



**HARVARD Kennedy School**  
JOHN F. KENNEDY SCHOOL OF GOVERNMENT

# Can Tax Reform Get Us to 3 Percent Growth?

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**New York, NY**

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## Outline

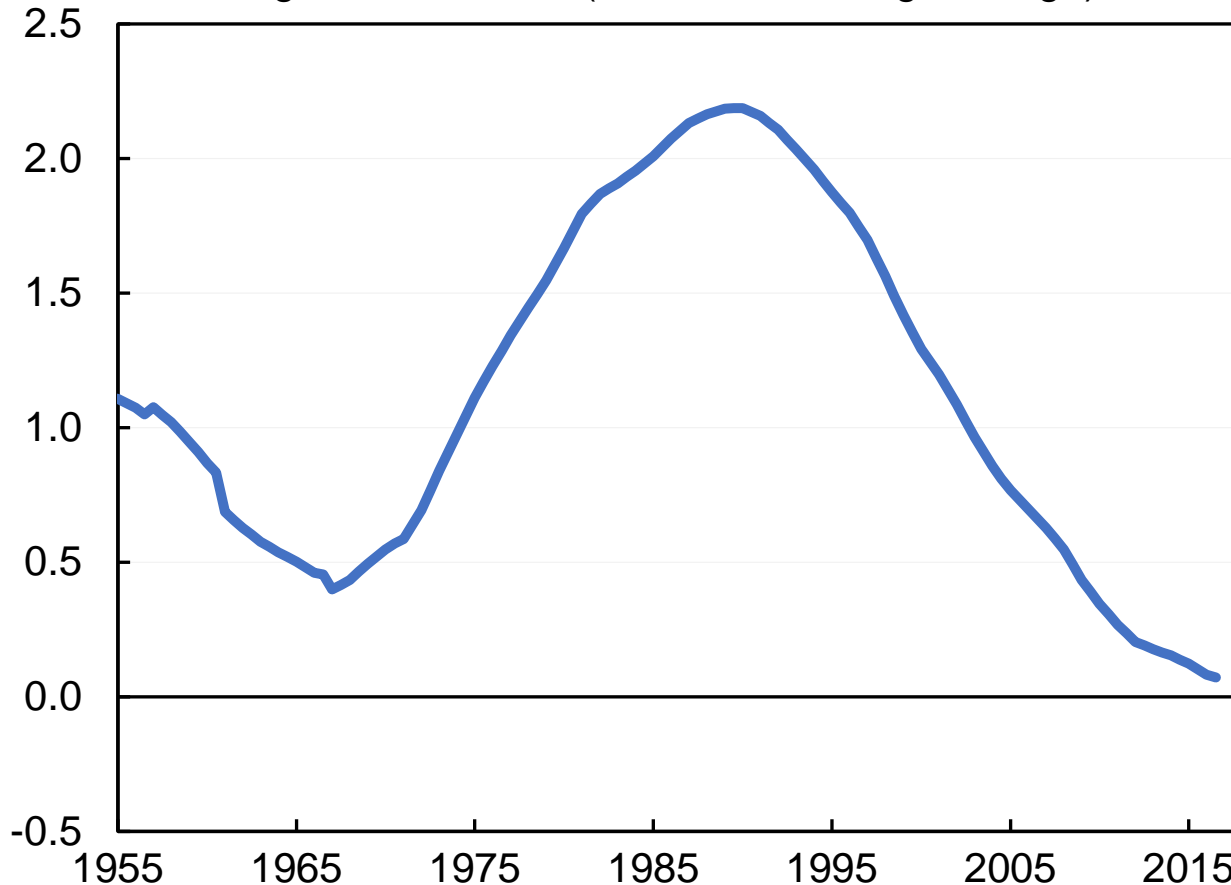
1. Our ~2 Percent Growth Rate Is Largely Due to Demography
2. Well-designed Tax Reform Could Have Modest but Worthwhile Benefits
3. The House Bill Is Not Well Designed
4. The Seven Deadly Sins of Overly Optimistic Dynamic Scoring
5. A Better Path Forward

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# Growth has slowed from the 1980s primarily because of the aging population

**Prime-Age (25-54) Population Growth, 1945-2016**  
Percent Change, Annual Rate (Ten-Year Trailing Average)



## Growth forecasts are consistent with historical productivity and current demography

### Potential GDP Growth Under Different Productivity Scenarios, 2016-2026

	Historical: 1966-2016	CBO forecast	Reagan era productivity, CBO demographic forecast
Potential Labor Force	1.5	0.5	0.5
Productivity Growth	1.9	1.7	1.6
Other	-0.5	-0.3	-0.3
<b>Potential GDP</b>	<b>2.9</b>	<b>1.8</b>	<b>1.7</b>

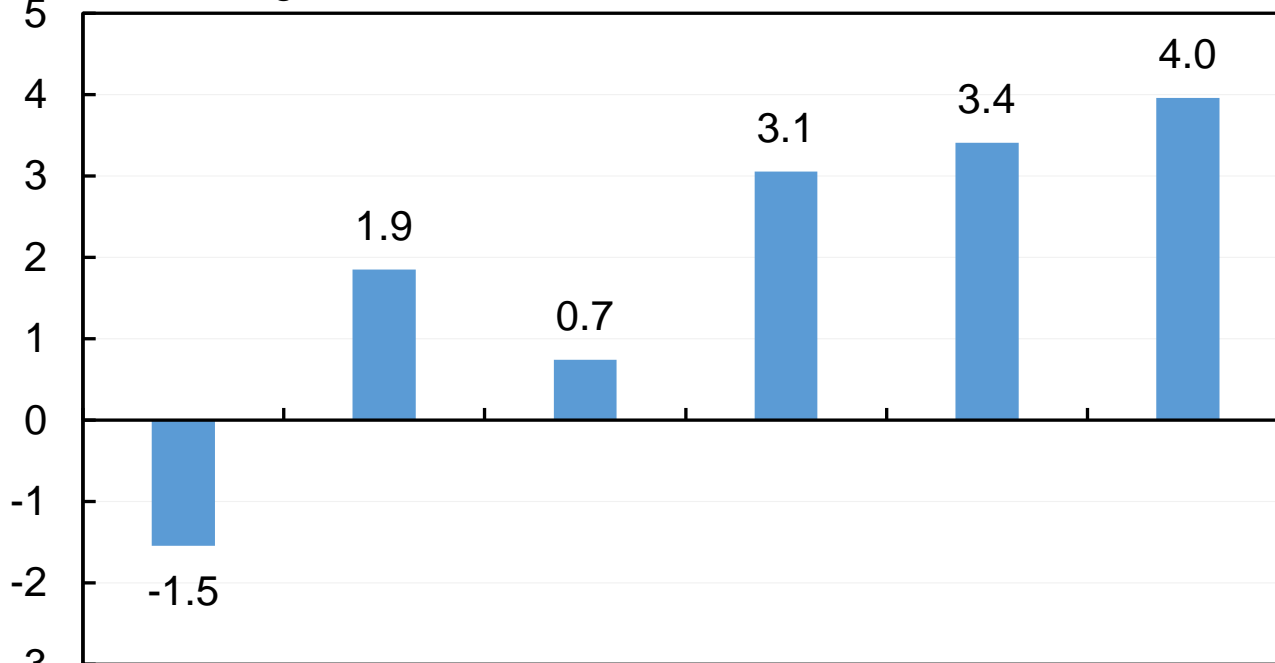
# The productivity slowdown has been across almost all the advanced economies



