LECTURE NOTES

Chapter 19: Policies for Intermediate-Run Growth

- What determines output for a period longer than the short-run but that is not the long-run
- It is supply (classics) or demand (Keynesians) what mostly affects output in the intermediate-run?
    - What policies would be in place?

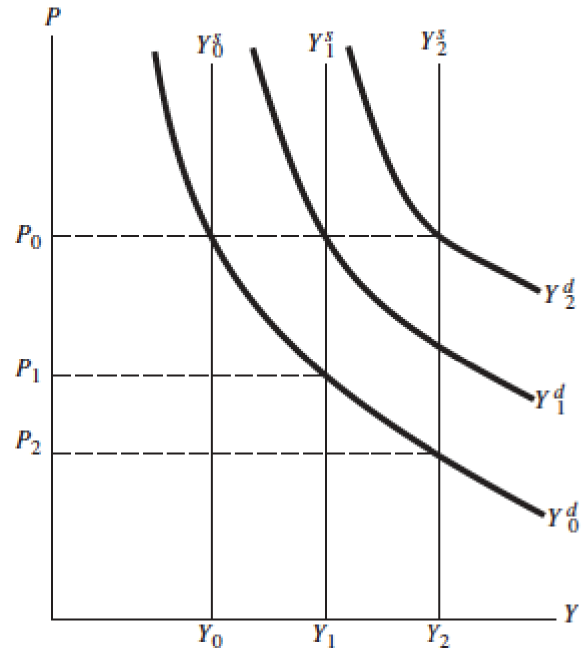
1. U.S. Economic Growth, 1960-2011

- The U.S. growth rate slowed down after 1973
- In the 1990s starts to accelerate again
- Why these “mid-term” changes in output growth rates?

2. The Supply Side Position

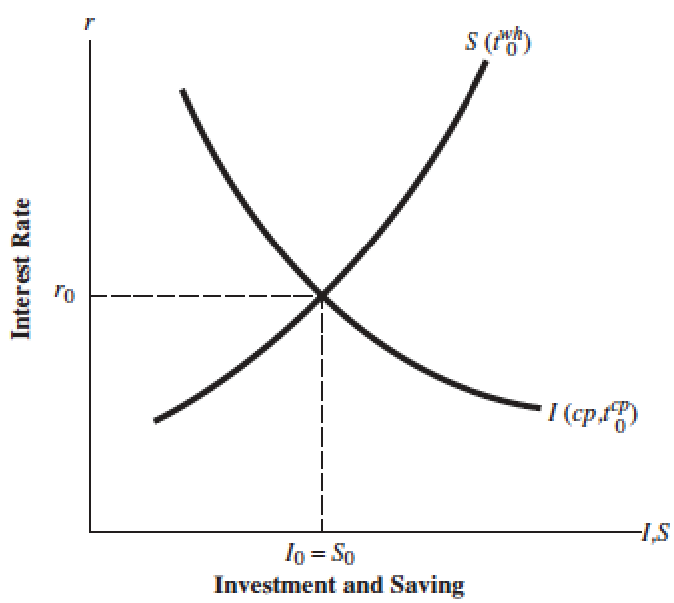
- Supply side economists consider that in the intermediate run output is defined by real variables (like the Classical model) and that savings equal investments in equilibrium
- Supply side economists also usually prefer a free market economy (shock-absorbing)
- If you move from the short-run towards the long-run, then the short-run effects start to dissolve and you're left with the original Classical model
- Supply side propositions
  - (1) Intermediate-Run Output Growth is Supply Determined
    - Growth is predominantly a supply phenomenon when inputs and technology grows
    - AD may shift to the right, but output level will finally depend on the location of supply
  - (2) Saving and Investment Depend on After-Tax Rates of Return
    - Investment depends on the (after-tax) rate or return
    - Demand for loanable funds (investment) location depends on corporate profits (cp) and taxes (tcp)
    - Supply of loanable funds (savings) depend on taxes on dividend and interests income
  - (3) Labor Supply is Responsive to Changes in the After-Tax Real Wage
    - A change in the income tax has a significant effect on labor supply
    - Laffer Curve
  - (4) Government Regulation Contributed to the Slowdown in the U.S. Economic Growth Rate
    - Excessive market regulation slows down the growth rate in the "mid and long-run"
    - Supply shock: To comply with excessive regulations is costly
    - A lower rate of return slows down capital formation
- Equality versus Efficiency
  - Be careful:
    - Inequality *inside* countries might be rising
    - Inequality *across* countries is decreasing (because large economies –India, China– are moving towards more free economies)
    - Income distribution does not depend on economic freedom (avoid <u>sample bias</u>)
    - If there's income mobility, there's always differences in income
    - Moral philosophy: It's distribution outcome, or the rules that govern how income is going to be distributed what defines what a "just" society is (Robert Nozick)

