The Right Tax?
Explorations of U.S. Tax Reform

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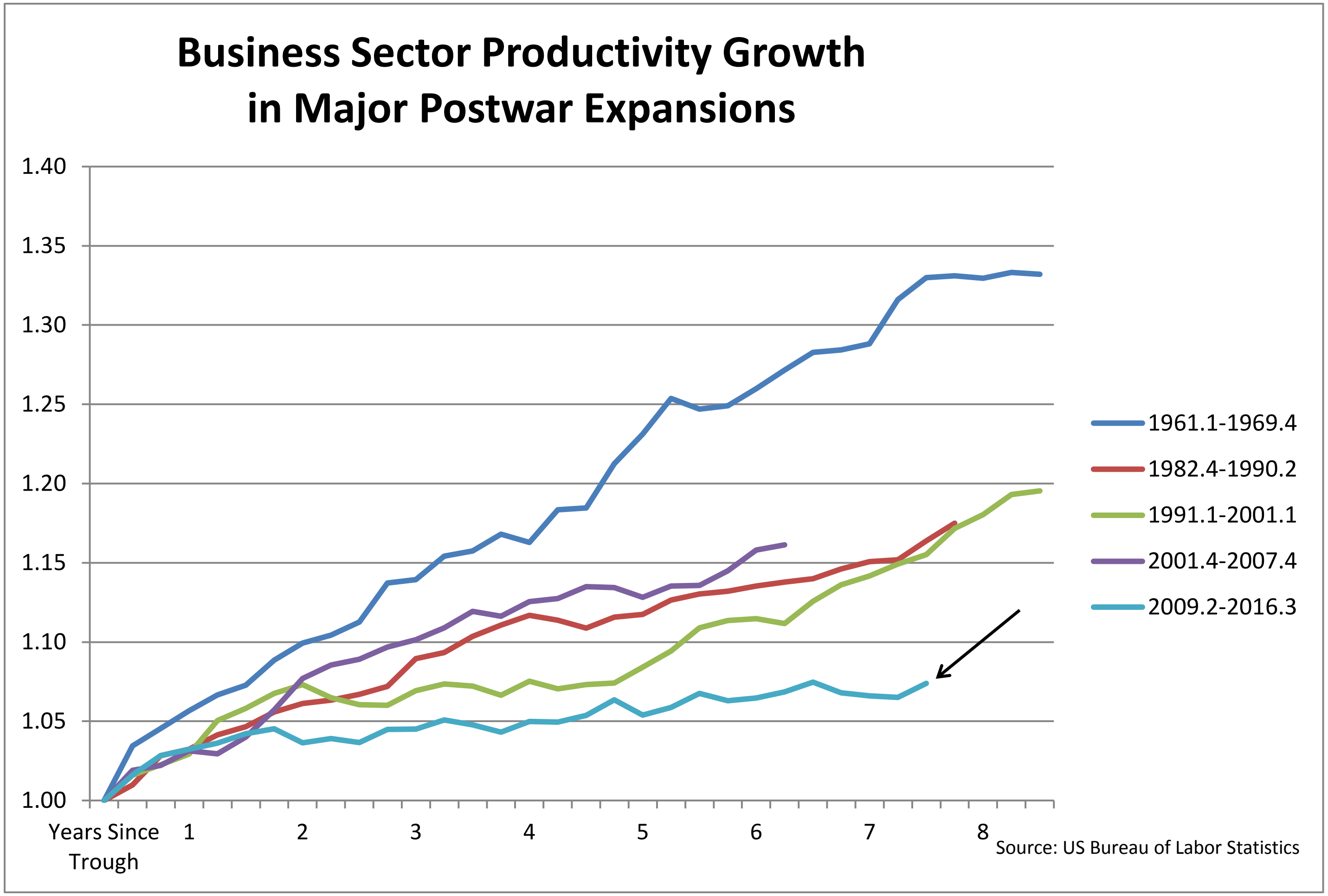
Overview of Topics

- Setting for Tax Reform: Slow Labor Force and Investment Growth
- House Republican "Blueprint" for Tax Reform
- The Inforum LIFT Model
- Modeling of the Provisions of the Plan
- Personal and Corporate Tax Cuts
- Conclusions and Further Issues

The Setting for Tax Reform

- Slow Productivity growth
- Historically low labor force participation
- Demographic handicaps
- Slow investment
- Debt overhang
- Policy uncertainties

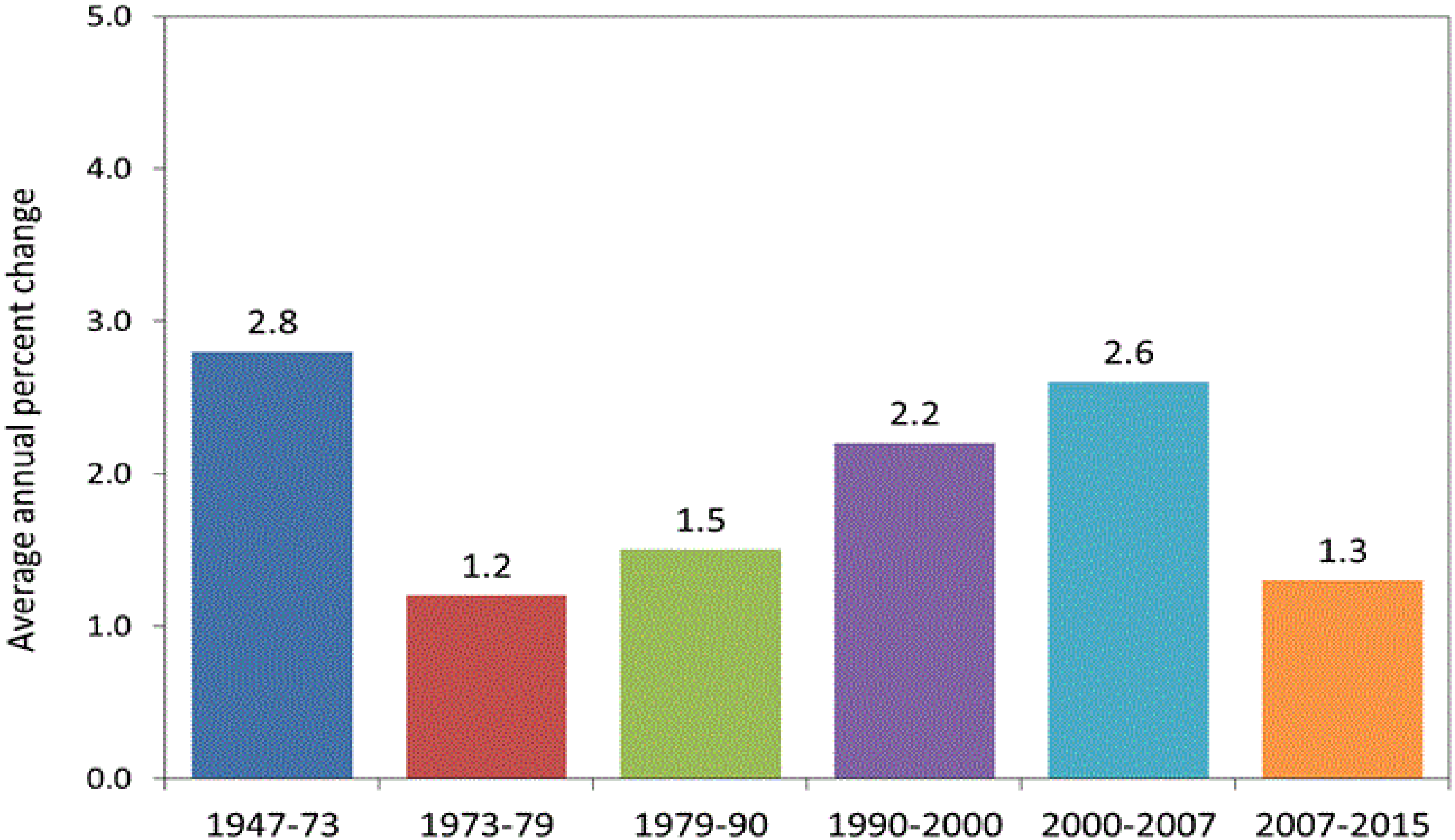
This Expansion Has the Slowest Growth Yet



