How Tax Proposals Could Affect Aggregate Demand, Output, and Revenue

September 16, 2016 Benjamin R. Page Dynamic Scoring of Tax Proposals



Dynamic Scoring



- Conventional analysis includes many behavioral responses, but assumes output and overall price level remain unchanged
- Dynamic scoring incorporates effects of policy on macroeconomic variables such as GDP, capital, and labor
- Macro effects uncertain, but likely non-zero
- With consensus assumptions, dynamic effects on revenues tend to be modest

Dynamic Scoring



- Macroeconomic effects influence revenues, but also useful information for assessing desirability of tax policy changes
- Other features of tax policy more central than macro effects
 - Level of revenues
 - Distribution of tax burden

Tax policy affects the economy at the margins

Two Approaches to Dynamic Analysis



Keynesian

- Effects stem from changes in demand
- Equations relate aggregate variables
- Output changes relative to its potential level
- Output returns to potential after a few years

Overlapping generations

- Effects stem from behavior at household level
- Households responds to incentives to work and save
- Households forward-looking
- Output equals potential

TPC Keynesian Model



- Estimates effects in two stages
 - 1. Direct effect of policy on demand
 - 2. Indirect effects of initial change in demand

 Model employs a range of assumptions for both direct and indirect effects

Effects fade over 4 years

Direct Effect on Demand



- With more after-tax income,-consumers spend more
 - Lower-income households spend a larger share of their additional income than higher-income households do
 - Baseline assumption:
 - Lowest quintile spends 90 cents out of each additional dollar
 - Highest quintile spends just 55 cents out of each additional dollar
- Investment incentives lead firms to invest more
- Higher wealth leads consumers to spend more

Indirect Effects on Demand



- Direct effect generates further, indirect effects that can add to or offset the direct effect
 - On the plus side, increased demand can lead to increased hiring, investment spending, or consumption spending
 - But increased demand could lead to higher interest rates, reducing investment and consumer spending

Indirect Effects on Demand



- In normal economic times the Fed offsets expansionary tax policy by raising rates to prevent increase in inflation
- In deep recession the Fed will not change rates
- TPC's Keynesian model assumes 2017 will be a blend of those two states, and following years will be "normal"
- In 2017 indirect effects offset 1/6 of direct effects; in later years 1/2

House GOP Tax Plan



- Cuts taxes for most households
 - With higher incomes, people spend more
 - Biggest cuts go to high-income households
 - Mutes spending increase

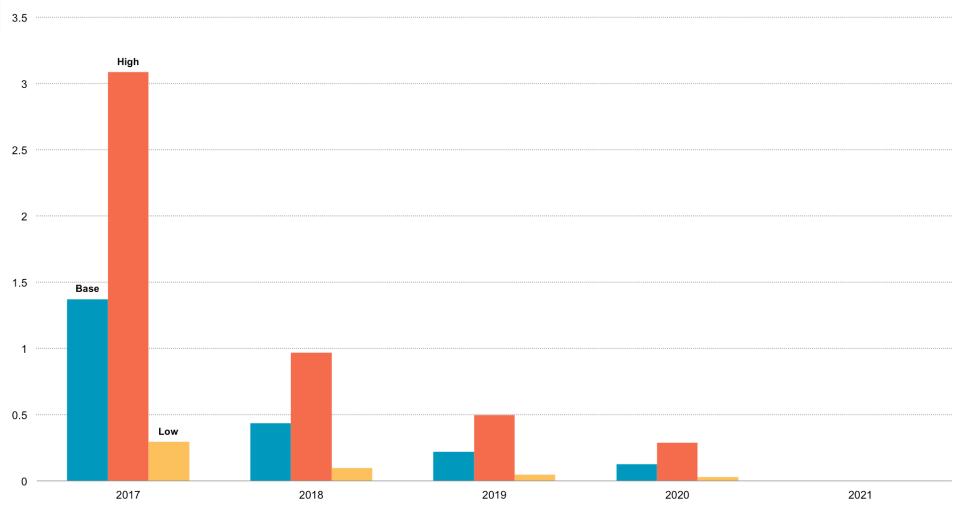
Expensing provision encourages firms to boost investment spending

FIGURE 1

Effect of House GOP Tax Plan on GDP

Percent, Calendar Year





Notes: Estimated effects are zero after 2020.

