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MACROECONOMIC ANALYSIS OF THE TAX CUTS AND JOBS ACT AS PASSED BY THE SENATE

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The Tax Policy Center has released an analysis of the macroeconomic effects of the Tax Cuts and Jobs Act as passed by the Senate on December 2, 2017. We find the legislation would boost US gross domestic product (GDP) 0.7 percent in 2018, have little effect on GDP in 2027, and boost GDP 0.1 percent in 2037. The resulting increase in taxable incomes would reduce the revenue loss arising from the legislation by $186 billion from 2018 to 2027 (around 13 percent). Because most of the tax cuts expire after 2025, we expect deficits (not including interest costs) would decline from 2028 to 2037, and macroeconomic feedback would boost the deficit savings by $34 billion over that interval. Including macroeconomic effects and interest costs, the legislation is projected to increase debt as a share of GDP over 5 percentage points in 2027 to 96 percent of GDP, and over 4 percentage points in 2037 to 117 percent of GDP.

The Tax Cuts and Jobs Act (TCJA), introduced on November 9, 2017, and passed by the Senate on December 2, 2017, would make major changes to the individual and corporate income taxes, estate and gift taxes, and certain federal excise taxes, and it would repeal the Affordable Care Act's individual mandate.[1]

The Tax Policy Center has analyzed the macroeconomic effects of the legislation. We find the following:

- The legislation would increase GDP relative to the Congressional Budget Office baseline projection 0.7 percent in 2018 and by diminishing amounts in subsequent years. The increase in GDP would be 0.1 percent in 2037.

[1] This analysis is based on the version of the Tax Cuts and Jobs Act as passed by the Senate on December 2, 2017. Descriptions of the bill as introduced and modified are available at JCX-51-17 and JCX-56R-17, and the revenue changes from the bill as passed by the Senate is available at JCX-63-17 on the Joint Committee on Taxation's website. The Tax Policy Center released a distributional analysis of this bill on December 4, 2017; see http://www.taxpolicycenter.org/publications/distributional-analysis-tax-cuts-and-jobs-act-passed-senate.

- The increase in output would boost revenues, offsetting roughly one-fifth of the increase in deficits projected under the legislation over two decades without accounting for macroeconomic feedbacks.
- Macroeconomic feedback would reduce the projected effect of the legislation on the size of the national debt 0.8 percent of GDP in 2027 and 0.9 percent of GDP in 2037, relative to the projected levels under conventional revenue-estimating methods.

EFFECTS ON OUTPUT

The proposed legislation would affect output primarily through its influence on aggregate demand, labor supply, and saving and investment.

Aggregate Demand

The legislation would increase aggregate demand (and therefore economic output) in two main ways. First, it would reduce average tax rates for most households over the first few years after enactment, increasing after-tax incomes. Households would spend some of that additional income, increasing demand for goods and services. These economic benefits would be modest because most tax reductions would accrue to high-income households, who spend a smaller share of any increases in after-tax income than do lower-income households. Second, by allowing businesses to elect to immediately deduct (expense) new investment over the next five years, the legislation would encourage firms to increase their near-term investment, further increasing demand. The boost in demand would raise economic output relative to its potential level for several years until higher interest rates and prices cause output to return to its long-term potential level. Because the economy is currently near full employment, the impact of increased demand on output would be smaller and diminish more quickly than it would if the economy were in recession.

Labor Supply

The legislation would modestly reduce effective tax rates on labor income (i.e., wages and salaries for employees and self-employment income for others) through 2025, primarily by reducing marginal income tax rates for most workers. The resultant increase in the after-tax wage rate would increase labor supply, mostly by encouraging lower-earning spouses to enter the work force or work additional hours. This effect would be reversed after 2025 because the expiration of most individual income tax provisions, together with the retention of slower indexation of tax brackets, would raise marginal tax rates and reduce labor supply.

Saving and Investment

Largely because the plan would reduce the corporate income tax rate and temporarily allow businesses to expense investment, the legislation would significantly increase the after-tax returns of saving and investment. That would encourage saving, foreign capital inflows, and investment.

Although the legislation would increase incentives to save and invest, it would also substantially increase federal budget deficits through 2025. Higher budget deficits would push up interest rates, which would discourage investment. After 2025, the legislation is projected to reduce federal budget deficits, pushing down interest rates and encouraging investment.

Output

Taking all these effects into account, we estimate that the legislation would boost GDP 0.7 percent in fiscal year 2018, mostly because of its effect on aggregate demand (table 1). The estimated boost to output diminishes over the first few years primarily because the effects of aggregate demand fade and are not fully offset by the increase in labor supply

and the increase in the capital stock from increased investment. The boost to output drops sharply after 2025 primarily because the expiration of most individual income tax provisions increases marginal tax rates on labor income, reducing labor supply. By 2027, the legislation would have little effect on GDP, and in 2037 it would raise GDP 0.1 percent. The effect on GDP rises slightly over the second decade primarily because lower projected federal budget deficits boost investment.

TABLE 1

Dynamic Effects of the TCJA on GDP as Passed by the Senate

FY 2018–37

	Fiscal Year										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2037
	GDP ($ billions)										
Before macroeconomic feedback	19,926	20,661	21,378	22,168	23,037	23,948	24,899	25,889	26,917	27,985	41,419
After macroeconomic feedback	20,056	20,782	21,475	22,271	23,163	24,084	25,038	26,030	26,950	27,996	41,450
	Percentage change in GDP caused by macroeconomic feedback										
	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.5	0.1	0.0	0.1

Source: The GDP forecast through 2027 is from CBO, *The Budget and Economic Outlook: 2017 to 2027* (January 2017) and for 2028–37 is from CBO, *The 2017 Long-Term Budget Outlook* (March 2017); macroeconomic feedback estimated using TPC's macroeconomic models.
Note: CBO = Congressional Budget Office; GDP = gross domestic product.

