipartisan Tax Fairness and Simplification Act of 2011 , S. 727, sponsored by Senators Wyden, Begich, and Coats. Similarly, most of the remaining distortion arises from the essentially zero rate of tax on

[14] The distortion, or deadweight loss, rises by the square of the tax rate, so that while reducing the rate from 35% to 25% would lose about 30% of total revenue, it would reduce the distortion by almost a half. This same relationship is the reason for the significant reduction in the cost of distortions with reductions in the corporate tax rate over time, which is larger proportionally than the decline in average tax revenues.

owner occupied housing. Restrictions of benefits for owner-occupied housing, such a cutting back on mortgage interest and property tax deductions, could be used to offset corporate rate reductions if this distortion is the major concern.