LECTURE NOTES

Chapter 18: Fiscal Policy

1. The Goals of Macroeconomic Policy

- Macroeconomic policy
    - Monetary Policy: The Federal Reserve
    - Fiscal Policy: The Treasury
    - Goals: (1) low unemployment, (2) price stability, (3) economic growth
        - Economic growth: To potential output, or to increase potential output. Can policy achieve the second? (Wait for chapter 20)
    - Fiscal and monetary policy need to coordinate. Different than one (monetary policy) being ruled by the other (fiscal policy)
- Assume the policymaker minimizes the following loss function of unemployment (U), inflation $(\dot{P})$, and output growth $(\dot{Y})$ as deviations from the target (*) levels:
    - $L = a_1(U - U^*)^2 + a_2\left(\dot{P} - \dot{P}^*\right)^2 + a_3\left(\dot{Y} - \dot{Y}^*\right)^2, \;\; a_1, a_2, a_3 > 0$

2. The Goals of Macroeconomic Policymakers

- Policymaking analysis needs to be "realistic"
    - Public-choice
    - Partisan theory
- Public choice
    - Policy makers are not "angels", but normal people with personal preferences
    - Do policy analysis "without romance"
    - Public choice is the microeconomic application to policy
    - Policymakers maximize their own welfare, not the social welfare
    - For the policymaker, the loss function (L) is a function of votes lost (VL)
        - $L = b_1 VL(U, \dot{P}, \dot{Y}), b_1 > 0$
    - Then:
        - $VL = c_0 + c_1(U - U^*)^2 + c_2(\dot{P} - \dot{P}^*)^2 + c_3(\dot{Y} - \dot{Y}^*)^2, \;\; c_0, c_1, c_2, c_3 > 0$
        - $c_1 \ldots c_3$ are the loss of votes by deviating from respective targets
        - c_0 is the loss of votes due to *other* influences (foreign policy, domestic issues, etc.)
    - The policymaker minimizes <u>his</u> loss function, but would that <u>minimize</u> the social loss function?
        - Yes *if* there is collective rationality
        - Voters understand how economics work
        - Voters know how to track policy to outcomes efficiently
        - Voters do not forget
    - Deviations from collective rationality
        - Voters are myopic: Voters are influenced by the economy of the last few quarters and are more concerned with output than inflation. (1) Policy that takes a long time to have an economic effect might be ignored and (2) policymakers will try to boom the economy (political business cycle)
        - Unemployment is more likely to result in loss than inflation: Incumbent policymaker will try to "play the Phillips curve" to win the election
        - A deficit bias exists in the budget process: (1) Policymakers prefer to spend money than to tax it away from voters. (2) Promise a policy that someone else is going to pay.
        - Rational irrationality: Voters have utility in holding a position, not in being right (i.e. tariffs to international trade, minimum wages, etc.)

- The Partisan Theory
    - Policymakers are ideologically motivated leaders of competing parties
    - Each party represents constituents with different ideologies
    - There is party-cycle, rather than a business cycle
    - Assume a *liberal* party and a *conservative* party
        - If *liberal* party wins, government spending increases (AD increases)
        - Inflation increases
        - Next election *conservative* party win
        - Spending becomes more restrictive (AD falls)
        - Next election *liberal* party wins
        - And so on…
    - The Four Stages of Populism (Dornbusch and Edwards, 1990)
        - Stage 1: A populist party assumes power and his policies *seem* to yield good results
        - Stage 2: Bottleneck effects start to appear (no more output gap, too much consumption at the expense of investment). Fiscal deficit rises. Because the government imposes price controls, the underground economy grows
        - Stage 3: Inflation accelerates. Fiscal revenue falls in real terms. Real wages fall. The failure of the populist policy is now evident
        - Stage 4: A new government puts forward an "orthodox reform" (probably with the endorsement of some international organization like the IMF that would loan the funds the country has consumed). The reforms include price deregulation, and then a fall in real wages.
        - Continue…
        - Stage 5: The "orthodox government" loses the election.
        - Stage 6: The populist government blames the "orthodox government" for the crisis, his policies *seem* to yield good results because its inconsistency is concealed behind the recovery of the crisis produced by the previous populist government
- More Public Choice Developments
    - Rent Seeking: Spend resources to capture a larger share of a *given* wealth without creating more wealth
    - Regulatory capture: A regulator agency advances the interest of the regulated group (which captures the regulatory agency)
    - Entanglement theory: Business and government sectors are interconnected bodies that develop numerous relationships to serve their joint interests