# Hard to see high U.S. taxes and burdensome regulation in the recent investment data

## Business Fixed Investment Growth in G-7 Countries, 2011-2016

Percent Change, Annual Rate



Average Corporate Tax Rate:

26%

37%

30%

35%

22%

39%

Note: Corporate tax rate is the average combined (central and sub-central) corporate tax rate for 2012-2016.

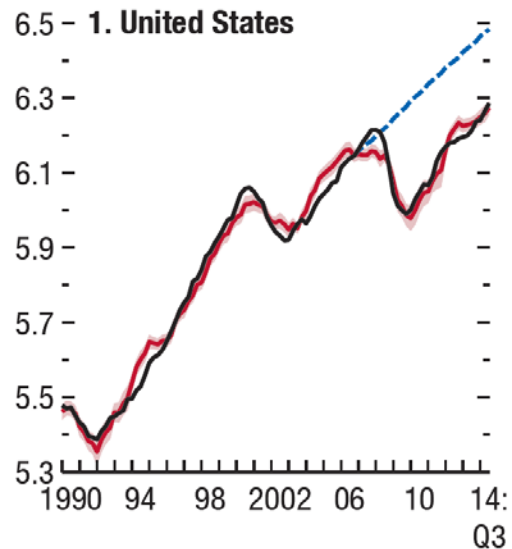
Source: OECD Global Economic Outlook, June 2017; Organisation for Economic Co-operation and Development; author's calculations.

# Moreover, U.S. investment growth is well explained by standard accelerator models

**Figure 4.8. Accelerator Model: Real Business Investment**  
*(Log index)*

Actual business investment has been close to the level predicted by the accelerator model since the crisis.

— Actual  
— Accelerator model prediction  
- - - Spring 2007 forecasts





## An aside: Maybe the real surprise is that growth rates are much higher than expected

### Projected Economic Growth Rates for 2015 (Percent)

	Real GDP Growth
GAO (1992)	*
Kerrey-Danforth (1994)	1.5
CBO (1996)	1.3
Social Security Trustees	
1995	1.6
2000	1.9
2005	2.1

Note: \*Approximately zero.

Note: GAO forecast is for real GNP.

Source: Congressional Budget Office; Government Accountability Office; Bipartisan Commission on Entitlement and Tax Reform; The Board of Trustees, The Federal Old-Age and Survivors Insurance, and Disability Insurance Trust Funds; author's calculations.

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## The business tax system has numerous distortions

- High statutory rates with many opportunities for avoidance
- Different tax rates on different types of investment (e.g., mining vs. manufacturing)
- Heavy tax favoritism for debt over equity
- Tax advantages for pass-through businesses
- “Stupid Territorial” international system raises little revenue while creating distortions

**Not time for tax cuts—if anything Bipartisan fiscal plans have called for cutting spending and raising revenue**

## **Revenue and Debt as a Share of GDP At Time of Previous and Proposed Tax Cuts**

	<b>1981</b>	<b>2001</b>	<b>2017</b>
<b>Revenue (% of GDP)</b>	19.1	18.8	17.3
<b>Debt (% of GDP)</b>	25.2	31.4	76.7

## What a sensibly reformed business tax would look like

- **Expensing investment & eliminating interest deductions** would eliminate the tax on the normal return to investment.
- **Lowering the corporate rate** as much as we can afford without raising the deficit would modestly help in reducing the pressure on transfer pricing etc.
- **Reducing the tax benefits for pass-throughs** to level the playing field
- **Minimum tax on foreign subsidiary income** to reduce distortions by balancing competing incentives

# Comprehensive estimates show well-designed, paid for reform could deliver a modest but real increase to GDP levels

## Select Estimates of the Effect of Tax Reform on the Level of Output

Source	Policy Change	Short-Run	Long-Run
Gravelle (2014)	Stylized Reform: 20% Reduction in Income Tax Rates	n. r.	0.7 - 4.0
JCT (2014)	Camp Plan	0.1 - 1.6	n. r.
Treasury (2006)	President's Advisory Panel on Tax Reform		
	Simplified Income Tax	0.0 - 0.4	0.2 - 0.9
	Growth and Investment Tax	0.1 - 1.9	1.4 - 4.8
	Progressive Consumption Tax	0.2 - 2.3	1.9 - 6.0
JCT (2005)	20% Cut in Federal Corporate Tax Rate		
	Not Financed	0.2 - 0.4	0.0 - 0.3
	Financed with Future Spending Cuts	0.2 - 0.4	0.5 - 0.9
Altig et al. (2001)	Stylized Revenue-Neutral Tax Reforms		
	Flat Tax with Transition Relief	0.5	1.9

n. r. = Not reported.

Note: Output measure is (in order of preference if multiple measures are reported) national income, real gross national product, and real gross domestic product. Time period for short-run effects varies across studies, but (in most cases) is an average over several years in the first decade. Long-run effects typically reflect estimates of the change in the steady state level of output.

Source: Furman (2016).

