Econ702 Section - Week 8

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Introduction

- These slides will be downloadable at Jun's website.
- A section recording will only be available during limited time (9:30 AM - 4:00 PM on Friday) at Canvas.
- TA will be staying at BBcollaborate Ultra session during the regular discussion sections time and office hours.

Overview

- Review
  - LM Curve, AD Curve, AS Curve
- Exercise

LM Curve

- LM curve plots combination of r_t and Y_t for which the money market is in equilibrium.

$$M_t = P_t M^d(r_t + \pi^e_{t+1}, Y_t)$$

$$r_t = i_t - \pi^e_{t+1}$$

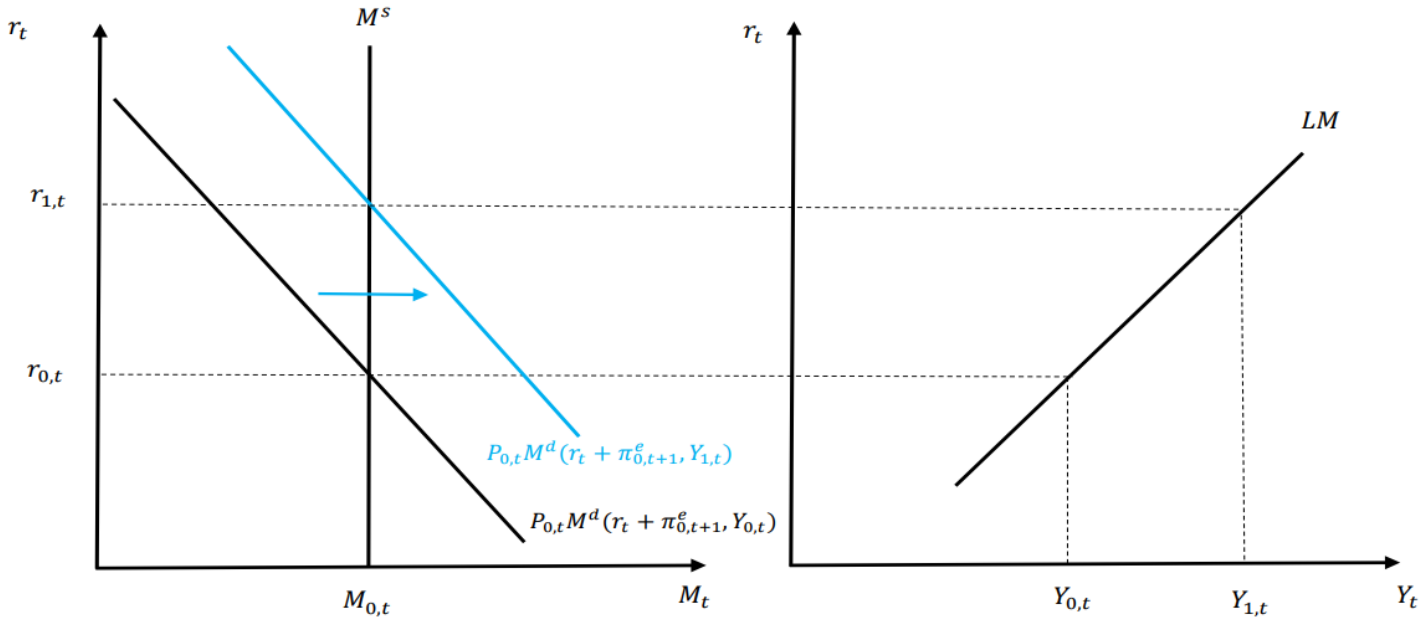

Figure 1: The derivation of LM curve

AD curve