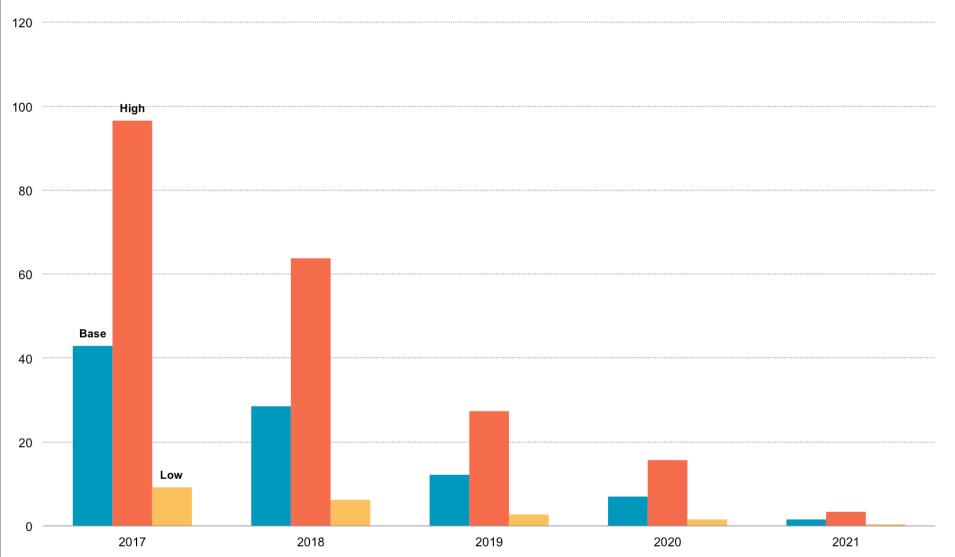
Source: TPC Keynesian Model.

FIGURE 2

Dynamic Effect on Revenues, House GOP Tax Plan



\$ Billions, Fiscal Year



Notes: Effects are zero after 2021. **Source:** TPC Keynesian Model.

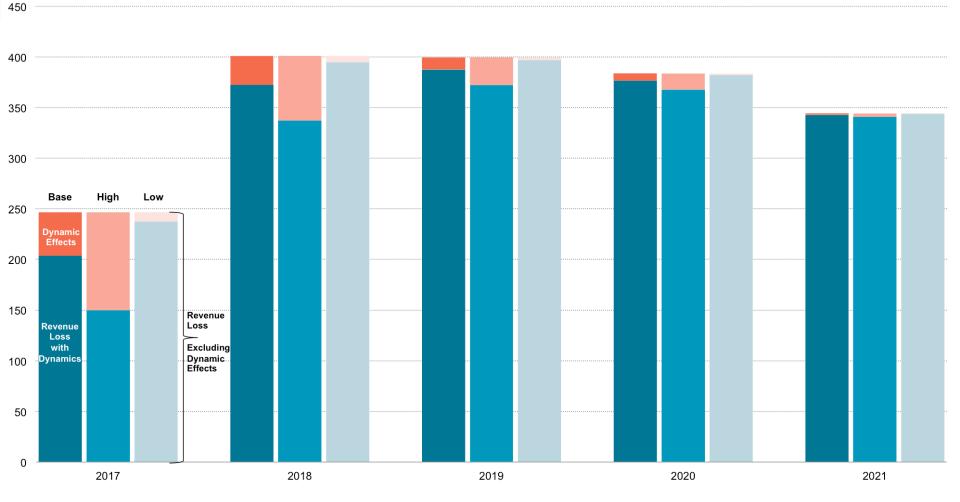
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FIGURE 3

Impact on Revenues, Including Dynamic Effects, of the House GOP Tax Plan

TPC

\$ Billions, Fiscal Year



Source: TPC Keynesian Model.

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