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## Issues with business side of the House bill from an aggregate macroeconomic perspective

- Large increase in the deficit
- Sunsetting major provisions, like expensing, adds substantial uncertainty. (Additional sunsets will be needed in the Senate bill)
- Expensing without eliminating interest deductions creates very negative tax rates on debt finance at the corporate level
- Rate reductions provide a large windfall for investments already made and monopoly profits
- New pass-through loophole is complicated and distortionary



## **An aside, little/no effective rate reduction on the individual side**

For example, consider the marginal tax on an additional \$100 earned under current law (28 percent federal rate and 11 percent state rate) and the proposal (25 percent federal rate and no State deduction) :

### **Current Law: 25% effective rate**

$$28\% * (\$100 - \$11) = \$25$$

### **Cut rate 25% and eliminate SALT: 25% effective rate**

$$25\% * \$100 = \$25$$

## **In fact, effective tax rates go up on high-income households**

Now consider a household in the 39.6 percent bracket:

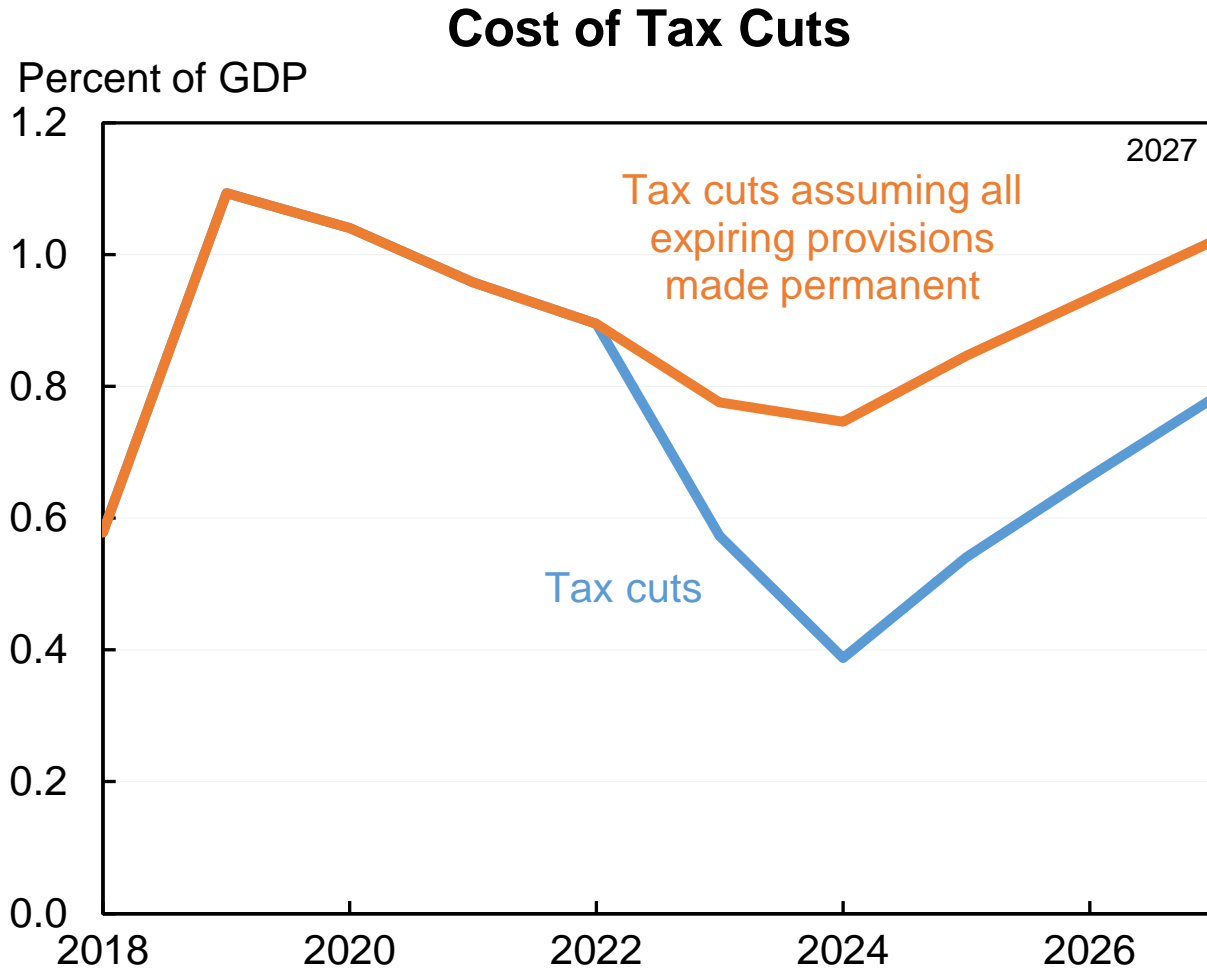
### **Current Law: 35% effective rate**

$$39.6\% * (\$100 - \$11) = \$35$$

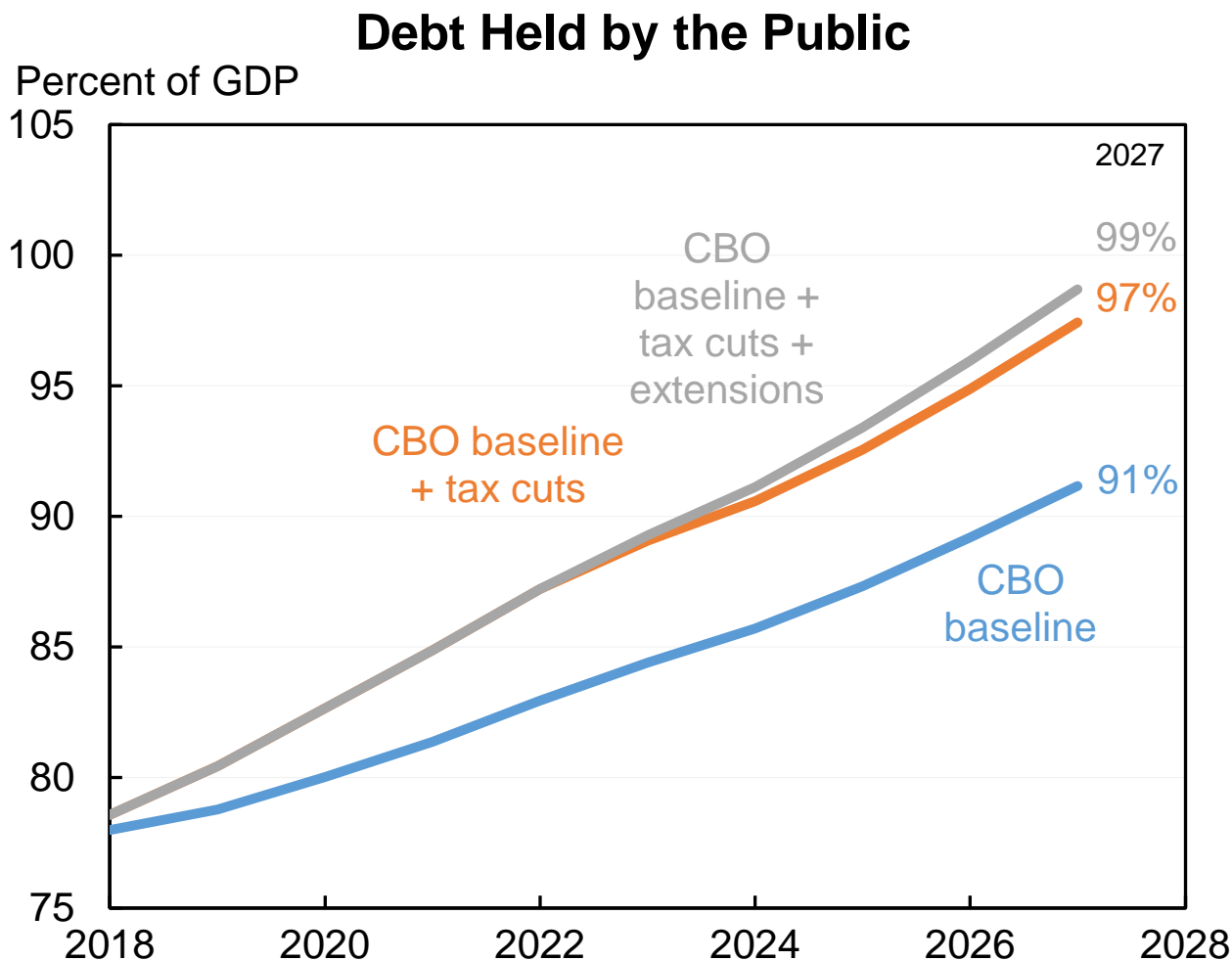
### **Cut rate 25% and eliminate SALT: 40% effective rate**

