



## Key Points

- Penn Wharton Budget Model's Tax Policy Simulator allows users to see the budgetary and economic impact of President Trump's 2017 White House Tax Plan. Users can vary the key economic behavioral parameters, for a total of 512 combinations.
- In the short-run, President Trump's 2017 White House Tax Plan produces similar economic growth as current policy. However, in the long-run, this tax plan reduces economic growth compared to current policy due to its impact on debt.
- A policy package that combines a reduction of 20 percent to federal spending, excluding Social Security and Medicare, and the White House Tax Plan with possible options from the 2016 campaign plan to raise more revenue can lead to greater economic growth than current policy.

## Penn Wharton Budget Model's 2017 White House Tax Plan Simulator

**MATERIAL IN THIS BRIEF IS NOW OUTDATED.  
AN UPDATED SIMULATOR IS AVAILABLE HERE.**

### Introduction

On April 26th, 2017 President Trump outlined a summary plan to change the U.S. tax system. This brief uses the Penn Wharton Budget Model to report the projected impact that the president's tax plan will have on the economy and federal budget, including revenues and debt held by the public.

Many items in his White House Tax Plan are similar to those he proposed while on the campaign trail in the fall of 2016. However, as shown in our previous analysis, the summary tax plan is less detailed than his 2016 campaign plan. Therefore, we also include analysis of a second tax plan, which also includes options to raise additional revenue that were part of the 2016 campaign plan. We will refer to this

second tax plan as the White House Tax Plan Plus Revenue Raisers.

### **Brief Overview of the PWBM Model**

The static version of the PWBM simulation model shows the direct impact that each tax plan will have on federal revenues, federal outlays and debt. These estimates include the static revenue projections and marginal tax rates prepared by the Tax Policy Center (TPC), supplemented with additional tax and spending series from the PWBM microsimulation model for creating a debt series.<sup>1</sup> The dynamic version of the PWBM model shows the budgetary and economic effects of tax policy changes, including the impact on the economy as households respond to changes to tax policy by changing how much they work, save and consume. More information about each model can be found in our previous analysis of the 2016 presidential campaign plans.

The PWBM dynamic model has several unique features that make it suitable for analyzing tax plans. First, the model allows for an unbalanced tax change, i.e., a tax reform that changes the annual deficit relative to current policy. Our analysis overturns the conventional wisdom that tax cuts must produce a positive dynamic score. In particular, more debt competes with private capital for household savings and international capital flows, potentially creating a negative dynamic score. Second, our model carefully analyzes key features of the U.S. tax system. On the international side, the U.S. system is hybrid (part residential, part territorial) tax system. On the corporate side, our tax system includes accelerated depreciation allowances (also known as expensing) that distinguishes between old and new capital investments, as well as pass-through provisions relevant to companies that are not organized as C corporations.

The PWBM tax policy simulator allows users to select from 512 different combinations of key economic assumption parameter values to see how they impact the economic outcomes of the tax plan. Users can choose the openness of the U.S. economy to international capital flows, the responsiveness of labor to changes in after-tax wages, the responsiveness of savings to changes in interest rates, and potential changes to government outlays (spending) that could offset the deficit effects of changes to tax policy. Parameter choice ranges are based on findings in the economic literature. A brief description of the economic assumption parameters and their role in framing the effects of policy changes is provided in a PWBM Brief: *Setting Behavioral Responses in PBWM's Dynamic Simulations*.

Simulations can also be run against two baseline (current policy) economies: the conventional and dynamic. The conventional baseline is the standard used in most federal policy analysis, but it ignores the impact of growing debt under current law on the baseline economy. The dynamic baseline includes the impact of growing debt under current law.

## **2017 White House Tax Plan: Main Features**

On April 26th, 2017 President Trump outlined a proposal to change the U.S. tax system. The tax plan reduces taxes and creates a deemed repatriation on accumulated foreign earnings. Table 1 shows the reforms that are included in PWBM’s analysis of the 2017 White House Tax Plan.