FIGURE 19-1 Intermediate-Run Growth in the Classical System



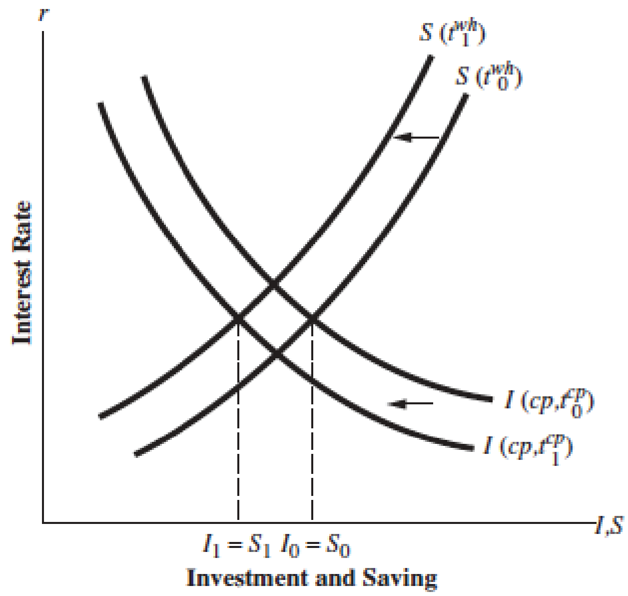
Growth in factor supplies shifts the supply schedule to the right (from Y_0^s to Y_1^s to Y_2^s). If demand is unchanged, the price level falls (from P_0 to P_1 to P_2). Appropriate increases in the quantity of money would increase demand sufficiently (from Y_0^d to Y_1^d to Y_2^d) to maintain the initial equilibrium price level (P_0).

FIGURE 19-2 Classical Theory of Interest



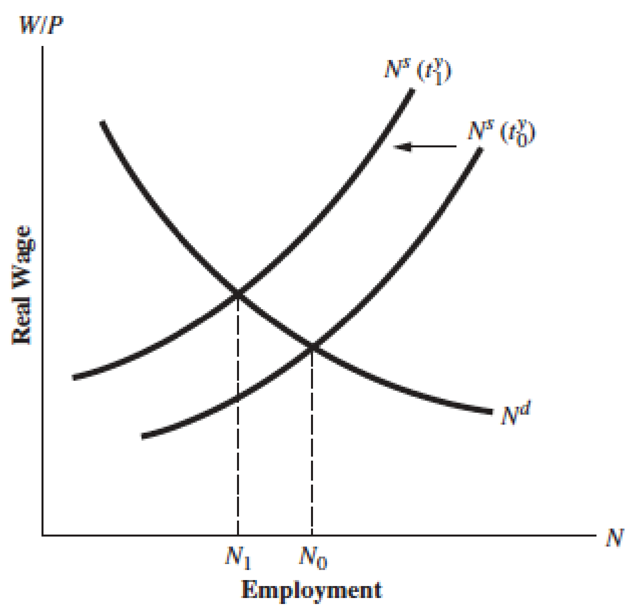
The position of the saving schedule depends on the tax rate for interest and dividend income (t_0^{wh}). The position of the investment schedule depends on the effective tax rate on corporate profits (t_0^{cp}) as well as on the pretax corporate profit rate (cp). These tax rates, t_0^{wh} and t_0^{cp}, therefore, affect the equilibrium real interest rate (r).

FIGURE 19-3 Inflation, the Tax System, and the Saving–Investment Process



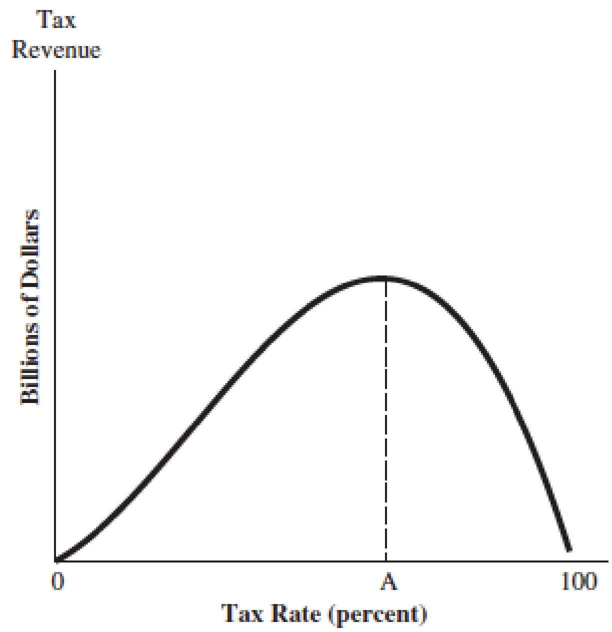
An increase in the effective corporate tax rate due to increased inflation caused the investment schedule to shift leftward from $I(cp, t_0^{cp})$ to $I(cp, t_1^{cp})$. An inflation-induced increase in the effective tax rate on interest income and capital gains shifts the saving schedule leftward from $S(t_0^{wh})$ to $S(t_1^{wh})$. The equilibrium levels of saving and investment fall from $I_0 = S_0$ to $I_1 = S_1$

