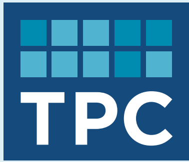

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The Macroeconomic Effects of Taxes

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> This year, Congress will consider what may be the biggest tax bill in decades. This is one of a series of briefs the Tax Policy Center has prepared to help people follow the debate. Each focuses on a key tax policy issue that Congress and the Trump administration may address.

Tax policy can affect the overall economy in three main ways: by altering demand for goods and services; by changing incentives to work, save and invest; and by raising or lowering budget deficits. The macroeconomic effects of taxes are important because they can affect people's well-being, although those effects do not always directly correspond to the effects on measured economic output. Macroeconomic changes also influence the amount of revenue a tax system raises, through so-called dynamic effects. However, evidence suggests that those dynamic effects are generally modest.

Tax policy directly affects the economy by shifting demand for goods and services. This "Keynesian" effect, however, is temporary and lasts a few years at most, after which the economy will return to its underlying sustainable level.

Tax cuts boost after-tax income. People typically spend some of the additional income, raising demand for goods and services. Firms respond to the increased demand by expanding production. A tax increase has the opposite effect. Tax policy can also change firms' cash flow or incentives to invest and consequently alter demand for investment goods.

Indirect effects can supplement or offset the direct effects of tax policy on demand. For example, increased spending by people getting tax cuts becomes income for others, who in turn increase their spending. Similarly, when firms expand their workforce to meet increased demand, the newly hired workers may further boost demand and thus further raise output.

On the other hand, the Federal Reserve could act to offset the tax cut's effects. If the Federal Reserve decides that increased demand will cause prices to rise too much, it may raise interest rates to dampen demand. Higher interest rates discourage people from buying homes or consumer durables such as cars and discourage firms from investing in capital goods such as machinery or computers. That reduced demand will offset the positive effect of the tax cut on output. (Similarly, policies that reduce demand tend to lead the Federal Reserve to reduce interest rates, encouraging spending by people and firms and offsetting the initial reduction in demand).

How much a tax cut would affect demand depends on whose taxes are cut. Low-income people typically spend most or all of their tax savings, so tax cuts targeted toward them have a relatively large effect on demand. In contrast, higher-income people may save a significant portion of a tax cut, particularly if the cut is temporary, so the effect on demand of tax cuts targeted toward them would be relatively smaller.

As mentioned above, a tax cut's effect on demand tends to be temporary, limited to a few years at most. Long-run output is determined by the amount of labor that workers supply, the size of the capital stock (productive goods such as factories, machinery, or computers), and the state of technological progress. Over time, the actions of the Federal Reserve and the natural equilibrating forces of the economy tend to return output to that sustainable level.

Tax policy can shift the economy's sustainable output over the long run by changing incentives to work, save, and invest. Those effects depend in part on marginal tax rates, or the tax rate on an additional dollar of income. A person who works an additional hour earns the after-tax wage—the prevailing hourly wage minus the marginal tax rate on additional wages. Reducing that marginal tax rate raises the after-tax wage, which can encourage the person to work more (the "substitution effect"). At the same time, however, the higher after-tax wage means the person can work fewer hours and take home the same after-tax income. That discourages additional work (the "income effect"). Which effect dominates depends on the specifics of the tax cut.

Tax rates affect the incentive to save in much the same way. A lower tax rate on capital income—interest, dividends, rents, and other income earned on assets—encourages additional saving and investment by raising the after-tax return. The increased investment boosts the size of the capital stock and expands the productive capacity of the economy.

Tax provisions can also distort how investment capital is deployed. Our current tax system, for example, favors housing over other types of investment. That favorable treatment likely leads to overinvestment in housing and reduces economic output and social welfare. Tax policy can also affect the economy by promoting technological progress, such as through a tax credit for research and development.

Tax policy also affects the economy through its effect on the government's budget deficit. A reduction in tax revenues increases the deficit (all else equal). A larger deficit implies increased government borrowing, which reduces the funds available for private investment—savings that would otherwise go to private investment are instead used to purchase government debt. Absent changed policy, an initial increase in the deficit can spiral upward over time as government debt climbs. Rising debt pushes interest rates up as the government competes with private sector firms for scarce funds. Increased debt combines with higher interest rates to raise the government's cost for debt service, pushing the deficit and debt higher still. Eventually, the deficit effects tend to

dominate the positive economic effects of the tax cut. Tax cuts need not have adverse budget (and hence macroeconomic) effects. For example, a tax reform that reduced marginal rates but kept average rates the same would increase the incentive to work and save and therefore boost output. That higher output would imply greater taxable incomes, meaning that the same average rates would raise more revenue.

Revenue estimates that account for the macroeconomic effects of tax proposals are often referred to as "dynamic" to distinguish them from conventional estimates that assume a fixed macroeconomic baseline. (Conventional estimates do incorporate many behavioral effects, just not ones that affect macroeconomic variables, such as overall output, unemployment, inflation, and interest rates).

Some people argue that estimates of the macroeconomic effects of tax legislation are too uncertain to contribute meaningfully to revenue projections. While uncertain, however, the macroeconomic effects are unlikely to be zero, so ignoring them entirely would likely omit useful information.

But experience suggests that the macroeconomic effects on revenue are unlikely to be large. Conventional projections (i.e., those that ignore macroeconomic effects) of tax proposals that were subsequently enacted do not appear to differ much from actual outcomes. That is, conventional analyses of tax changes have not consistently overestimated either the revenue losses from tax cuts or the revenue gains from tax increases, as would be expected if tax changes had large macroeconomic effects. That may be in part because large tax changes likely have many different and often-offsetting effects on the economy. And because aspects of the economy are constantly changing, accurately measuring the revenue effects of tax legislation, including macroeconomic effects, even after the fact, is difficult if not impossible.

In 2016, the Tax Policy Center published its first dynamic analyses, partnering with the Wharton School of the University of Pennsylvania to analyze the tax plans of presidential candidates Hillary Clinton and Donald Trump. Those analyses found only modest dynamic effects on estimated revenue, largely because any incentive effects were eventually outweighed by the effect on budget deficits. In Clinton's plan, the macroeconomic effects of reduced incentives to work and save were eventually outweighed by the increase in saving and investment from lower budget deficits. In Trump's plan, increased incentives to work and save were eventually outweighed by the reduced saving and investment from much higher budget deficits.

The macroeconomic effects of tax legislation are a relevant consideration for policymakers and the public in judging tax proposals. One goal of tax legislation is to boost the economy, and that goal may be especially relevant during recessions. But the importance of tax policies' macroeconomic effects can be overstated. The United States has, by and large, a well-functioning economy, with fluid labor markets, well-developed capital markets, and a strong rule of law. Given that strong base, changes in tax law on the scale of those that have been enacted in the past will tend to affect the economy at the margins rather than fundamentally. More basic considerations in evaluating tax policy concern the level of tax revenues to be collected and the distribution of the tax burden across different households and firms—in other words, how much money the tax system raises and who pays it.