EFFECTS ON THE BUDGET

The increase in output from the legislation would raise taxable incomes for individuals and businesses. That would in turn alter the impact of the proposal on the federal budget deficit, reducing it (relative to the impact before macroeconomic feedback) by $26 billion in fiscal year 2018 without including interest costs. Between 2018 and 2027 the estimated feedback effect is a cumulative $186 billion, and between 2028 and 2037 it is a cumulative $34 billion (table 2). Macroeconomic feedback effects would reduce the increase in the federal budget deficit from the plan about 13 percent over the first decade and boost estimated deficit reduction by about 13 percent over the second decade. Over the full 20 years, it would reduce the increase in the federal deficit as conventionally estimated by about 18 percent.

TABLE 2

Deficit Effects of Tax Proposals in the TCJA as Passed by the Senate

Billions of dollars, fiscal years 2018–37

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2018–27	2028–37
Increase in deficit without macroeconomic feedback or interest costs	32	220	246	218	201	183	164	156	59	-34	1,447	-266
Impact of macroeconomic feedback on the deficit without interest costs	-26	-23	-17	-18	-22	-24	-24	-25	-6	-2	-186	-34
Increase in deficit with macroeconomic feedback and without interest costs	5	197	229	199	179	160	140	131	54	-36	1,260	-300

Sources: Joint Committee on Taxation (JCT) and Urban-Brookings Tax Policy Center (TPC) macroeconomic models.
Notes: Estimates without economic feedback for fiscal years 2018–27 are from JCT, *Estimated Revenue Effects of the "Tax Cuts and Jobs Act," as Passed by the Senate on December 2, 2017 (JCX-63-17)*; estimates for fiscal years 2028–37 are TPC calculations based on extensions of JCT estimates. Estimates of impact on the deficit caused by macroeconomic feedback are calculations using TPC's macroeconomic models.

EFFECTS ON DEBT

The legislation would have an additional effect on deficits and the national debt because of its impact on debt service. Dynamic effects would alter that additional impact by reducing the size of the projected additions to federal debt and by increasing interest rates. Dynamic effects reduce the impact on the primary (or noninterest) deficit and therefore also reduce the amount of additional debt that accumulates and, consequently, the additional debt service costs. That effect is offset modestly because the legislation is projected to increase interest rates (and therefore the debt service cost per dollar of debt) over the first decade. Over the second decade, the legislation is projected to reduce interest rates and

debt service costs per dollar of debt. Interest rates are projected to rise in the short term because the legislation would boost aggregate demand and output, leading the Federal Reserve to increase interest rates to avoid a surge in inflation. Interest rates are projected to fall after 2025 because reduced government borrowing would lower demand for savings, pushing down the price of borrowing (interest rates). We project that including additional interest costs, but not including macroeconomic feedbacks, the legislation would increase US debt by about $1.7 trillion (or 6.1 percent of GDP) in 2027 and by about $2.0 trillion (or 4.9 percent of GDP) in 2037. Including macroeconomic effects, the projected impact on the debt would fall to about $1.5 trillion (or 5.4 percent of GDP) in 2027 and about $1.7 trillion (or 4.1 percent of GDP) in 2037 (table 3). Compared with debt level projections using conventional revenue-estimating methods, macroeconomic effects reduce the increase in the amount of federal debt about 0.7 percent of GDP in 2027 and about 0.8 percent of GDP in 2037.

TABLE 3

Effects of the TCJA on Debt Service Costs as Passed by the Senate

Trillions of dollars

	2018–27	2028–37
Increase in deficit without interest costs		
Without macroeconomic effects	1.4	(0.3)
With macroeconomic effects	1.3	(0.3)
Increase in interest costs		
Without macroeconomic effects	0.3	0.6
With macroeconomic effects	0.2	0.5
Increase in deficit		
Without macroeconomic effects	1.7	0.3
With macroeconomic effects	1.5	0.2
Increase in federal debt (end of period)		
Without macroeconomic effects	1.7	2.0
With macroeconomic effects	1.5	1.7
GDP (last year of period)		
Without macroeconomic effects	28.0	41.4
With macroeconomic effects	28.0	41.4
Increase in ratio of federal debt to GDP (end of period, in percentage points)		
Without macroeconomic effects	6.1	4.9
With macroeconomic effects	5.4	4.1

Sources: Joint Committee on Taxation (JCT) and Urban-Brookings Tax Policy Center (TPC) Macroeconomic Models.
Note: GDP = gross domestic product. Estimates without macroeconomic effects for fiscal years 2018–27 are from JCT, *Estimated Revenue Effects of the "Tax Cuts and Jobs Act," as Passed by the Senate on December 2, 2017* (JCX-63-17); estimates for fiscal years 2028–37 are TPC calculations based on extensions of JCT estimates. The GDP forecast without macroeconomic effects through 2027 is from CBO, *The Budget and Economic Outlook: 2017 to 2027* (January 2017) and for 2028–37 is from CBO, *The 2017 Long-Term Budget Outlook* (March 2017). Macroeconomic effects were estimated using TPC's macroeconomic models.

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