$$39.6\% * \$100 = \$40$$

# The tax cuts cost 0.8% of GDP and rising (Note: 75-year fiscal gap $\approx$ 0.8% to 2.8% of GDP)



# Would bring the debt held by the public near 100 percent of GDP at the end of the decade



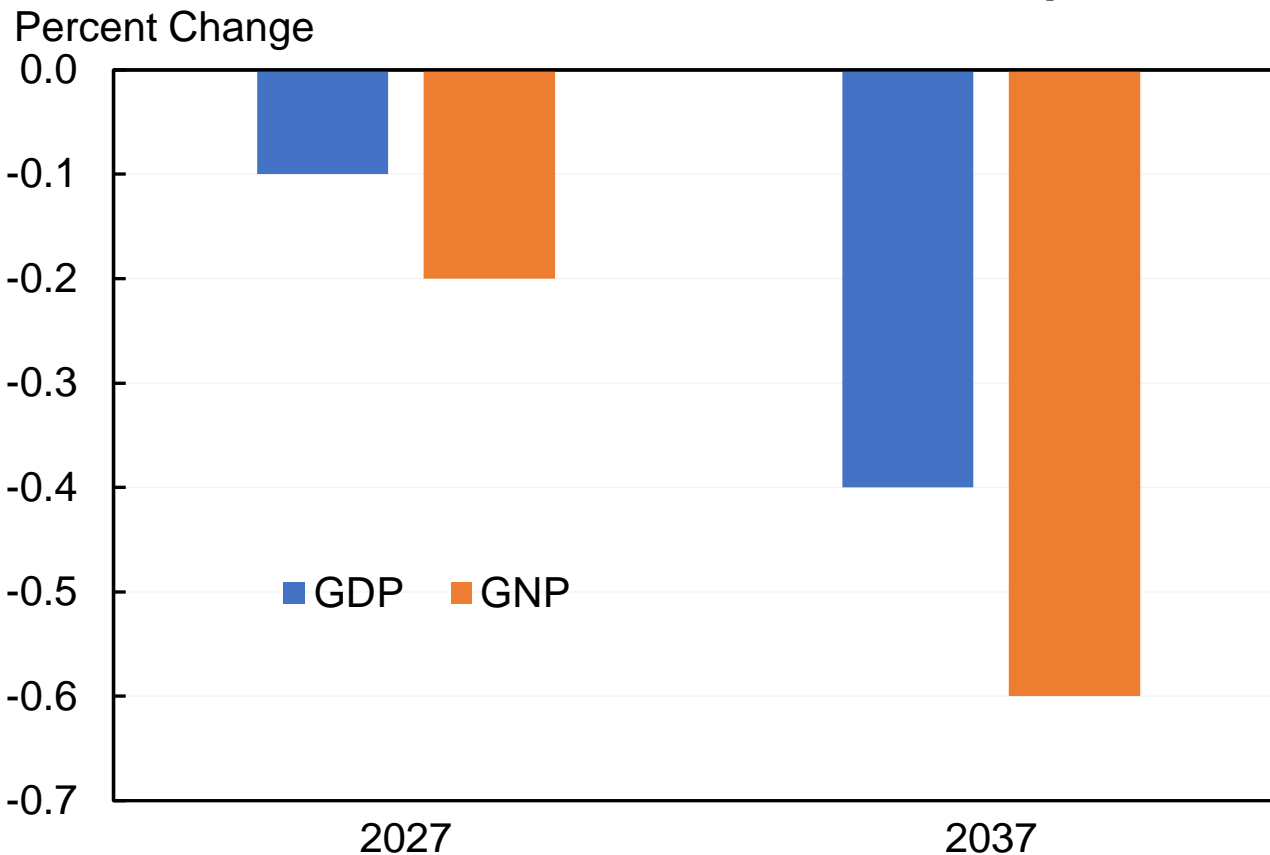
## Macroeconomic effects of unpaid for tax cuts can become increasingly negative over time

**Short run: Keynesian effect.** Goldman Sachs estimated 0.1 to 0.2 percentage point higher growth in 2018-19. Higher growth limited by economy at/near full employment and Federal Reserve offsetting higher demand.

**Long run: Deficits increasing drag.** A wide range of macroeconomic models show that unpaid for tax cuts (or deferred financing) reduces economic growth, increases foreign borrowing, lowers wages, and raises the overall cost.