3. The Federal Budget

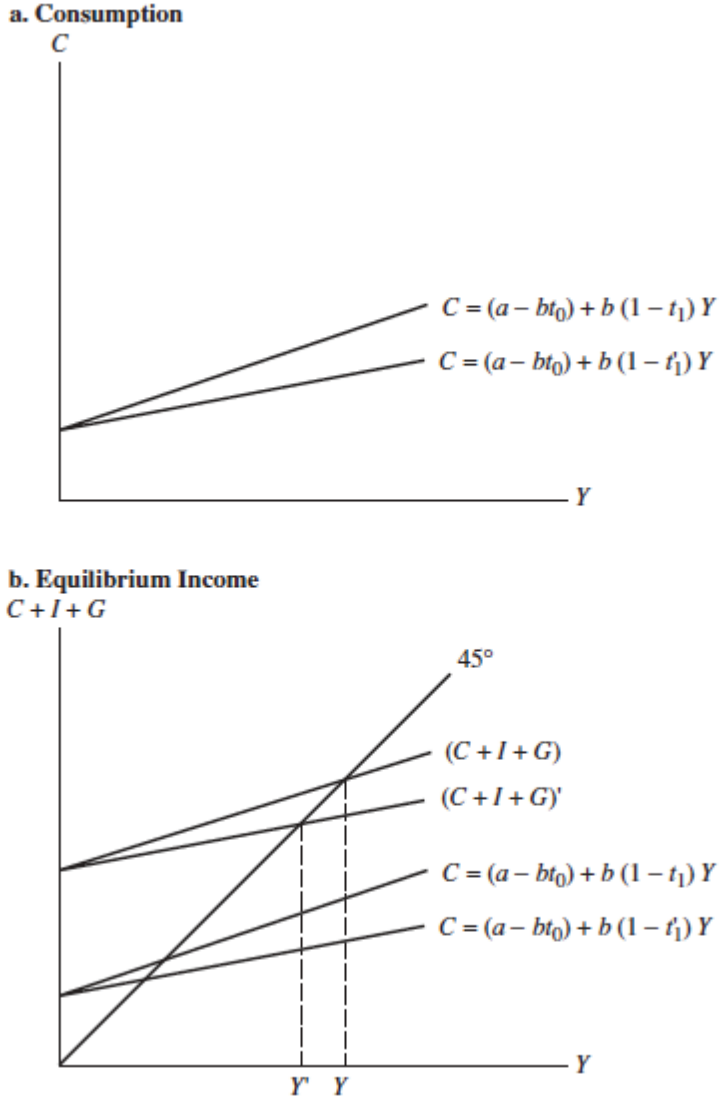
- Government spending
- Tax collections
- Usually represented in nominal (not real) values in terms of NGDP
- Deficit = T – G
- Deficit/NGDP = $\frac{T-G}{NGDP}$
- Consolidated budget: spending and tax collection at all government levels
- Macroeconomic stability relies on the consolidated budget. This requires a coordination between the federal government, states, and all levels of governments that manage a budget

4. The Economy and the Federal Budget: The Concept of Automatic Fiscal Stabilizers

- Three variables that affect macroeconomic goals in the budget:
    - (1) purchases of (new) goods and services
    - (2) transfers
    - (3) taxes
- Keynesian prescription: $\Delta G = -(\Delta C + \Delta I) \rightarrow \Delta AD = 0$
    - Can ΔG be managed automatically (at least to some extent)?
- Automatic fiscal stabilizers: Changes in taxes and transfers that occur with the level of income changes
    - Taxes
        - $T = t_0 + t_1 Y; t_0 < 0, t_1 \in (0,1)$
        - If $t_0 = 0$, then t_1 equals the average tax rate: $\left(\frac{T}{Y}\right) = t_1$
        - If $t_0 > 0$, then t_1 is larger than the average tax rate $\left(\frac{T}{Y}\right) < t_1$
        - t_0 allows for tax progressivity and transfers because someone is paying more than the average tax rate in the margin
        - t_1 is the marginal tax rate $\left(\frac{\Delta T}{\Delta Y} = t_1\right)$
        - If follows that with increase (decrease) in income tax receipts increase (decrease)
            - If the economy grows the deficit falls (the expansion dampens)
            - IF the economy falls, the deficit increases (the fall is reduced)
    - Transfers
        - When output increase unemployment decreases and so does unemployment benefits
        - When output decreases unemployment increase and so does unemployment benefits
    - Recall
        - $\bar{Y} = \frac{1}{1-b}(a - bT + I + G)$
        - $\frac{\Delta \bar{Y}}{\Delta I} = \frac{\Delta \bar{Y}}{\Delta G} = \frac{1}{1-b}; \frac{\Delta \bar{Y}}{\Delta T} = -\frac{b}{1-b}$
        - Replace the above tax formula into the Keynesian consumption function
        - $C = a + b(Y - T) \rightarrow C = a - b \cdot t_0 + b \cdot (1 - t_1) \cdot Y$
        - Substitute in the equilibrium condition
        - $Y = a - b \cdot t_0 + b \cdot (1 - t_1) \cdot Y + I + G \rightarrow \bar{Y} = \frac{1}{1-b\cdot(1-t_1)}(a - b \cdot t_0 + I + G)$
        - Then
            - $\frac{\Delta \bar{Y}}{\Delta I} = \frac{\Delta \bar{Y}}{\Delta G} = \frac{1}{1-b\cdot(1-t_1)} < \frac{1}{1-b}$
            - Because the marginal tax rate increase or decreases with income, the multiplier moves inversely with income smoothing the business cycle

- $\frac{\Delta \bar{Y}}{\Delta t_0} = -\frac{b}{1-b\cdot(1-t_0)}$
- This is the analogous to $\frac{\Delta Y}{\Delta T}$

FIGURE 18-4 Effect of an Increase in the Marginal Income Tax Rate (t_1)



An increase in the income tax rate from t_1 to t'_1 rotates the consumption function downward in part *a*. Consequently, the $C + I + G$ schedule in part *b* also rotates downward from $(C + I + G)$ to $(C + I + G)'$. Equilibrium income declines from Y to Y'.

5. Fiscal Policy Controversies: From the Reagan Years to the Present

- The Pros and Cons of Fiscal Policy Rules
    - A fiscal rule can help to limit deficit accumulation and therefore inflation and high debt
    - Keynesians oppose to fiscal rules for similar reasons they oppose to monetary policy rules
    - A rule would limit the role of automatic fiscal stabilizers
    - A rule would limit the possibility of *discretionary* countercyclical fiscal actions
- What About the Deficit?
    - Cyclical deficits: Portion of the federal deficit that result from the economy's business cycle
    - Structural deficits: Portion of the federal deficit that would exist even if the economy were at its potential level of output
    - Long-term stability requires a structural balanced fiscal budget; the cyclical deficit and surplus cancel out