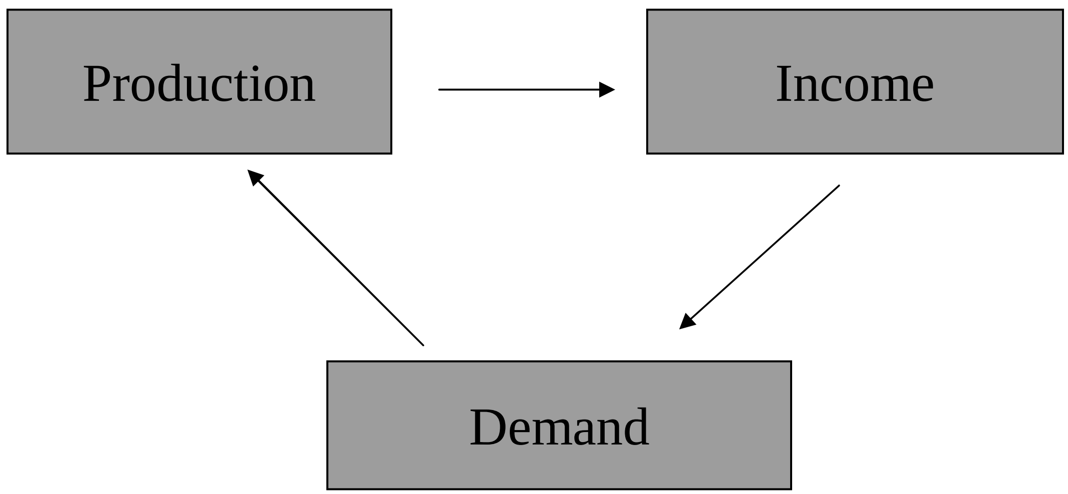
Lecture 3: Basic Aggregate Demand Model

- 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

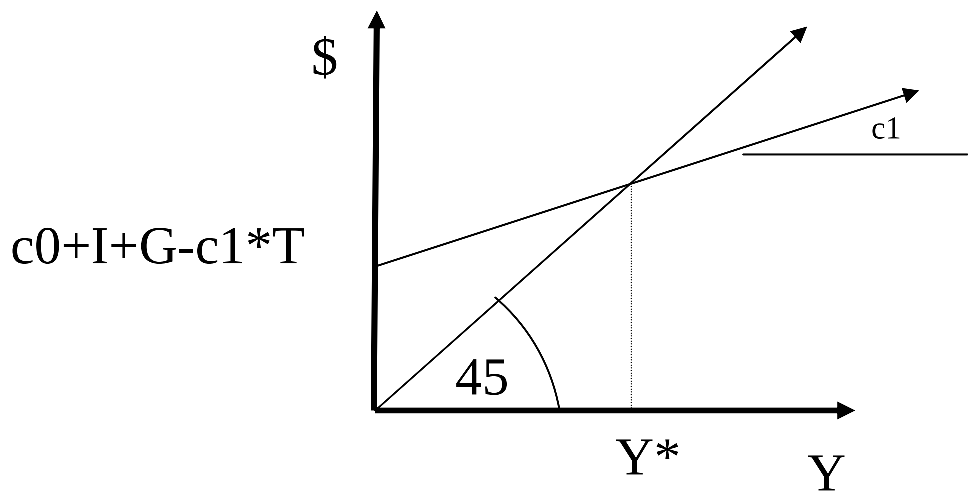
Behavioral Equations

- $X - Q = 0$ (for now)
- G and I: constant
- $C = c0 + c1*YD$; $c0 > 0$; $0 < c1 < 1$
- $YD = Y - T$, T constant