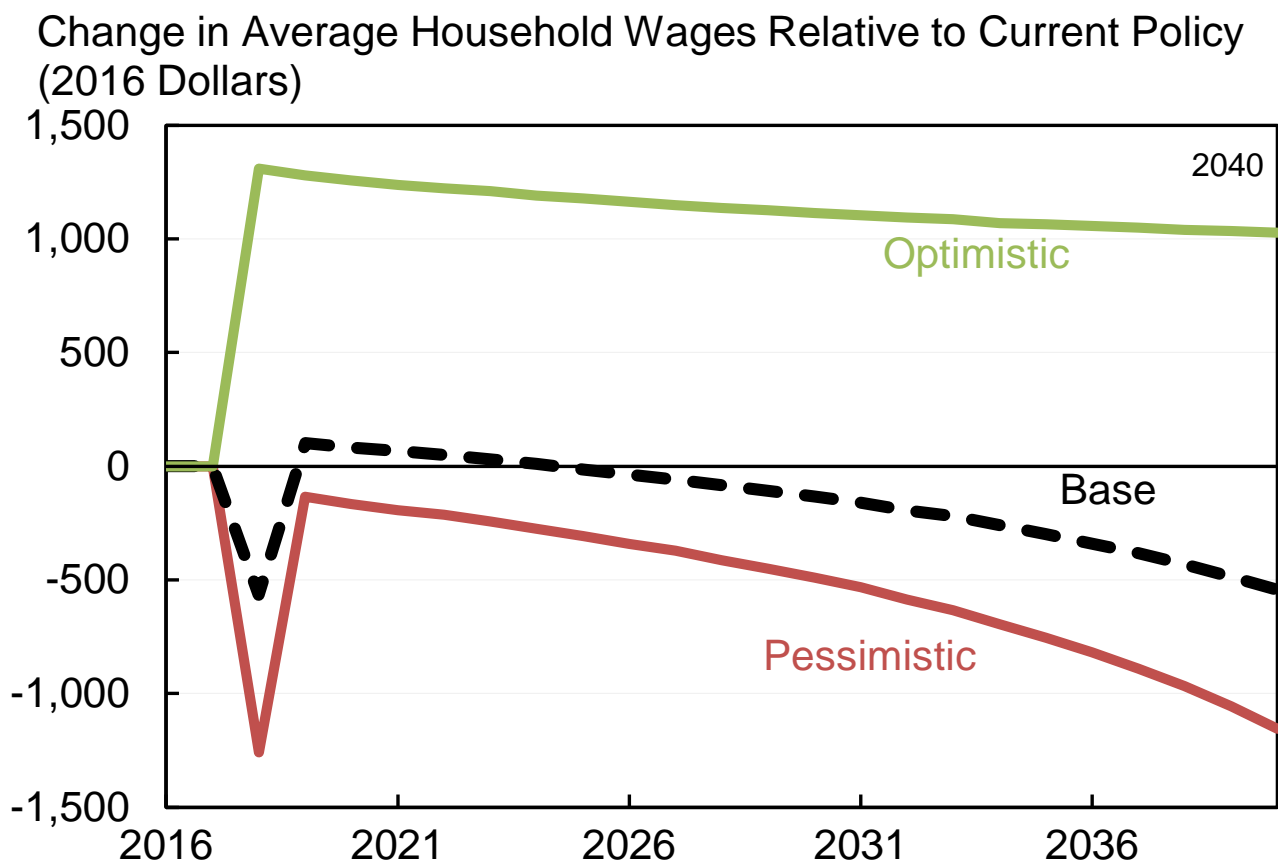
# Modeling an earlier version of the Unified Framework + assumptions: GDP falls, GNP falls even more as we increase foreign borrowing

**Macroeconomic Impacts of the Republican Unified Framework Combined with TPC Assumptions**



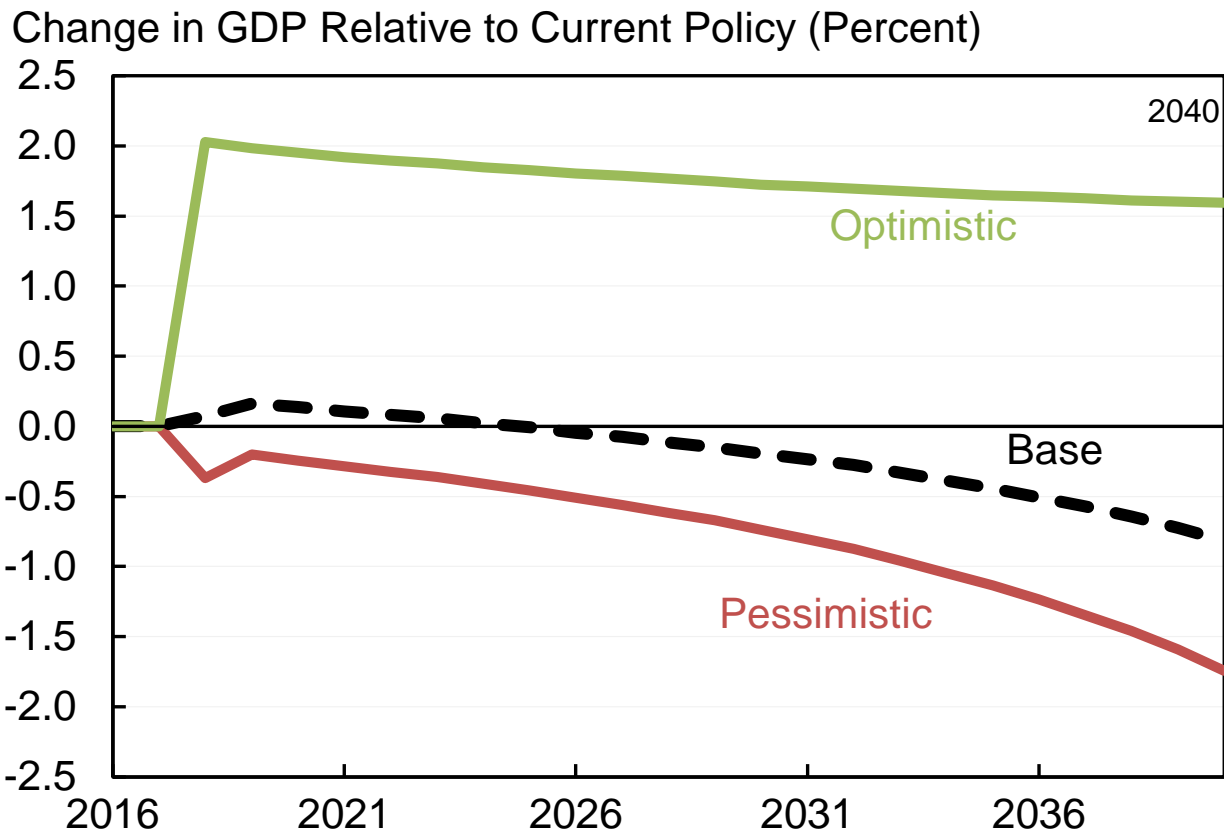
# Cutting the corporate rate to 20 percent is more likely to *reduce* wages than to increase them