What Next For Labor Productivity?

- The productivity slowdown has come again.
  - Average growth has fallen by half (2000-2007: 2.6%; 2007-2015: 1.3%)
  - Furthermore, growth since 2010 has been even slower (0.6%).
  - Growth has been slower than any previous post-war expansion > 4 years.
  - The slowdown is generally broad-based, but not all industries declined in the recent period.
  - Inforum projects a return to more normal but modest growth (1.6%)

Productivity change in the nonfarm business sector, 1947-2015

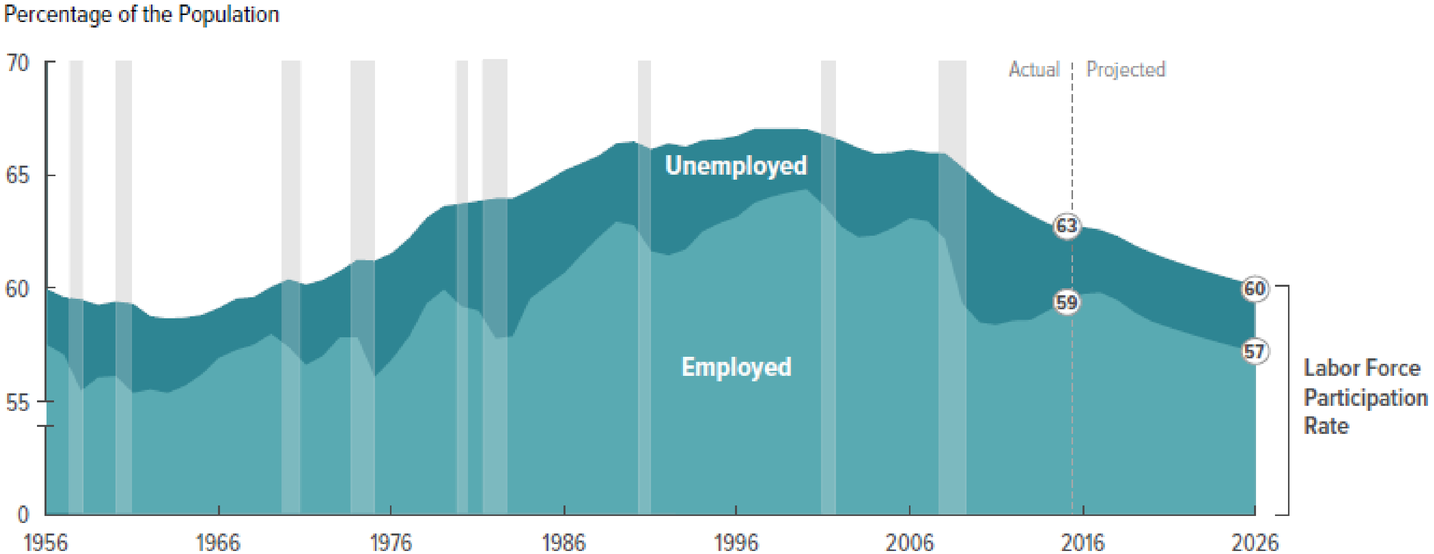


Source: U.S. Bureau of Labor Statistics

Figure 2-6.

The Labor Force, Employment, and Unemployment

The percentage of the population that is employed is projected to remain roughly unchanged over the next two years and then to decrease through 2026, mainly because baby boomers will be retiring and leaving the labor force.