For individuals, the White House proposes to reduce the top income tax rate to 35 percent, double the standard deduction, and add additional tax benefits for child and dependent care. The tax plan eliminates the alternative minimum tax (AMT) and the net investment income tax enacted as part of the Affordable Care Act (ACA). The tax plan also eliminates the estate and gift taxes.

For businesses, the White House proposes to reduce the corporate rate to 15 percent. Owners of pass-through businesses could choose to pay a flat tax rate of 15 percent rather than individual income taxes.

More information on White House Tax Plan proposals can be found in analysis by the Tax Policy Center and by Penn Wharton Budget Model, which also includes a detailed description of how this plan differs from the Trump tax plan proposed during the 2016 presidential campaign.

Table 1: Reforms Included in Each Tax Plan

	<b>2017 White House</b>	<b>2017 White House Plus Revenue Raisers</b>
<b>Business Taxes</b>		
Corporate rate	15%	15%
Pass-through rate	15%	15%
Repatriation rate	10% on cash. 4% non-cash.	10% on cash. 4% non-cash.

	paid over 10 years	paid over 10 years
Interest deduction	Repealed for businesses who choose expensing	Repealed for businesses who choose expensing
Immediate expensing	Allowed for business who choose	Allowed for business who choose
Tax distributions from large pass-throughs as qualified dividends	Not yet determined	Yes
<b>Repeal certain business tax expenditures</b>		
Treat carried interest as capital gains income	Not yet determined	Repealed
Domestic production activities deduction	Not yet determined	Repealed
Credits for renewable energy producers	Not yet determined	Repealed
Low-income housing credit	Not yet determined	Repealed
Various other industry-specific business credits	Not yet determined	Repealed
<b>Territorial Tax</b>	Yes	Yes
<b>ACA taxes</b>	Repeal net investment tax of 3.8%	Repeal net investment tax of 3.8%
<b>Individual Taxes</b>		
Tax rates	10%, 25%, 35%	10%, 25%, 35%
Adjusted gross income (AGI) tax rate thresholds	10% bracket: < \$37,500 (single), < \$75,000 (married) 25% bracket: ≥ \$37,500 to < \$112,500 (single), ≥ \$75,000 to < \$255,000 (married)	10% bracket: < \$37,500 (single), < \$75,000 (married) 25% bracket: ≥ \$37,500 to < \$112,500 (single), ≥ \$75,000 to < \$255,000 (married)

	(married) 35% bracket: ≥ \$112,500 (single), ≥ \$255,000 (married)	(married) 35% bracket: ≥ \$112,500 (single), ≥ \$255,000 (married)
Alternative minimum tax (AMT)	Repealed	Repealed
Estate tax	Repealed	Repealed
Capital gains tax at death	Not yet determined	Yes, exemption \$5 million (single), \$10 million (married)
Personal exemptions	Not yet determined	Repealed
Head of household filing status	Not yet determined	Repealed
Standard deductions	Doubled	Doubled
Itemized deductions	N/A	Repealed other than those below
State and local taxes	N/A	Repealed
Mortgage interest	N/A	Remains
Charitable giving	N/A	Remains
Child care	Enhance tax benefits for child and dependent care expenses	Enhance tax benefits for child and dependent care expenses

## 2017 White House Tax Plan Plus Revenue Raisers: Main Features

Table 1 shows that the White House Tax Plan leaves many potential tax system features undetermined. Relative to the 2016 campaign plan, most of these “not yet determined” components pertain to “revenue raisers” that would, if included, increase revenue.

Our simulator, therefore, also includes analysis of a second tax plan--the White House Tax Plan Plus Revenue Raisers--that includes some the main options to raise additional revenue that were part of the campaign plan. Table 1 shows the reforms included in PWBM’s analysis of the 2017 White House Tax Plan Plus Revenue Raisers.