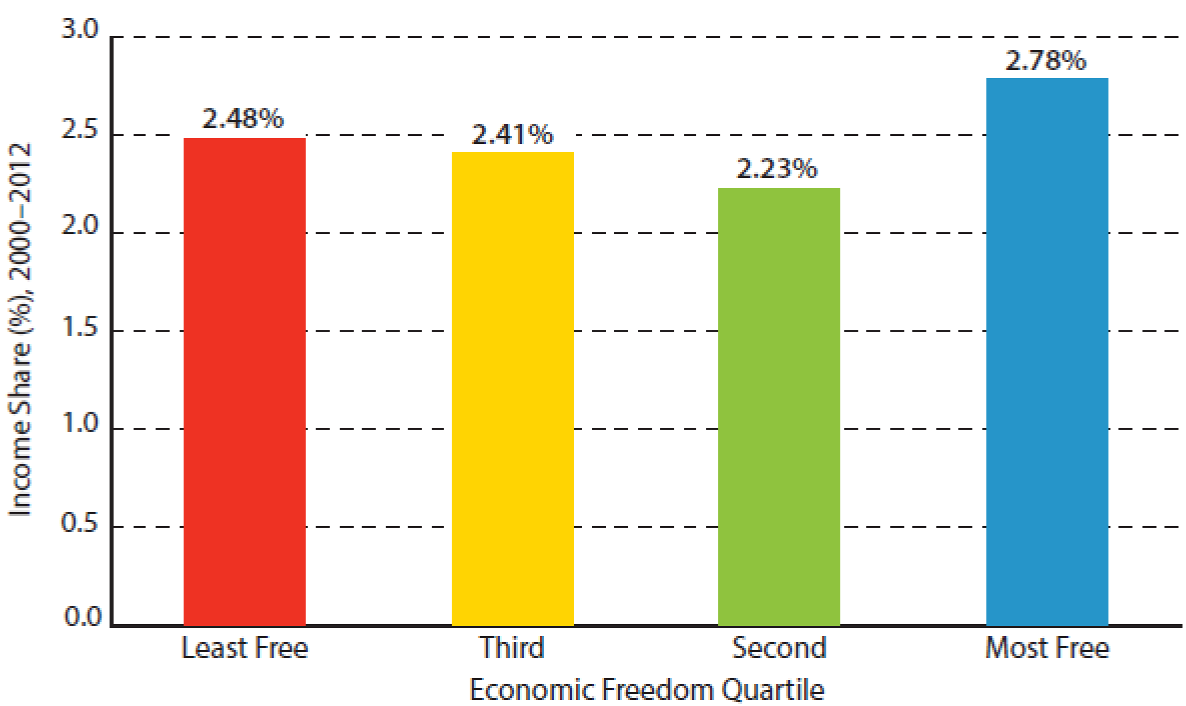
FIGURE 19-4 Taxes and Labor Supply in the Classical System



An increase in the income tax rate from t_0^y to t_1^y reduces the after-tax real wage and causes the labor supply schedule to shift to the left. Employment declines from N_1 to N_1.

FIGURE 19-5 The Laffer Curve





Sources: Fraser Institute, *Economic Freedom of the World: 2013 Annual Report*; World Bank, *World Development Indicator*.

3. The Keynesian Critique of Supply-Side Economic

- Keynesians agree that supply shocks can affect the intermediate-run growth rate of output
  - Oils shock in the late 1970s
  - But also monetary shock (too restrictive) to reduce inflation
- Saving and Investment and After-Tax Rates of Return
  - Keynesians agree that capital formation is needed for growth (beyond the short-term)
  - But Keynesians argue that the low level of capital formation during the 1970s was the slow down of the growth rate [opposite relationship to supply side economists]
- The Effect of Income Tax Cuts on Labor Supply
  - Income tax does not have significant effects on labor supply
- Regulations as a Source of Inflation and Slow Growth
  - There's agreement that excessive regulation negatively affects intermediate and long-run growth rates
  - But good regulation can have positive effects (the problem is *bad* regulation, not regulation *per se*)

4. Growth Policies from Ronald Reagan to Barack Obama

- Read yourself…