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The Long-Run Economic Effects of Raising the Corporate Tax Rate to 28 Percent

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KEY TAKEAWAYS

A corporate tax rate of 28 percent will reduce long-run GDP by about 0.96 percent, or about $1,650 per American household.

The higher tax rate harms both shareholders and workers. Wages will fall by about 1.27 percent as less investment lowers productivity.

The best policy to promote prosperity for all households in the United States is to keep taxes low, and spending in line with revenue.

In March, the White House announced the American Jobs Plan—a proposal to spend $2 trillion on infrastructure and other projects—paid for by an increase in the corporate income tax rate from 21 percent to 28 percent.[1] As lawmakers consider the merits of the proposal, it is helpful to review important aspects of how corporate taxation affects economic activity and to give an estimate of the effects of the higher tax rate.

The estimate presented here uses a simple set of elasticities to give lawmakers an idea of the effect that a seven-percentage-point increase in the corporate tax rate would have on incomes. I estimate that the proposed increase in the corporate income tax would reduce long-run[2] gross domestic product (GDP) by about 0.96 percent, or about $1,650 per household.[3]

User Cost of Capital

The standard way to analyze corporate tax rates is to look at the user cost of capital. The user cost of capital measures the cost to a firm associated with making use of an additional dollar of investment in capital goods. It is primarily related to how much the firm pays debt holders and equity holders for funding the project, but also includes the cost of depreciation, the corporate income tax rate, and the present value of income deductions from investment spending.

The user cost of capital is a key number in business financial planning. When considering a new investment project, such as opening a new store or new factory, a corporate finance department will estimate the new revenues that the project would generate. From the revenues, the department will subtract the cost of intermediate goods and wages and salaries for workers that are needed to run the project, leaving an operating surplus. If the operating surplus relative to the cost of investment is larger than the user cost of capital, the project gets funded. Increasing the corporate tax increases the cost of capital, which means that fewer projects will get funded, or those that do, will be smaller.

Who Pays the Tax?

Economic theory shows that the actual costs of taxation are not necessarily borne by whoever statutorily pays the tax. This is because taxes raise costs, and people adjust their behavior in response to the new cost. The exact shares of the burden that fall on capital and labor are a point of debate in the literature, but there is agreement that it is not just corporate shareholders that pay the tax.[4]

Corporate tax rates may affect wages because workers rely on capital to perform their jobs. Workers with newer or improved equipment, or places to work, are more productive and can command a higher salary. If the corporate tax causes firms to reduce their investment and operate with less capital, they will pay lower wages as a result. When capital is more mobile, the reduction in wages from this channel is larger. In today's global economy, it is easy for firms to redirect investment away from jurisdictions with high taxes into jurisdictions with low taxes.

The Effects on Output

The proposed increase in the corporate tax rate will affect both the amount of capital and labor available for use in economic production. The increase in the user cost of capital leads to a decline in the stock of

equipment of about 1.24 percent, and a decline in the stock of structures by about 4.20 percent.[5] With less capital available, output should fall by about 0.73 percent.

Additionally, the smaller capital stock leads wages to fall by about 1.27 percent, so fewer people choose to work, or those who do decide to work, decide to work fewer hours. The lower wages imply that total hours fall by about 0.38 percent. For a full-time worker earning the U.S. median of $52,000,[6] the drop in wages and hours corresponds to a reduction in income of about $840 per year. With fewer hours worked, output falls by 0.23 percent.

In total, less capital and fewer hours worked reduce output by about 0.96 percent. Using GDP in the fourth quarter of 2020 as a reference, that corresponds to $206 billion, or about $1,650 per household.[7]

For the sake of argument, suppose that federal revenue under the current corporate income tax rate is $240 billion a year,[8] and assume that revenue increases to $320 billion following an increase in the rate from 21 percent to 28 percent.[9] The additional $80 billion in revenue[10] is still smaller than the income lost as corporations respond to the higher tax rate.

Additional Considerations

The estimate presented here assumes that the share of capital held by firms subject to the corporate tax remains constant. There are several legal forms that a firm can use, but only C corporations are subject to the corporate income tax. Other types of businesses, including S corporations, are not subject to the corporate income tax and report profits on shareholders' personal income taxes where they are taxed only once. The trade-off is that S corporations and partnerships are limited in the number of shareholders that can buy into the corporation.

Thus, the bigger the difference between the corporate income tax rate and the personal income tax rate, the bigger the incentive for firms to use other legal forms to avoid the corporate tax. Indeed, in recent years when the corporate tax rate was higher, more firms filed as S corporations and partnerships than as C corporations.[11] The extent to which tax rates affect firms' type of incorporation may result in a smaller decrease in output than estimated here.

But, the more firms file as pass-through entities, the fewer people have the opportunity to build wealth in capital markets. C corporations have no limit on the number of shareholders and often raise capital by issuing equity in public markets. Given the limitation on shareholders, S corporations

and partnerships look to sell equity to private investors with deep pockets. Limiting the number of potential investors depresses equity prices, hurting the entrepreneurs trying to scale their companies, while benefiting those who already have deep pockets.