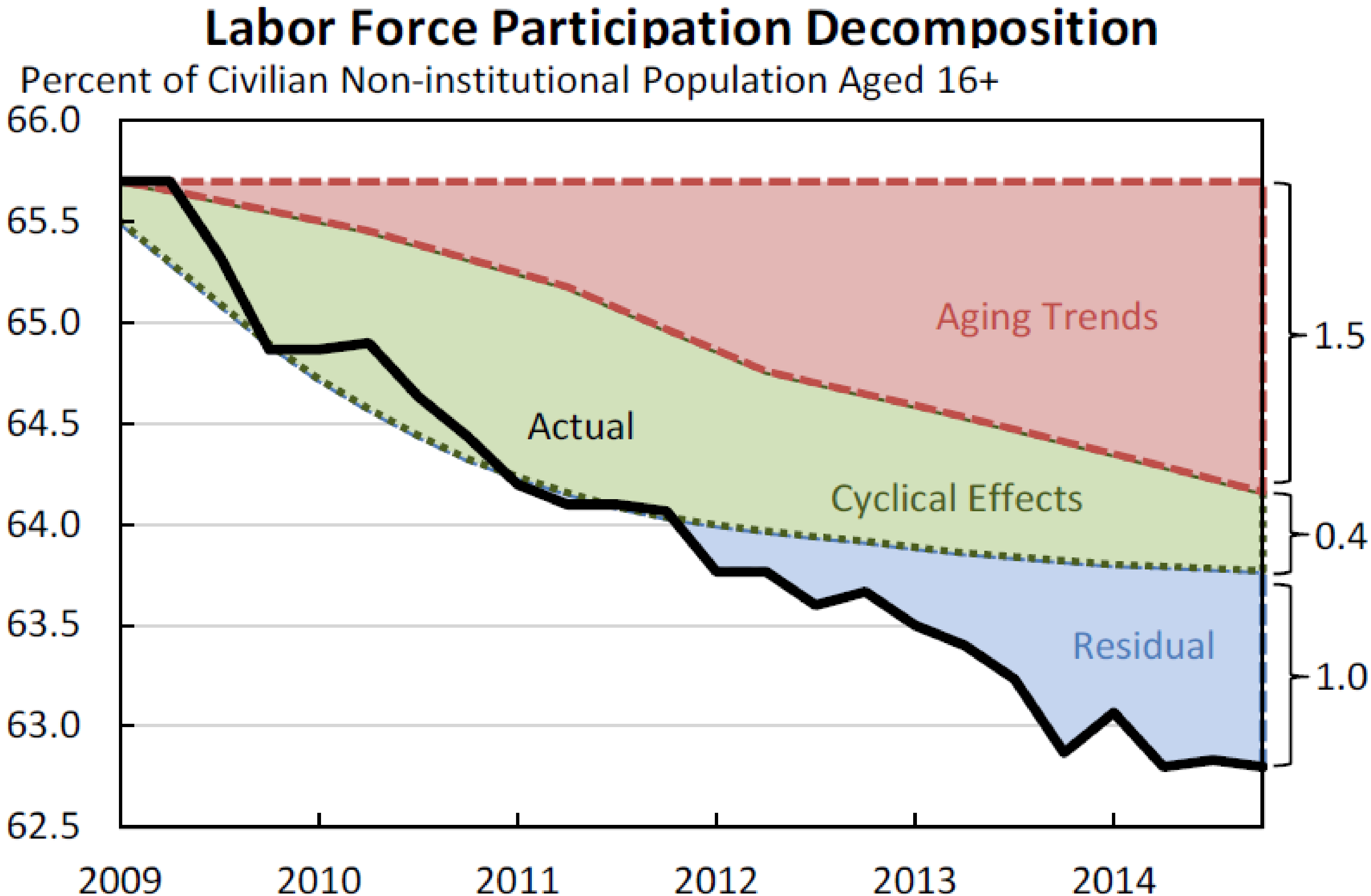


Source: Congressional Budget Office, using data from the Bureau of Labor Statistics.

The labor force consists of people who are employed and people who are unemployed but who are available for work and are actively seeking jobs. Unemployment as a percentage of the population is not the same as the official unemployment rate, which is expressed as a percentage of the labor force. Here, the population is the civilian noninstitutionalized population age 16 or older.

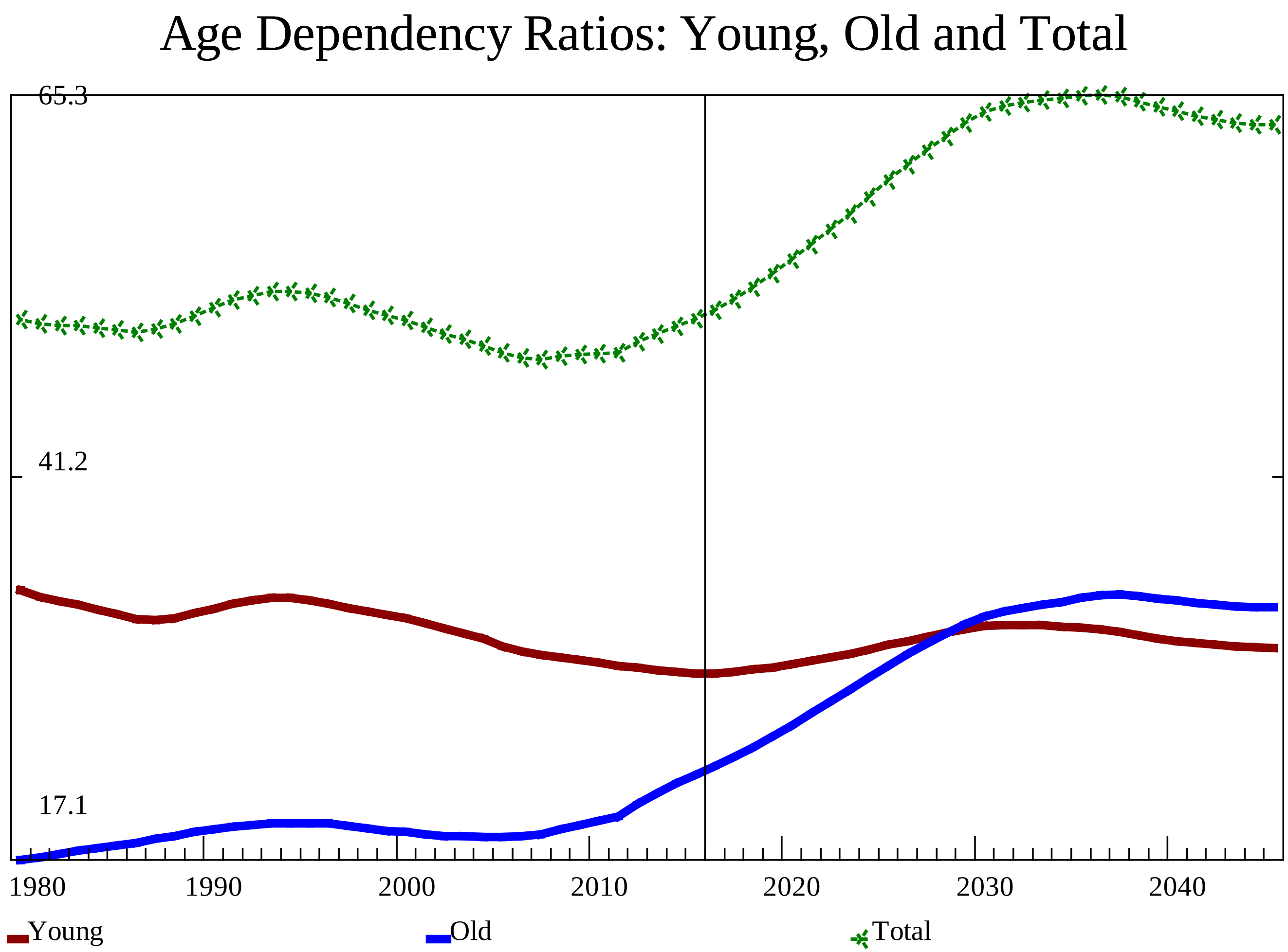
Data are annual. Actual data are plotted through 2015.