## Change in Wages with 20% Corporate Tax Rate



# Also to reduce GDP...

## Change in GDP with 20% Corporate Tax Rate

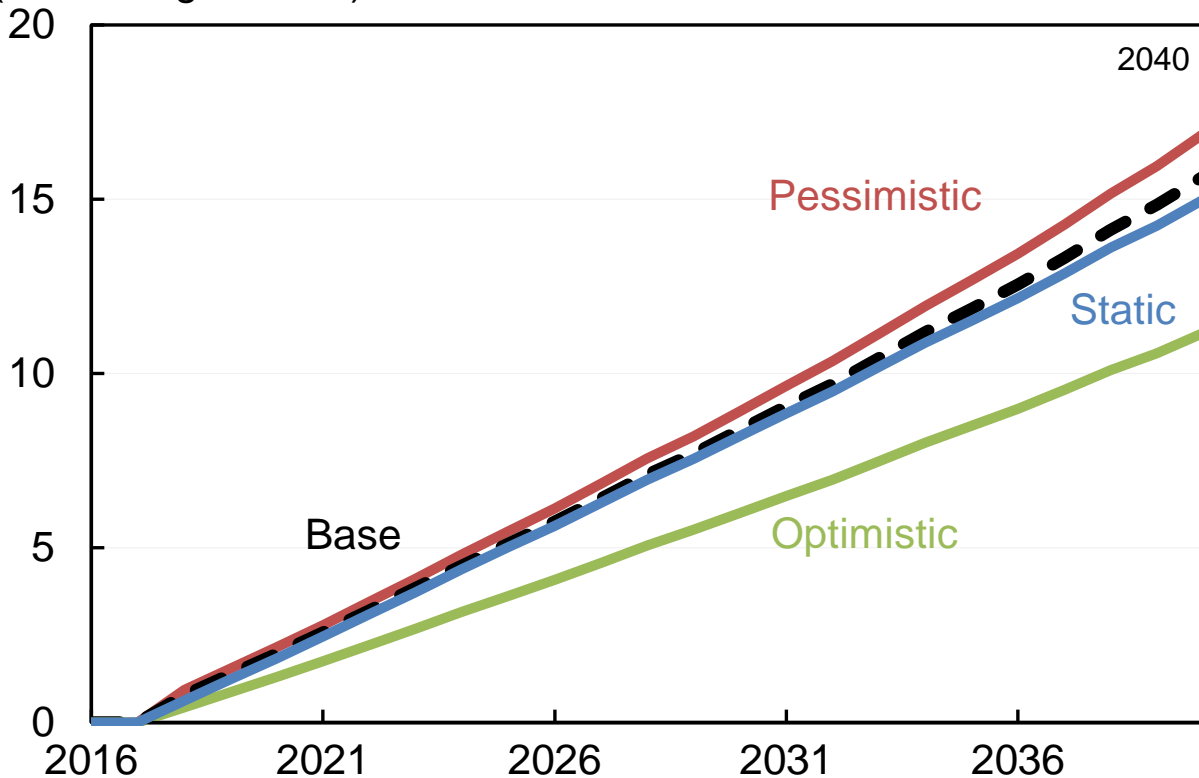




# ...While substantially increasing the Federal debt, by slightly more *with* dynamic scoring

## Change in Debt (Dynamic) with 20% Corporate Tax Rate

Change in Debt as a Percent of GDP Relative to Current Policy (Percentage Points)



## **This is why we need a Joint Committee on Taxation dynamic analysis and dynamic score**

Different models have different results, none of the previous were models of this particular tax plan.

Need a model that incorporates: (1) the actual tax changes; (2) the effects of deficit financing; and (3) a realistic transition path.

JCT is not all knowing, but better than the alternatives.

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## The seven deadly sins of overly optimistic dynamic scoring

1. Rely on studies that assume tax cuts are paid for, often in a lump sum manner
2. Use estimates from “similar” tax plans that are not similar—for example, plans that tax old capital rather than provide it a windfall
3. Use short-run Keynesian estimates or very long-run steady-state estimates for ten-year changes
4. Ignore the details of tax reform
5. Ignore the way that foreign borrowing will reduce future National Income.
6. Rely on the study of different economies with different circumstances and different tax changes to infer the impact on the United States.
7. Cherry pick parameters from studies.

## See for example this recent WSJ op-ed

Eddie Lazear (Stanford University) (*WSJ*, 2017):

“Plans **similar** to the Big Six proposal have been scored in the past. In 2005 the Advisory Panel on Federal Tax Reform (of which I was a member) proposed a plan that would create **about 5% additional growth**. When I served in the White House as chairman of the Council of Economic Advisers in 2006-09, the Treasury Department estimated that going to full expensing—in which businesses can deduct immediately all investment expenditures from taxable earnings—would produce **the same 5% growth**.”

# Use the upper end of the range for the long run (in the Bush Commission's paid for reform plan)

		GIT		
		Budget		
		Window*	Year 20	Long-run
National Income				
	Ramsey Growth Model	1.9%	3.7%	4.8%
	OLG Model	1.5%	2.1%	2.2%
	Solow Growth Model	0.1%	0.4%	1.4%

# Even though the ten-year numbers are much lower

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	Budget Window*	Year 20	Long-run
National Income			
Ramsey Growth Model	1.9%	3.7%	4.8%
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# And the growth is generated by a large consumption decline due to taxing old capital

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<b>Consumption</b>				
	Ramsey Growth Model	<b>-1.6%</b>	2.0%	4.8%
	OLG Model	-0.4%	1.3%	1.8%
	Solow Growth Model	-0.3%	0.1%	1.4%



## The other model cited was to eliminate corporate taxes and replace with a VAT

### Treasury (2007):

The approaches discussed in this report would improve the competitiveness of the United States as compared to the current system for taxing U.S. businesses. Nevertheless, the approaches differ in a number of dimensions. The BAT described in Chapter II would possibly provide the largest benefit in terms of its effect on expanding the size of the economy – ultimately increasing output by roughly 2.0 percent to 2.5 percent – but raises a number of serious implementation and administrative issues.

## And Treasury found this *reduced* after-tax wages

### Treasury (2007):

Because a BAT does not allow businesses to deduct labor compensation, a BAT would add several percentage points to the tax rate on labor income. Thus, the economic benefits of greater capital formation would be offset to some extent by the reduction in labor supply caused by the higher tax rate on labor income. After accounting for the wage-increasing effect of a larger stock of capital and the wage-decreasing effect of a higher tax rate on wages, on net, the after-tax wage rate falls slightly under a BAT in the

## Many macro models assume lump-sum financing, growth at the expense of distribution—consider Mankiw's toy example

**Mankiw model**: Assuming the United States is a small open economy, \$200b business tax cut paid for lump sum tax of \$1,600 per household. Raises wages by \$300b, or 3%.