Recommendations for the Administration and Congress

The proposal to raise the corporate income tax is motivated in part by a desire to pay for $2.65 trillion in spending over the 10-year budget window.[12] Many of the provisions in the American Jobs Plan, such as building energy-efficient housing and producing electric vehicles, are things that the private sector is already doing. Providing public funding for those activities and raising corporate taxes merely produces the same goods at a higher cost.

Taxes lead to market distortions and inefficiencies as households and businesses adjust to the costs that they impose. The reduction in trade benefits no one, as the government cannot collect tax revenue on income that is not produced.[13] The best policy to promote prosperity for all households in the United States is to keep taxes low and to keep spending in line with revenue.

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Appendix: Methodology

The methodology behind the estimate presented here is very similar to that used in a previous Heritage Foundation *Issue Brief* on the Tax Cuts and Jobs Act (TCJA).[14]

This estimate expands on the previous method to account for the change in wages due to a smaller capital stock. I use the point estimate reported by Kevin Hassett and Aparna Mathur that a 1 percent increase in the capital-to-labor ratio leads to a 0.45 percent increase in wages.[15] The capital-to-labor ratio is based on private non-residential fixed assets reported by the Bureau of Economic Analysis and on work hours in the private non-farm sector reported by the Bureau of Labor Statistics.

Ordinarily, corporations deduct the cost of investment as its value depreciates over its service lifetime rather than all at once at the time that the investment is made. The TCJA enacted a temporary period of "full expensing," where the full cost of new investment is deductible in the year it is made, with bonus depreciation phasing out before being eliminated in 2026. Given that the long-run estimates presented here describe a situation after complete adjustment to a policy change, I assume that bonus depreciation has expired. If the bonus depreciation were kept in place, it would lower the cost of capital and increase the size of the long-run capital stock, and therefore increase output.

Endnotes

1. News release, "Fact Sheet: The American Jobs Plan," The White House, March 31, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/ (accessed April 9, 2021).
2. The long run is considered a steady state equilibrium, where the effects of policy changes are fully incorporated and capital per effective worker is constant.
3. Based on 2020:Q4 GDP. The dollar amount of the change in income will grow with productivity and inflation.
4. For a recent review of the literature with an application to the Tax Cuts and Jobs Act (TCJA), see A. J. Auerbach, "Measuring the Effects of Corporate Tax Cuts," *Journal of Economic Perspectives*, Vol. 32, No. 4 (2018), pp. 97–120.
5. The larger decline for structures is primarily due to their longer service life. Because firms have to wait longer to claim the deduction, the present value of the exemption is lower. More income from investing in structures is subject to the tax, so firms are more sensitive to the tax rate when investing in structures. At the extreme end of the range, the corporate tax rate makes no difference to the cost of capital when firms can deduct the full value of the investment in the year it is made ("full expensing").
6. Jessica Semega et al., "Income and Poverty in the United States: 2019," U.S. Census Bureau, September 15, 2020, https://www.census.gov/library/publications/2020/demo/p60-270.html (accessed April 13, 2021).
7. This is an average calculated by dividing the dollar change in GDP by approximately 125 million households. Depending on how much income is derived from accumulated savings or from labor, a given household may see a larger or smaller decrease in income.
8. Federal corporate tax revenue has been below $240 billion since the passage of the TCJA, so this assumption overstates the increase in tax revenue.
9. If firms adjust their operations to reduce income, the amount raised would be lower. In the years preceding the TCJA under the previous statutory corporate tax rate of 35 percent, revenue ranged between about $300 billion and $350 billion.
10. For comparison, the Tax Foundation estimates higher revenue by between $60 billion and $102 billion per year using a conventional score, and $55 billion to $70 billion per year using a dynamic score for the period from 2022 to 2031. See Garrett Watson and William McBride, "Evaluation Proposals to Increase the Corporate Tax Rate and Levy a Minimum Tax on Corporate Book Income," Tax Foundation, February 24, 2021, https://taxfoundation.org/biden-corporate-income-tax-rate/ (accessed April 9, 2021).
11. William McBride, "America's Shrinking Corporate Sector," Tax Foundation, January 6, 2015, https://taxfoundation.org/america-s-shrinking-corporate-sector/ (accessed April 11, 2021).
12. Committee for a Responsible Federal Budget, "What's in President Biden's American Jobs Plan?" April 2, 2021, https://www.crfb.org/blogs/whats-president-bidens-american-jobs-plan (accessed April 9, 2021).
13. Technically speaking, the reduction in welfare from lost gains in trade is referred to as deadweight loss. Deadweight loss measures the increase in welfare that would have accrued to producers or consumers, but did not happen because the gain from trade was not high enough to pay for the tax levied on it.
14. Parker Sheppard and David Burton, "How the GOP Tax Bill Will Affect the Economy," Heritage Foundation *Issue Brief* No. 4789, November 28, 2017, https://www.heritage.org/sites/default/files/2017-11/IB4789.pdf.
15. Kevin A. Hassett and Aparna Mathur, "A Spatial Model of Corporate Tax Incidence," *Applied Economics*, Vol. 47, No. 13 (2015), pp 1350–1365, https://www.tandfonline.com/doi/abs/10.1080/00036846.2014.995367 (accessed April 13, 2021).