For individuals, these revenue raising provisions include eliminating personal exemptions and head of household filing status. Itemized deductions other than mortgage interest and charitable giving are also eliminated. Finally, capital gains will be taxed at death with a \$5 million exemption.

For businesses, large pass-through entities would also pay tax on distributions from the business, but at the favorable rates that apply to dividends. Possible revenue raisers also include the elimination of certain business tax expenditures.

### **The Results: GDP Growth Under PWBM's Default Settings for Economic Assumption Parameters**

As noted above, the PWBM simulator allows users to vary the value of economic assumption parameters. We now report the results using the “default parameter” assumptions that we estimate from the literature. Specifically, the openness of the U.S. economy to international capital flows’ default value is 40 percent; the responsiveness of labor to changes in after-tax wages’ default value is 0.5; the responsiveness of savings to changes in interest rates’ default value is 0.5; and the change to federal spending, excluding Social Security and Medicare, default value is 0. Users are encouraged to experiment with different values of economic assumption parameters. Users can click on the information buttons in the simulator to obtain more information about each parameter button.

In the near-term, under our simulator’s default settings for economic assumption parameters, the size of the economy is slightly smaller compared to current policy under the White House Tax Plan and the White House Tax Plan Plus Revenue Raisers. The dotted red line in Figure 1 shows that, in 2020, PWBM projects that GDP under the White House Tax Plan will be 0.6 percent less than under current policy (the solid black line).

The reduction in GDP relative to current policy grows over time. The White House Tax Plan leads to an economy that is 3 percent smaller than current policy in 2030 and nearly 9 percent (\$2.3 trillion) smaller in 2040. Increases to federal debt due to the proposals in The White House Tax Plan dampen economic growth.

The dotted blue line in Figure 1 shows that the White House Tax Plan Plus Revenue Raisers also results in a smaller economy than current policy. However, the White House Tax Plan Plus Revenue Raisers results in higher GDP than the White House Tax Plan

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alone because it adds less to debt. For example, in 2040, under the White House Tax Plan Plus Revenue Raisers GDP will be 4.7 percent less than current policy.

## Figure 1: Gross Domestic Product with PWBm's Default Settings for Economic Assumption Parameters

In the short-run, hours worked increase by 0.6 percent in 2020 under the White House Tax Plan because taxes on labor are reduced. There is no boost to hours worked, however, under the White House Tax Plan Plus Revenue Raisers because taxes on labor are reduced by less. However, in the long-run, the rising federal debt in both plans means that domestic saving and hours worked are lower than under current policy. As a result, capital services are dampened in both the short- and long-run under both plans.

The longer-run dynamic differences in between the White House Tax Plan and the White House Tax Plan Plus Revenue Raisers are mostly driven by differences in debt accumulation. The solid blue line in Figure 2 shows that, on a static basis, the White House Tax Plan Plus Revenue Raisers reduces revenue by less than the White House Tax Plan alone (solid red line). The dynamic revenue estimates, indicated by the dotted lines, fall below the static estimates because of the negative impact that rising debt has on the economy. The dotted red line shows that, when households adjust work and saving decisions, in 2040, the White House Tax Plan reduces federal revenues by 35 percent and

the White House Tax Plan Plus Revenue Raisers (dotted blue line) by 20 percent.

## Figure 2: Revenues with PWBM's Default Settings for Economic Assumption Parameters

### **Different Settings for Economic Assumption Parameters**

The PWBM simulator allows users to see the impact of tax reform under different values of economic assumption parameters. A brief description of the parameters is provided in a PWBM Brief: *Setting Behavioral Responses in PBWM's Dynamic Simulations*.

One of the most important economic assumption parameters is the assumed rate of foreign investment flows into the United States. As government debt increases, more household savings is diverted to financing it rather than private capital formation, which dampens economic growth. If foreign investment flows into the U.S. offset some of the declines in domestic saving, domestic capital formation need not decline as much. However, there will still be a negative impact on the U.S.'s financial account balance.