For a household making \$50,000 and no capital income:

- Wage increase \$1,500
- Tax change - **\$1,600**
- **After-tax income change:** -\$100

**The details matter: for example, many companies would have interest deductibility and thus negative rates under the House bill**

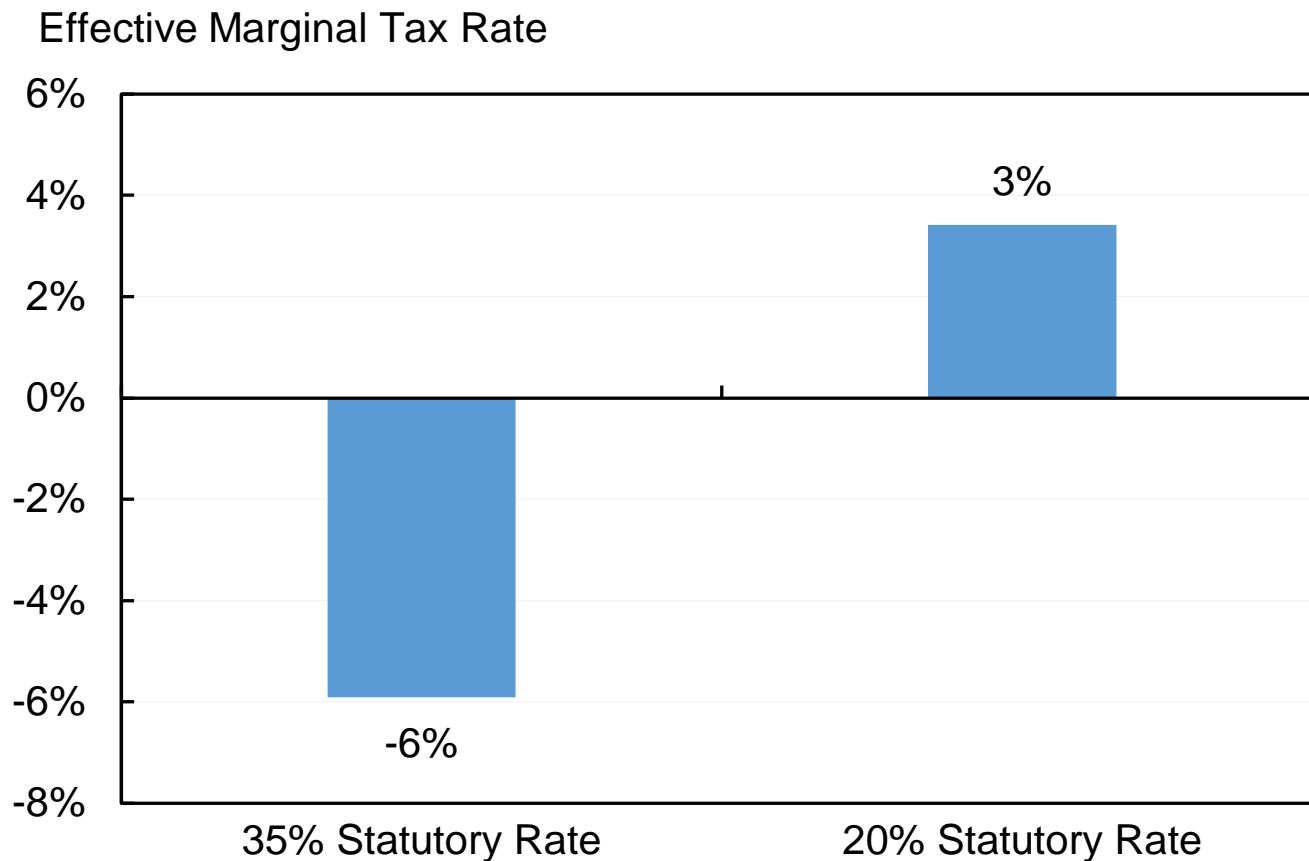
**Corporate Taxation of a \$100 Investment with Expensing**

Corporate Tax	After-tax Cost	After-tax Return	Rate of Return	Marginal Tax Rate
No corporate tax	\$100	\$10	10%	0%
20% corporate tax, no interest deduction	\$80	\$8	10%	0%
20% corporate tax, maintain interest deduction	\$80	\$8.80	11%	-10%

