ECON 3510 - Intermediate Macroeconomic Theory

Fall 2015

Mankiw, *Macroeconomics, 8th ed.*, Chapter 19

Chapter 19: Government Debt and Budget Deficits

Key points:

- Measurement of US Debt
- Traditional vs. Ricardian View of debt
- Costs and benefits of a balanced budget

The Size of Government Debt:

- Show figure 19-1
- Show CBO forecast for debt
- Show Table 19-1

Problems with measurement:

1. Inflation
   - Because the deficit is reported in nominal terms, it overstates the amount by πD where D = size of the debt
   - e.g. assume $\text{deficit}_{2000} = 0$, let D_{2000} be the debt on Jan 1, 2000 in year 2000 dollars
   - $D_{2001} = D_{2000}(1+\pi) + \underbrace{\text{deficit}_{2000}}_{=0}$
   - $\implies D_{2001} = D_{2000} + \pi D_{2000}$
   - $\implies \underbrace{D_{2001} - D_{2000}}_{=\Delta D = \text{nominal deficit}} = \underbrace{\pi D_{2000}}_{=\pi D = \text{Debt} \times \text{inflation}}$
   - So even though no deficit, inflation makes it look like there is one since the debt grows due to inflation
2. Capital assets
   - Debt includes liabilities, but not assets
   - Solution: capital budgeting (e.g., include loan to buy road on liabilities side, but put the road on the assets side)
   - Problem - what is capital? How much is it worth?
3. Uncounted liabilities
   - Debt is really more like $200 trillion - if we including promised Medicare and Social Security, etc
   - Think about all the gov't guarantees on assets... should count these too
   - This idea of counting these promises to future generations is called "generational accounting"
4. The business cycle

- Debt increase during bad times because tax receipts fall
- SHOW graph of tax receipts over time
- This makes it difficult to determine source of deficits - was it a bad economy or policy (an increase in spending/decrease in taxes)?
- Solution, the cyclically adjusted budget deficit
  - Evaluate deficit as if economy were operating at it's natural level of output
  - SHOW cyclically adjusted budget deficit
  - See this:
  - DRAW Tax receipts as function of GDP. Assume 10% income tax - meaning tax receipts, T, 10% of GDP.
  - Deficit = Gov't spend - Revenue = G - T
  - DRAW deficits using graph above, but adding horizontal line for constant G. Note how deficit decreases (surplus increase) as GDP increases
  - If GDP less, move left along deficit curve and get large deficit
  - If $G \uparrow$, shift deficit curve and get larger deficits for all levels of GDP
  - The Cyclically adjusted budget deficit evaluates the budget deficit at potential GDP
  - DRAW deficit curve and note two points on curve - actual GDP and potential GDP

<u>The traditional view of government debt</u>:

- We saw this in Chapters 3, 8, 11, 12
- Short run (Chapters 11 and 12)
  - $\uparrow G$ shifts the IS curve out
    - $\Rightarrow$ shift AD out
    - b/c prices as sticky, $\Rightarrow \uparrow Y$, in the short run
    - over time, prices adjust and the economy returns to it's natural level of output with higher prices
- Long Run (Chapter 3)
  - $\uparrow G$ stimulates spending and reduces public and national savings
    - $\downarrow S \Rightarrow \uparrow r \Rightarrow \downarrow I(r)$
    - less savings leads to a higher r, which leads to less investment
    - i.e., Gov't spending crowds out investment, no change in Y
- Very Long Run (Chapter 8)
  - Lower investment leads to a lower steady state capital stock and a lower level of output
  - If the economy has less capital than the Golden Rule capital stock, consumption will be lower

<u>Ricardian View of Gov't Debt</u>:

- Consumers are forward looking
- Without an offsetting change in spending/taxes today, an increase in G or decrease in T now, means an increase in taxes later.
- b/c consumers are forward looking, they base consumption decisions on lifetime income, NOT present income

- So if debt increases (due to increases spending or less taxes), no change in lifetime income and thus no change in consumption
  - e.g., if my $600 stimulus check this year, paid for my $600 increase in taxes next year. Does this affect spending?
  - 2008 stimulus checks... people spend only about 30% of the money
- This idea is called Ricardian Equivalence: the idea that financing gov't spending by debt or taxes is equivalent.
  - This means that it's the amount of spending that matters - not how it is financed (whether through increases in taxes today or by borrowing today)

Why the Ricardian View might not hold in reality:

- Myopia: people aren't forward looking enough to consider future taxes
- Borrowing constraints: It is difficult for people to move income around over time
  - e.g., want to borrow from your future earnings, but can't. So you would spend some of tax cut, even if temporary.
- Altruism towards future: if care about future generations less than yourself, and some of debt burden falls on them, cutting taxes now can increase spending
- Income mobility and progressive taxes: Taxing now or in the future may affect your lifetime income because you pay different taxes at these times

Should the government run a balanced budget?:

- Pros:
  - Limits politicians who might have a short time horizon and poor incentives
  - Reduces pressure on monetary authority to print money and thus cause inflation
  - Risk of international problems related to debt are reduced:
    1. Capital flight (fear gov't defaults, so sell of bonds $\rightarrow$ lower prices $\rightarrow$ higher interest rates, big problems)
    2. Lost political clout
- Cons:
  - Limits stabilization policy
  - Limits ability to tax smooth
    - Taxes case economics distortions, which means efficiency losses
    - This efficiency losses are proportional to the square of the tax rate
    - That means that higher tax rates cause much larger welfare losses, so you'd rather collect a given amount of revenue with lower rates over a longer period of time
  - Limits intergenerational redistribution (e.g. Soc Security)