Source: Congressional Budget Office (2016)

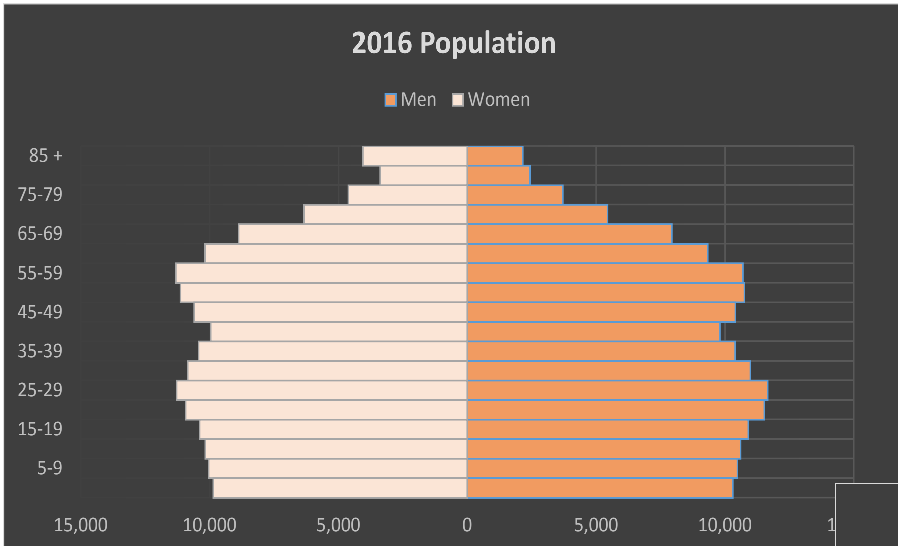


Source: Council of Economic Advisors

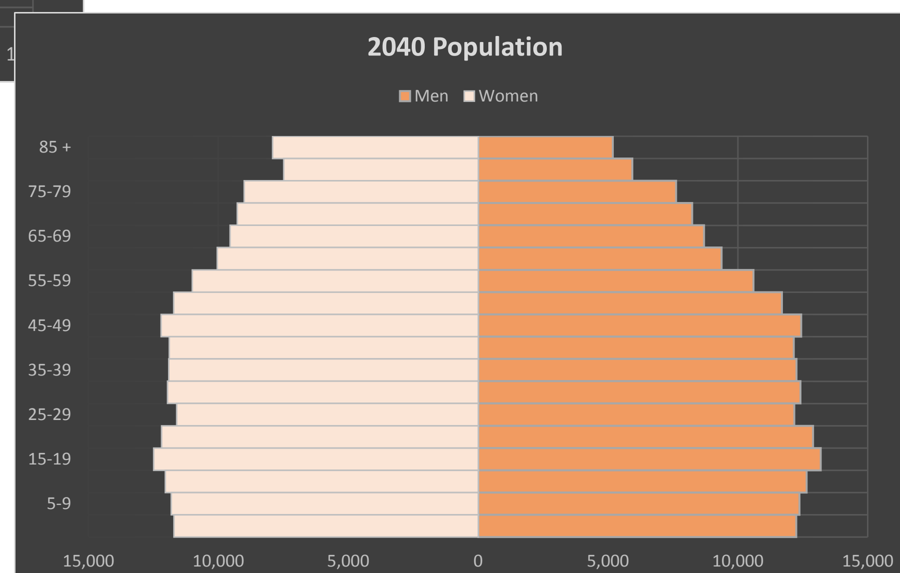
Age Dependency Ratios



Population Distribution: 2016 and 2040

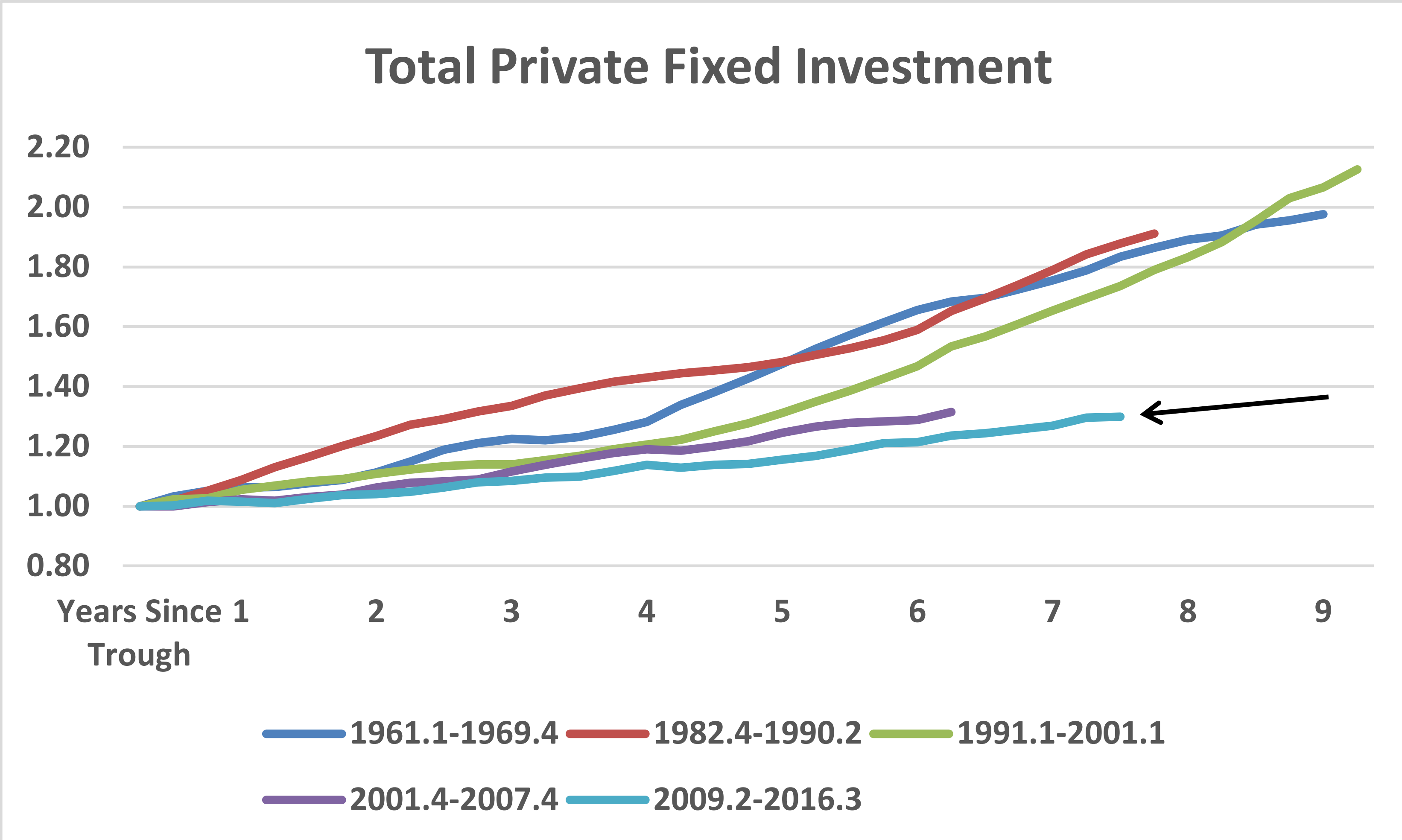


- The bulge of the baby boomers and the "echo" generation is apparent in 2016.

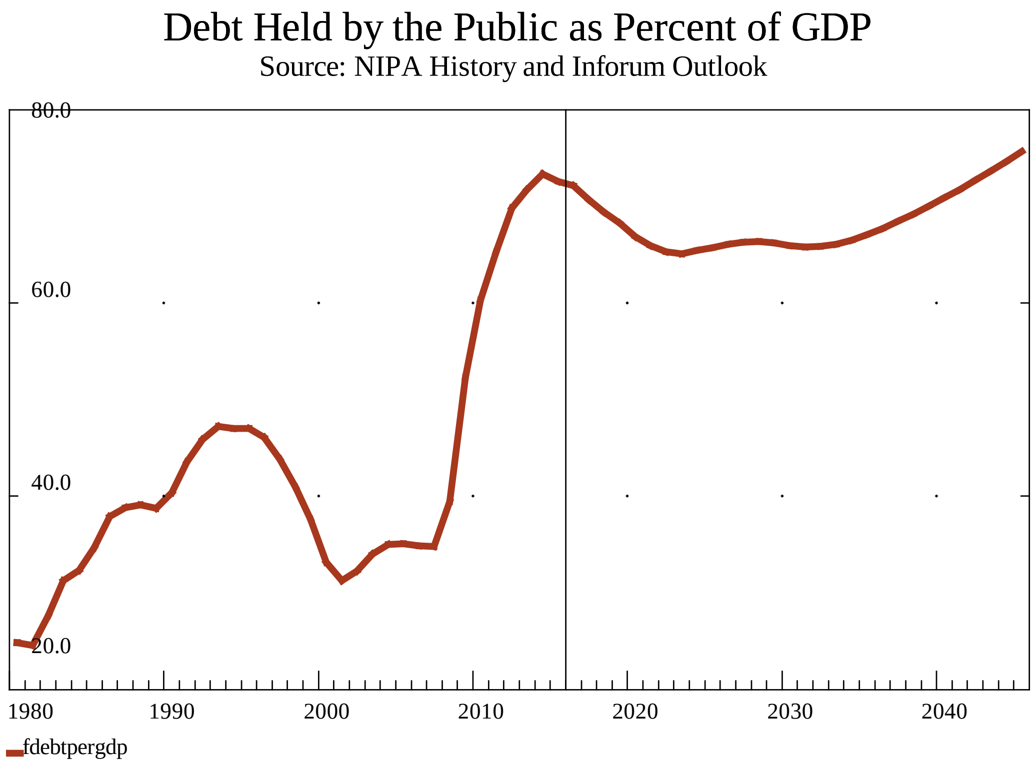


- The flattening of the entire distribution in 2040 is striking!
- The dependency ratio is likely to remain high after 2040.

Private Investment Compared to Previous Expansions



Federal Debt Outlook



- The debt/GDP ratio climbed from 35% to 72% from 2007 to 2016.
- The outlook projects federal income tax rates to rise by 4 percentage points by 2030.
- With current law and tax schedules, the debt/GDP ratio would reach 141% by 2046, according to the latest CBO estimate.

The House Blueprint for Tax Reform

Repeals corporate income tax and individual income tax on passthrough entities	Simplifies personal income tax schedules and reduces total personal taxes	Business tax base is destination based cash flow, taxed at a rate of 20%
Investment is immediately deductible, no depreciation allowances	Imported intermediate and investment cannot be deducted, exported products are exempt from the tax	One-time tax on accumulated deferred foreign earnings

The House Blueprint

- ## Individual Income Tax
  - Consolidate 7 brackets into 3: 12%, 25%, 33%.
  - Capital gains, dividends, and interest income taxed at half the normal rate.
  - Eliminate itemized deductions except for mortgage interest and charitable contributions.
  - Increase standard deduction, eliminate personal exemption, increases Child Tax Credit, eliminate the AMT, all ACA taxes would be repealed.
- ## Business Income Taxes
  - Reduce corporate income tax from 35% to 20%.
  - Introduces destination-based cash flow taxation (DBCFT), exempting profits from exports and foreign activities, but disallowing deductions for imported inputs.
  - Investment is immediately deductible. Net interest expense is not deductible.
  - Eliminate most corporate tax deductions and credits.

Impacts of the House Blueprint?

- Income Distribution: by 2025 nearly all the tax reduction would go to the top 1% of households. Some upper-middle income brackets would see tax increases.
- Federal Revenue: Tax Policy Center estimated $3.1 trillion revenue loss from 2016 to 2026.
- Savings and Investment: The plan reduces the user cost of capital investment, and so should increase equipment and structures investment.
- Demand Effects: The reduction in the federal tax receipts stimulates the private economy, at least in the short-run. However, debt increases faster.