Setting foreign investment flows to 0 percent means that changes in national saving lead to equal changes in domestic investment. No new debt is financed by foreign investors. As a result, new government debt will significantly reduce the amount of domestic investment. Setting foreign investment flows to 100 percent means that new government

debt will not reduce domestic investment since any new debt is financed by foreign investors.

Research indicates that neither setting is realistic for the U.S. economy. At our intermediate setting of foreign investment flows at 40 percent, about 40 percent of new government debt will be funded by foreign savers and 60 percent by domestic savers. New government debt will, therefore, still reduce domestic investment.

As shown in Figure 3, varying the assumed foreign investment flows into U.S. has a sizeable impact on estimates. Under the White House Tax Plan, if foreign investment is set at 0 percent then in 2030, GDP will be \$615 billion less than with foreign investment set at 40 percent. If foreign investment were set at 100 percent, then under the White House Tax Plan, in 2030, GDP will be \$922 billion more than with PWBM's default settings for economic assumption parameters.

**Figure 3: Gross Domestic Product with Foreign Investment Flows into U.S. Offsetting 100 Percent of a Change in National Saving**

### **Pairing Tax Policy with Spending Policy**

The White House budget includes proposals that reduce federal non-Social Security and

non-Medicare spending by 14 percent. PWBM shows the impact of pairing the White House Tax Plan with a federal non-Social Security and non-Medicare spending reduction. Estimates show the impact of federal spending reductions on federal debt, not the effect of changes to specific programs.

PWBM analyses a larger policy package that combines The White House Tax Plan Plus Revenue Raisers combined with a 15 percent reduction to federal spending, excluding Social Security and Medicare. Figure 4 shows this scenario produces similar economic growth as current policy.

**Figure 4: Gross Domestic Product with Federal Spending, Excluding Social Security and Medicare, Reduced by 15 Percent**

### **Producing Long-term Growth**

A tax cut, however, need not increase debt or reduce GDP relative to current policy if part of a larger policy reform. Figure 5 shows the impact of a policy package that includes the White House Tax Plan Plus Revenue Raisers and a 20 percent reduction to federal spending, excluding Social Security and Medicare. Under this scenario the level of federal debt is similar to current policy. A 20 percent non-Social Security and non-Medicare spending reduction equals \$405 billion in 2018. Figure 6 shows that under this scenario

GDP in 2040 is 1 percent higher than under current policy.

Figure 5: Debt Held by the Public with Federal Spending, Excluding Social Security and Medicare, Reduced by 20 Percent

Figure 6: Gross Domestic Product with Federal Spending, Excluding Social Security and Medicare, Reduced by 20 Percent

## Conclusion

President Trump's White House recently outlined a new tax plan. However, the White House Tax Plan lacks considerable detail. In areas left unspecified, it is informative to look to proposals from President Trump's 2016 campaign tax plan. Therefore, we analyse the results of two tax plans, the White House Tax Plan and White House Tax Plan with possible options to raise more revenue. Under most settings for economic assumption parameters both tax plans increase federal debt more than current policy, resulting in less economic growth. However, some scenarios do lead to higher economic growth than under current policy. The first example is when foreign investment flows fund the deficit. The second example is when federal spending, excluding Social Security and Medicare, is reduced enough to offset revenue reductions. Users of the model are encouraged to experiment with different economic assumption parameter settings.

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1. We have made several enhancements to our model since our previous estimates of the campaign tax plans. First, PWBM updated the static baseline from 2015 to 2016. Second, the dynamic model now allows for more isolated changes to the corporate tax rate, pass-through rules, expensing and international tax regimes. Third, the static version of the model has been adjusted to fit more closely with estimates produced by TPC. Finally, PWBM's tax policy analysis is now integrated with PWBM's immigration policy and Social Security policy analysis. This integration improves our estimates of the impact of debt on economic growth. ↩

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