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

Equilibrium

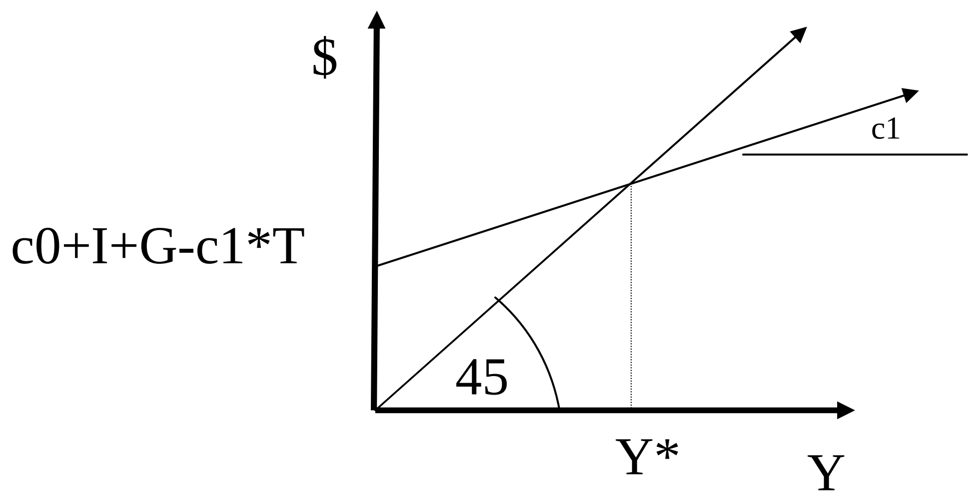
$$Z(Y) = Y$$



$$Y^* = \underbrace{(1/\,(1\text{-}c1))}_{\text{multiplier}} * \underbrace{(c0\text{-}c1*T+I+G)}_{\text{autonomous spending}}$$

Comparative Statics

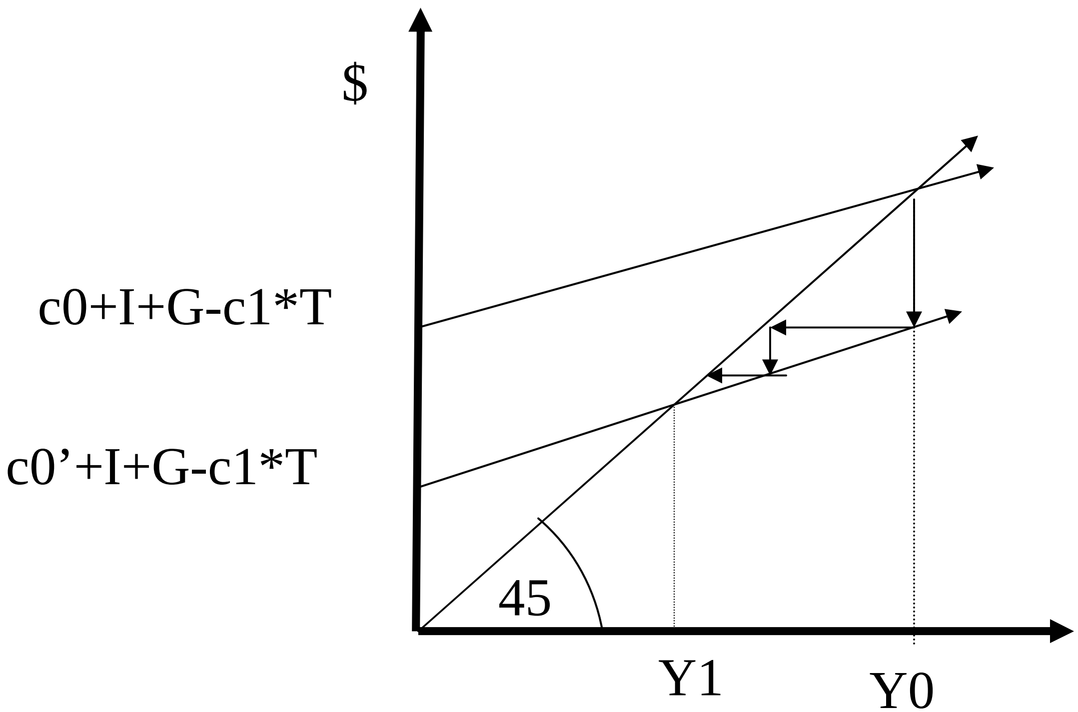
Fiscal contraction; consumption boom (stock market)



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

Consumer Confidence

$c0' < c0$



$Y(t+1) = Z(t)$ => (inventories)

Other: $C(t) = c0 + 0.5 * c1 * (Y(t) + Y(t-1))$

Macroeconomic policy is tricky… lags and leads