Simplified Version

Model a 25% sales tax on sales to final household consumption

Provide a 20% wage credit to employees, to adjust for increase in consumer prices

Construct the baseline consistent with the Congressional Budget Office 10-year projection

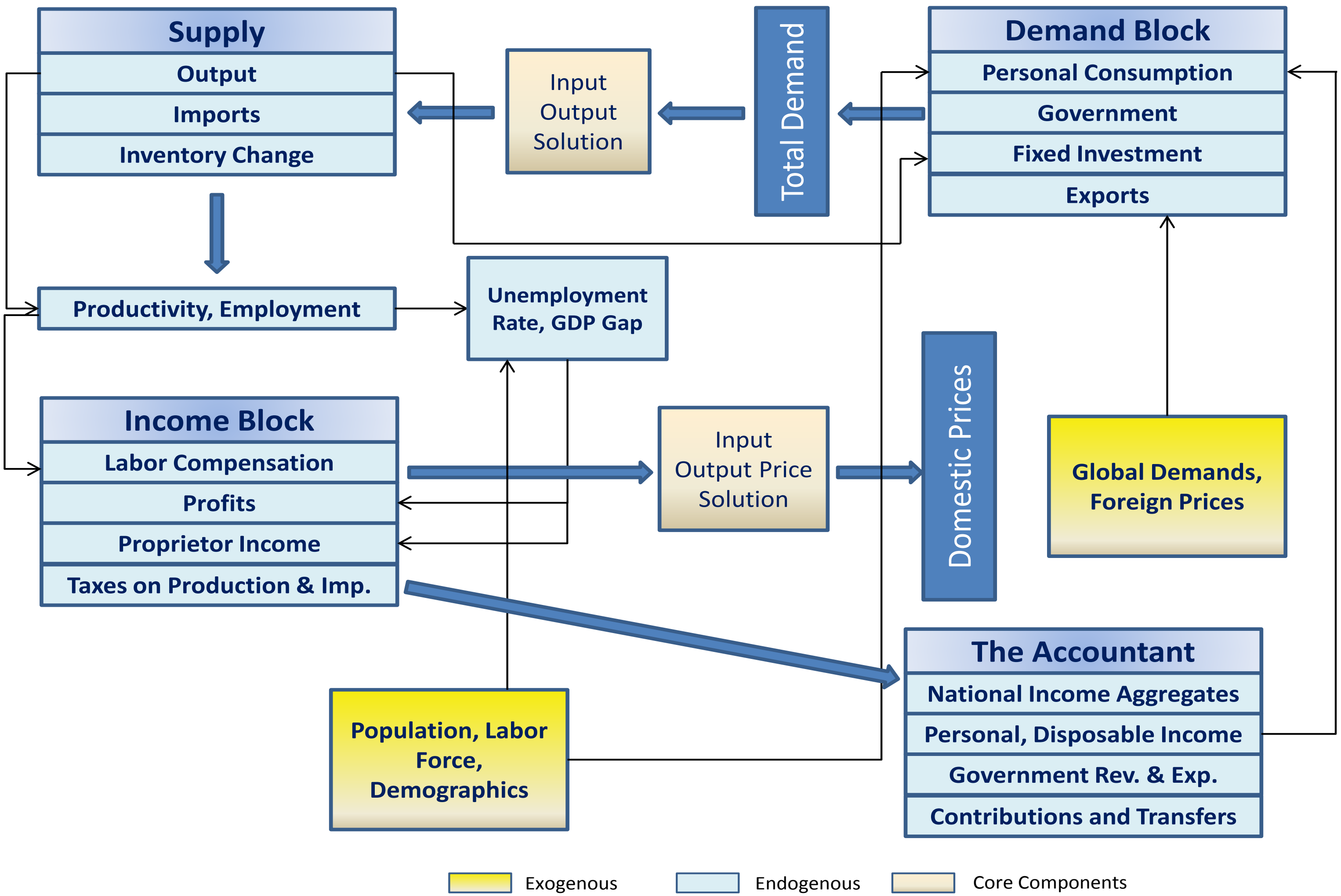
Scenario A: Immediate adjustment of wage credit

Scenario B: Gradual (5-year) adjustment of wage credit

The Inforum LIFT Model

- LIFT is an interindustry macroeconomic model of the U.S., with IO demand and price relationships at its core, but also a dynamic aggregative model.
- Econometric equations are included for all vectors of final demand, value added, employment and hours. There are 121 commodities and 71 industries in the model.
- The model structure is useful for understanding how changes in taxes impact profits or prices by industry.
- It is also crucial for being able to model the destination based cash flow (DBCF), which requires IO detail.
- Benefits and costs can be expected to be different for each industry.

The LIFT Model



Implementation in the LIFT Model

- Repeal the corporate income tax: LIFT includes detail on corporate profits for 66 private sector industries.
- Impose a 20% tax-inclusive national sales (indirect) tax. Estimates of applicable tax are applied to a consumption bridge matrix, with 121 commodities (rows) and 83 consumption categories (columns).
- Implement personal and corporate tax rate cuts.
- Model the multiplier effects of these cuts, within macroeconomic constraints.
- Model changes in the cost of capital and effects on equipment and structures investment.

