Lecture 3: Basic Aggregate Demand Model

- Current events (FT 09/15/99)
- Review Lecture 2
  - GDP
  - Inflation Rate (Cont.)
  - Unemployment Rate (Cont.)
  - Trade and Budget Deficits (Cont)

The Inflation Rate

- More than one…. (P(t)-P(t-1))/P(t-1)
- GDP deflator and CPI
- GDP deflator = Nominal GDP / GDP
  - P0 = 1
  - P1 = 230,000/210,000 = 1.1 (approx.)
- NGDP growth = GDPg + Inflation (defl)
-     15   5   10
- Why do we care?

The Unemployment Rate

- Labor force (L) = Empl. (N) + Unemployed (U)
- Unemployment Rate (u) = U/L
- Willing to work? Looking for work?   L < Pop.
    - Not in the labor force
    - Discouraged workers (recessions)
- High unemployment often comes hand on hand with low *participation rate* :
    - L/Pop of working age
- U.S. (u = 4%, pr = 80%) France (u=13%, pr = 65%)
- Why do we care? Too high and…. too low??

Deficits

- Expenditure > Income
- Trade Deficit :
  - Imports > Exports
  - U.S. today (FED, Treasury, Japan)
- Budget deficit
  - Gov. Expenditure > Gov. Revenue
- Why do we care? Smoothing; Brazil

Basic Aggregate Demand Model

- Goal: Determine equilibrium output
- Short-run
- A bit more complex than standard micro demand and supply
  - **Feedback**
- Shortcuts (isolate one effect)

First Model: The Goods Market
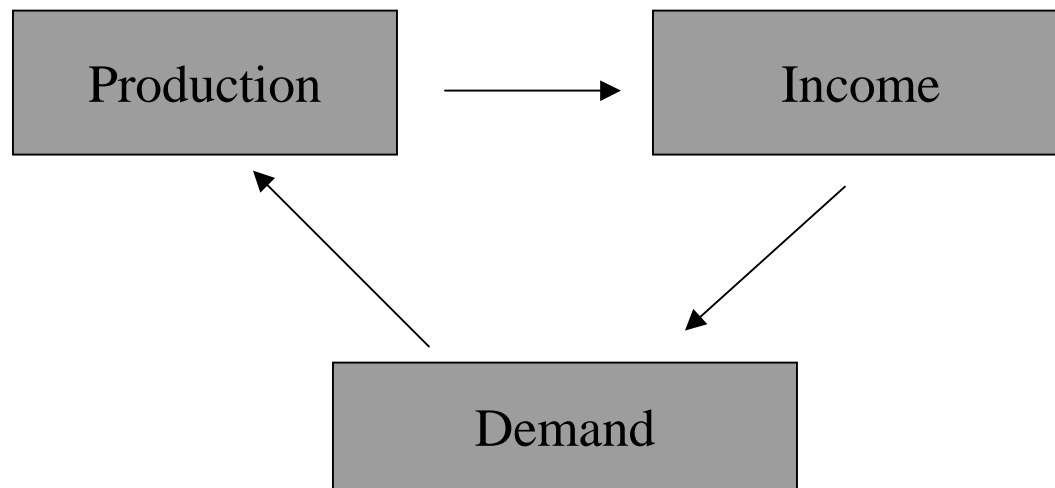
Demand Determined Output

- Aggregate demand (Z):
  - $$Z = C + I + G + (X\text{-}Q)$$
- Aggregate supply:
  - fixed P
  - as much as needed to satisfy demand
- Model:
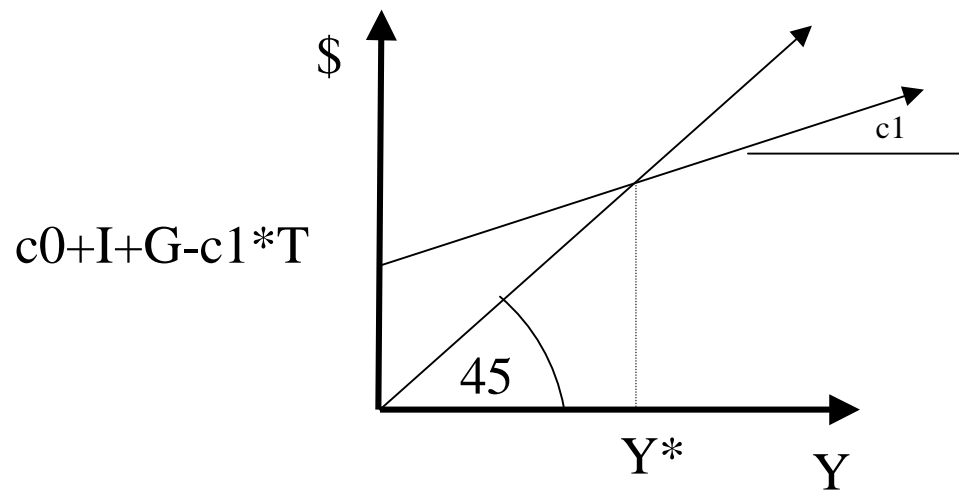 - behavioral equations
  - equilibrium conditions

Behavioral Equations

- X-Q $= 0$ (for now)
- G and I: constant
- C $= c_0 + c_1*YD$; $c_0 > 0$; $0 < c_1 < 1$
- YD $=$ Y - T,   T constant

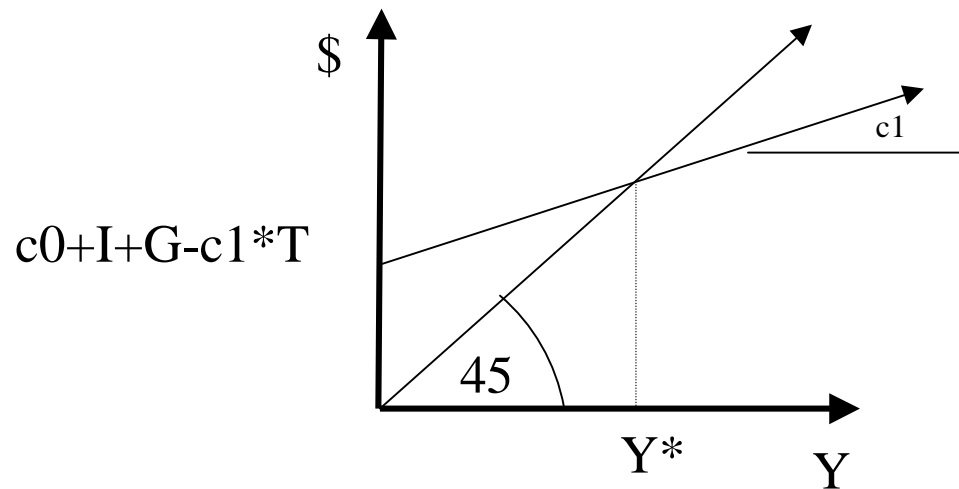$$Z = (c_0 - c_1*T + I + G) + c_1*Y$$

Equilibrium

$$Z(Y) = Y$$

c0+I+G-c1*T

45

Y*

$

Y

c1

$$Y* = (1/ (1-c1)) * (c0-c1*T+I+G)$$

multiplier   autonomous spending

Comparative Statics

Fiscal contraction; consumption boom (stock market)

$$Y^* = (1/ (1-c1)) * (c0-c1*T+I+G)$$