Note: Interest rate = 4%

# For companies that can deduct interest the lower corporate rate *raises* marginal rates

## Effective Marginal Tax Rate vs. Statutory Tax Rate under Interest Deductibility



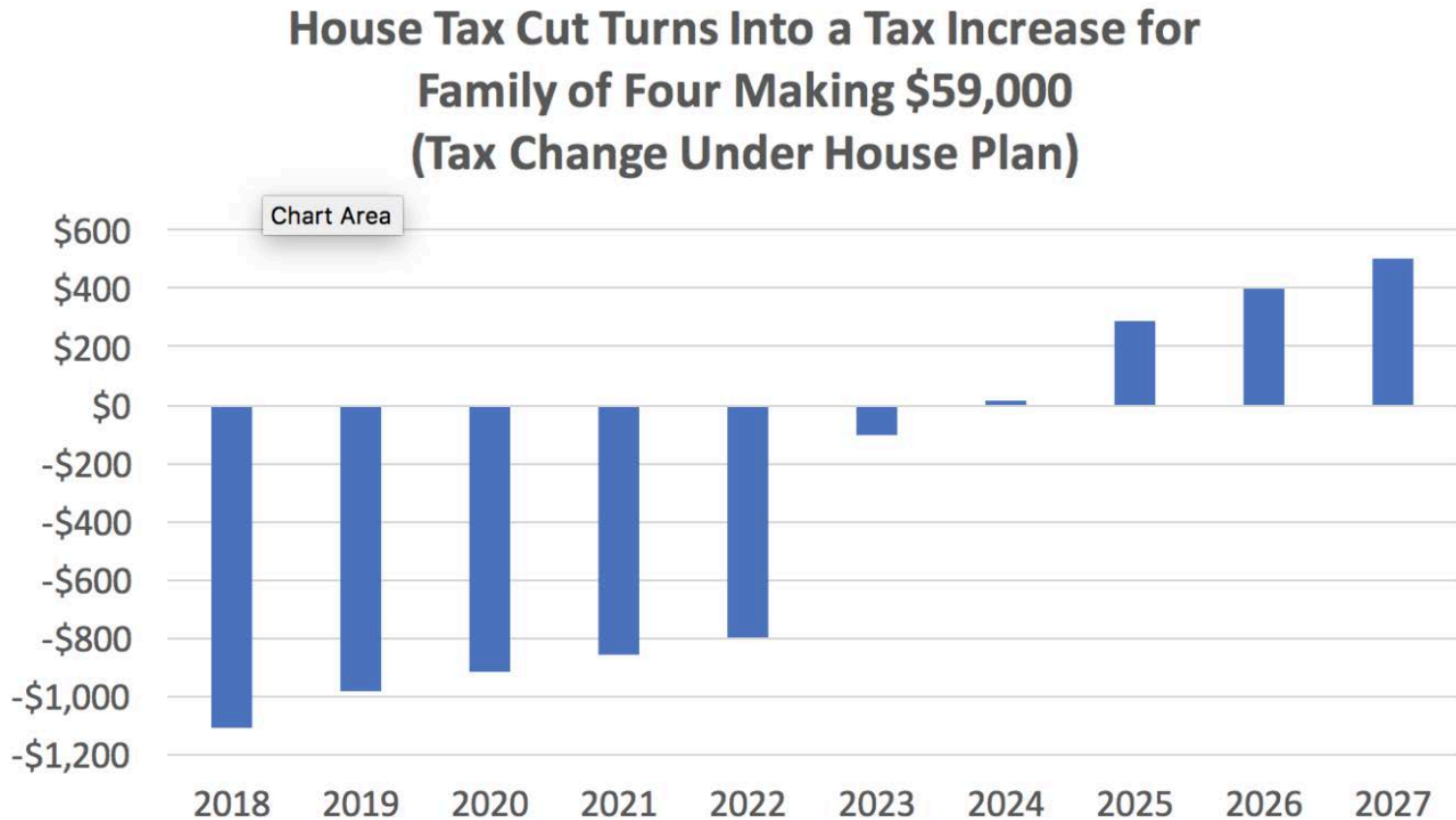
## Broader lessons

- Tax reform can involve tradeoffs. For example, taxing old capital can reduce distortionary taxes and increase growth. (House bill is a windfall for old capital.)
- Most estimates of macroeconomic tax reform have been relatively small.
- Need comprehensive, non-partisan, professional modeling.

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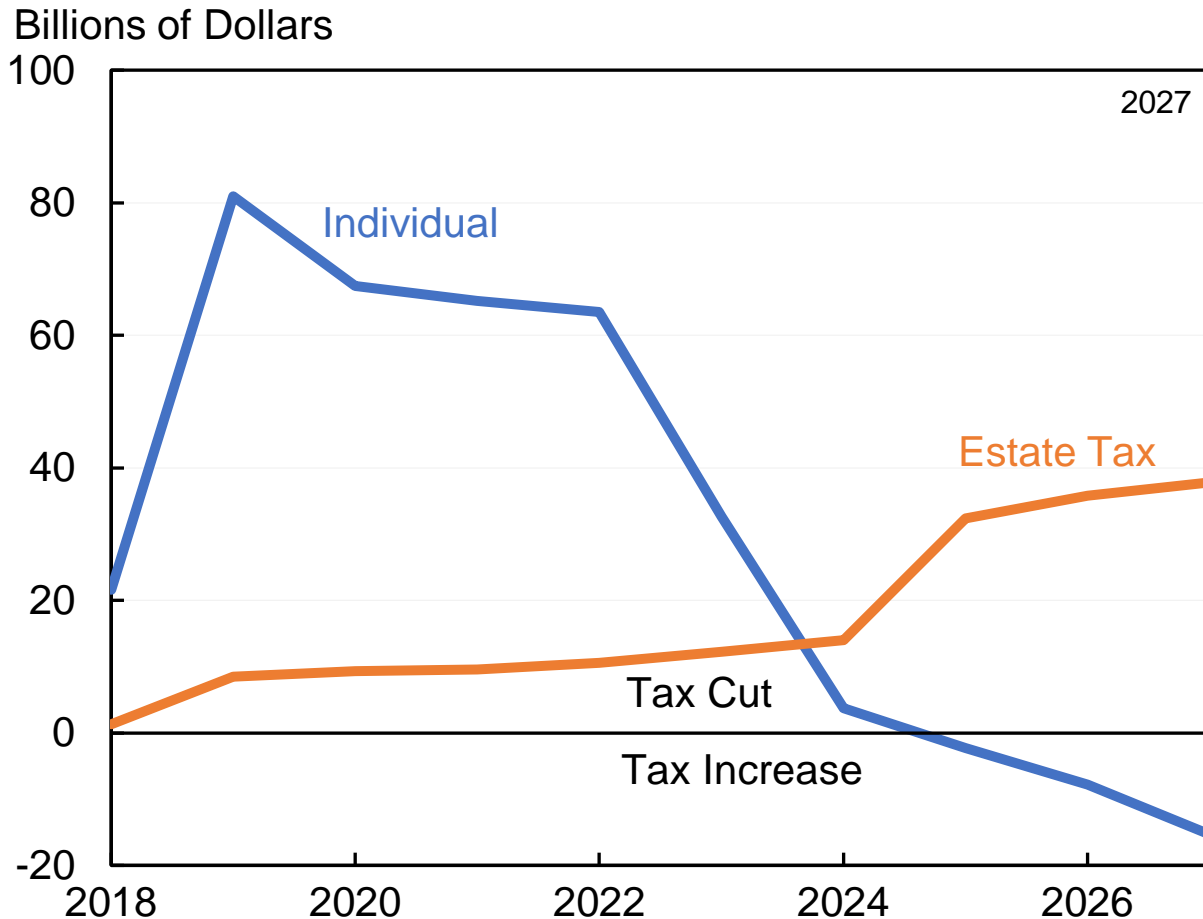
# Also serious issues on the distributional side, like the sample family the House used





# This is not a special case—the House bill raises individual taxes on non-business households over time

## Value of Tax Cuts



Note: Individual excludes the new rate for pass-throughs.  
Source: Author's calculations based on JCT (2017).

# Even if these issues were solved (and they are large issues) the plan would still have major problems

- Still much larger increases in after-tax incomes for high-income households than low-income households.
- Many households, including 16 million children, entirely or largely left out.
- Over time, deficit financing would hurt many more.

## Some elements of a solution

- Make the entire tax code permanent, stable and predictable. **This requires revenue neutrality.**
  - Permanent expensing & eliminate interest deductions
  - Much smaller corporate rate reduction
- Expand broad public buy-in and benefits, **at a minimum this requires distributional neutrality.**
  - Do not cut/repeal the estate tax or add a pass-through loophole
  - Do expand refundable child tax credits and childless EITC.

***Only possible to do this in a bipartisan manner. Easier to get 70 out of 100 Senators for genuine reform than 50 out of 52 Republicans.***



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