Personal Income Tax Cuts

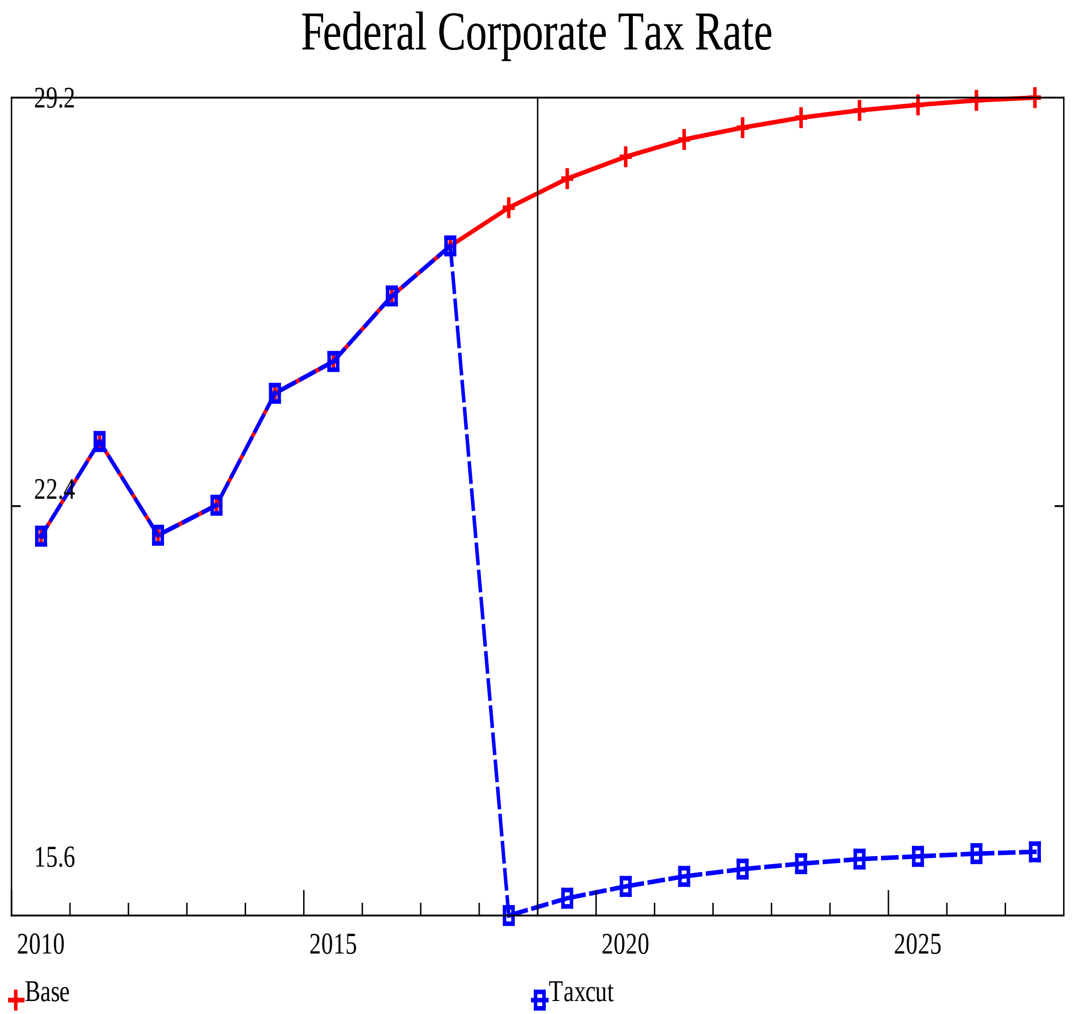
- In this plan, the federal personal income tax structure is simplified, with a reduction in total rates.
- In the U.S. National Accounts (NIPA) Personal income is the best measure of income from all sources (wages, dividends, rent, interest, transfers, etc.)
- An adjusted measure of Personal income is constructed to better approach the true tax base.
- We have subdivided this tax base into:
  1. Wages and salaries
  2. Pass-through income (mostly proprietors' income)
  3. Dividend income
- Personal tax cuts are assumed to start in 2018, and we have estimated the tax cuts for each component..

Aggregate Personal Tax Rate Cut

Corporate Tax Cuts

- In LIFT, corporate profits and taxes are modeled by industry.
- Most current tax reform plans have called for the reduction of corporate taxes to a 15 to 20 percent legislated rate.
- To simplify the analysis, we have decided to cut the legislated rate from 35 percent to 20%. In the tax cut scenario, the effective tax rate has been cut by the same percentage.

Aggregate Corporate Tax Rate Cut



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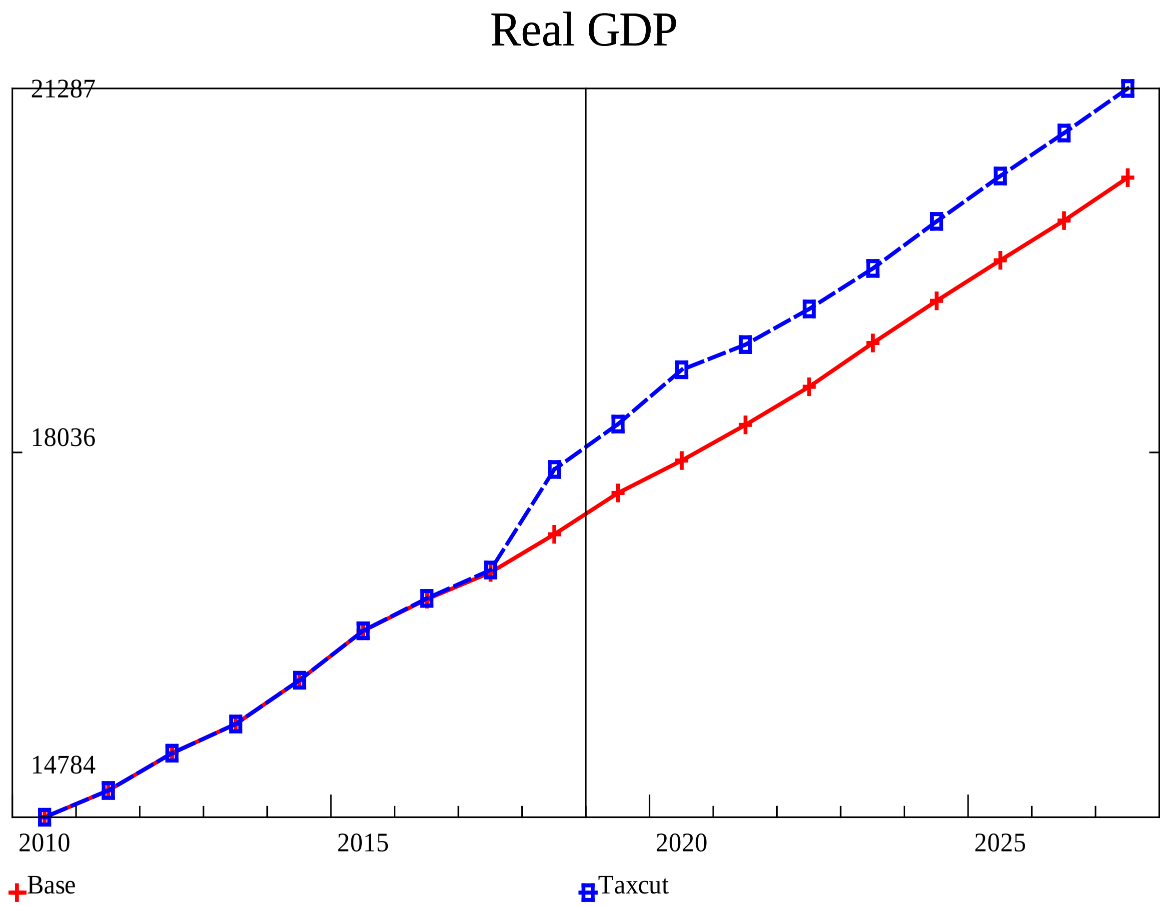
First Round Results

- Personal tax cuts have multiplier effects, generating demand, output and jobs increases in the consumer goods sectors, as well as stimulating imports.
- The corporate rate cut is expected to reduce the cost of business borrowing, stimulating investment and generating multiplier impacts in investment goods industries.
- Factors constraining growth include 1) higher prices; 2) higher interest rates; 3) reduction in net exports.
- However, even with these constraints, the economy doesn't have enough supply capacity to satisfy the additional demand. This leads to very low unemployment rates.

Labor Force Participation and Productivity

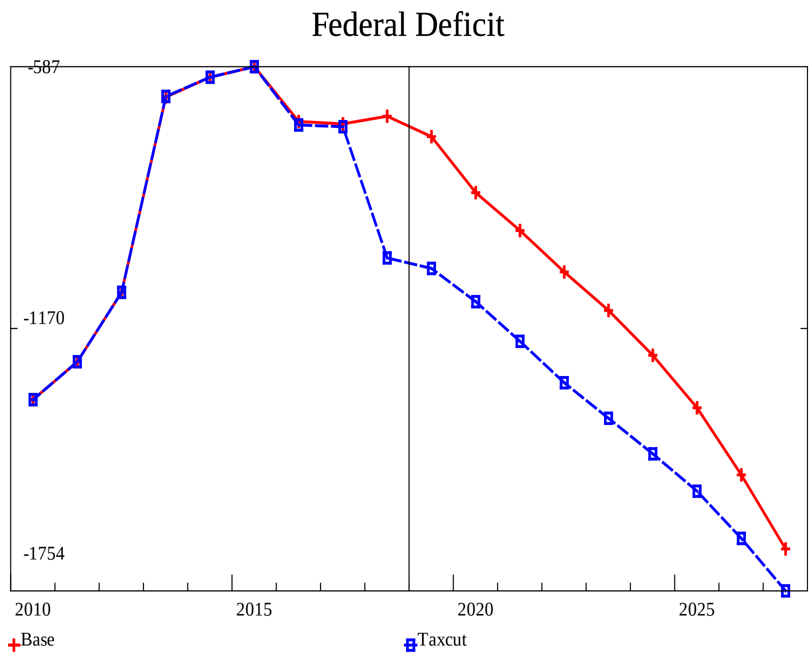
- It is likely that labor force participation should increase in response to a prolonged increase in demand.
- Increases in investment from tax and capital cost reductions should lead to an increase in labor productivity.
- If both these changes occur, this would lead to the possibility of more growth without abnormally low unemployment rates.
- In fact, with these combined assumptions, GDP and income are both higher in the tax cut scenario.

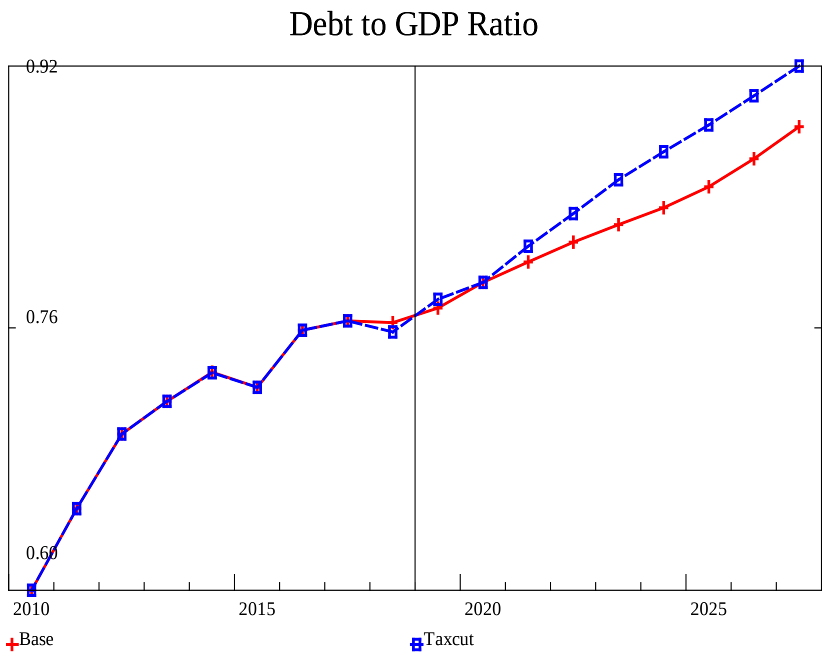
GDP Impact



Federal Deficit

- However, the federal deficit and debt are much bigger than in the base case.





Lift: Dynamic Scoring

- Statically calculated revenue losses vs. actual revenue losses: slightly less than 10% is won back from additional economic growth.

	10-year Revenue Loss		
	Static	Dynamic	Percent Reduction from Economic Growth
Personal Tax	3,679	3,149	14.4%
Corporate Tax	2,225	2,175	2.2%
Total	5,904	5,324	9.8%

Initial Conclusions

- It would be possible for the U.S. economy to accommodate the extra demand stimulus arising from the proposed cuts in taxes in the tax reform plan.
- But this requires optimistic assumptions about the response of labor force participation and labor productivity growth.
- The additional GDP growth is choked back partly due to constraints in the model, but GDP is significantly higher.
- Annual deficits and total debt are higher as well. The ultimate impact of this additional debt is unclear.
- Some of the revenue loss is made up by additional economic growth (about 10%), but the tax cuts don’t “pay for themselves”.

Further Issues

- The distribution of benefits of the tax cuts currently proposed benefit primarily the wealthiest households.
- If and when the additional debt is repaid, upon whom will this burden fall?
- Any negative economic consequences or instability due to the higher debt will affect everyone in the economy.
- More efficient tax schemes are needed to encourage savings and investment, increase productivity, and increase domestic production.
- However, more optimal taxes should be used to balance the tax cuts currently proposed. Some choices are energy/carbon taxes, or a form of VAT. However, these proposals are not very popular with the current legislature.

Paldies!

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