- The AD curve plots the combination of P_t and Y_t such that

$$C_t = C^d(Y_t - G_t, Y_{t+1} - G_{t+1}, r_t)$$

$$I_t = I^d(r_t, A_{t+1}, K_t)$$

$$Y_t = C_t + I_t + G_t$$

$$M_t = P_t M^d(r_t + \pi^e_{t+1}, Y_t)$$

$$r_t = i_t - \pi^e_{t+1}$$

- AD curve = IS curve + LM curve

AD curve

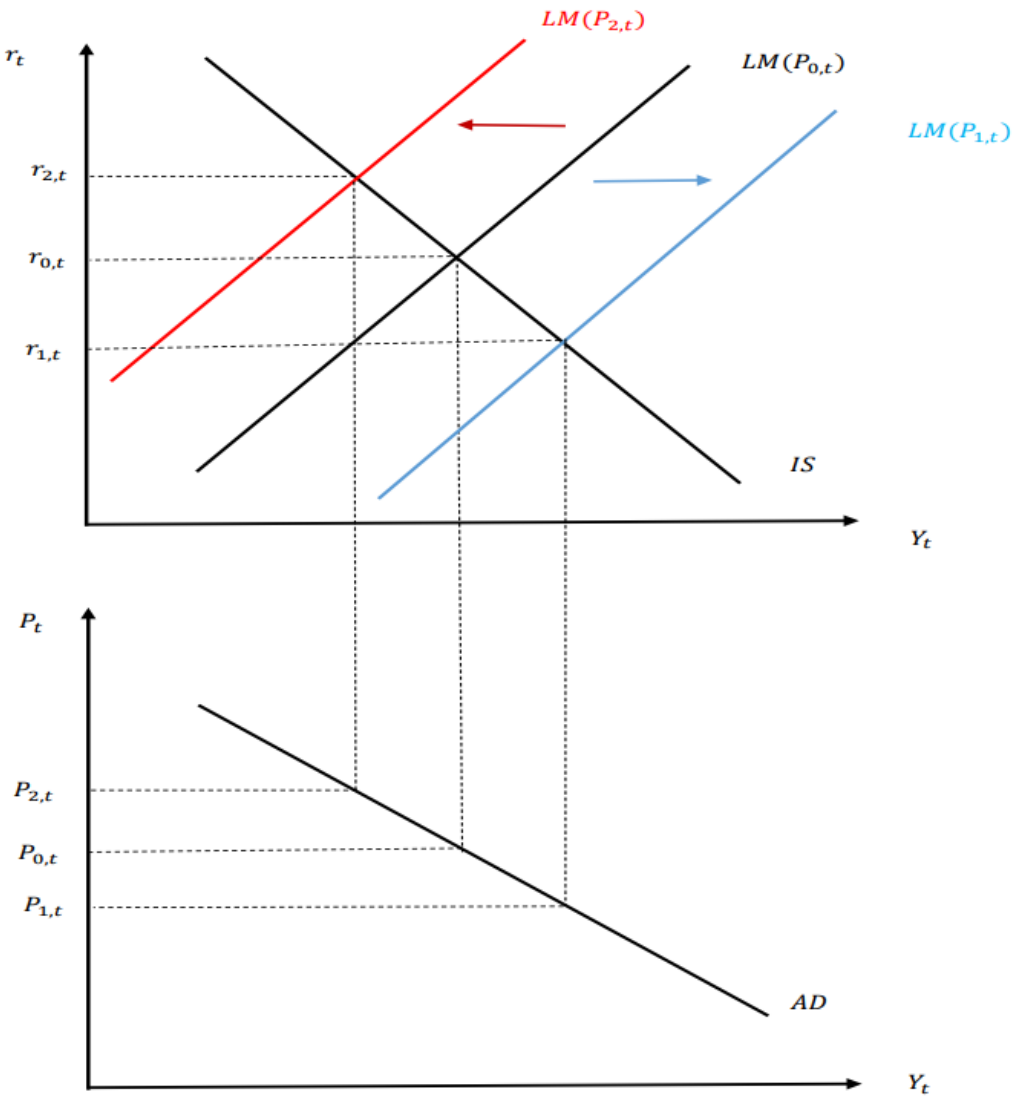

Figure 2: The derivation of AD curve

AS curve

- The AS curve plots the combination of P_t and Y_t consistent with the production function and labor market equilibrium.
- Equations summarizing the supply side of the economy are

$$N_t = N^s(w_t, \theta_t)$$

$$N_t = N^d(w_t, A_t, K_t) \ \ (?)$$

$$Y_t = A_t F(K_t, N_t)$$

$$P_t = \bar{P}_t + \gamma(Y_t - Y_t^f)$$

AS curve

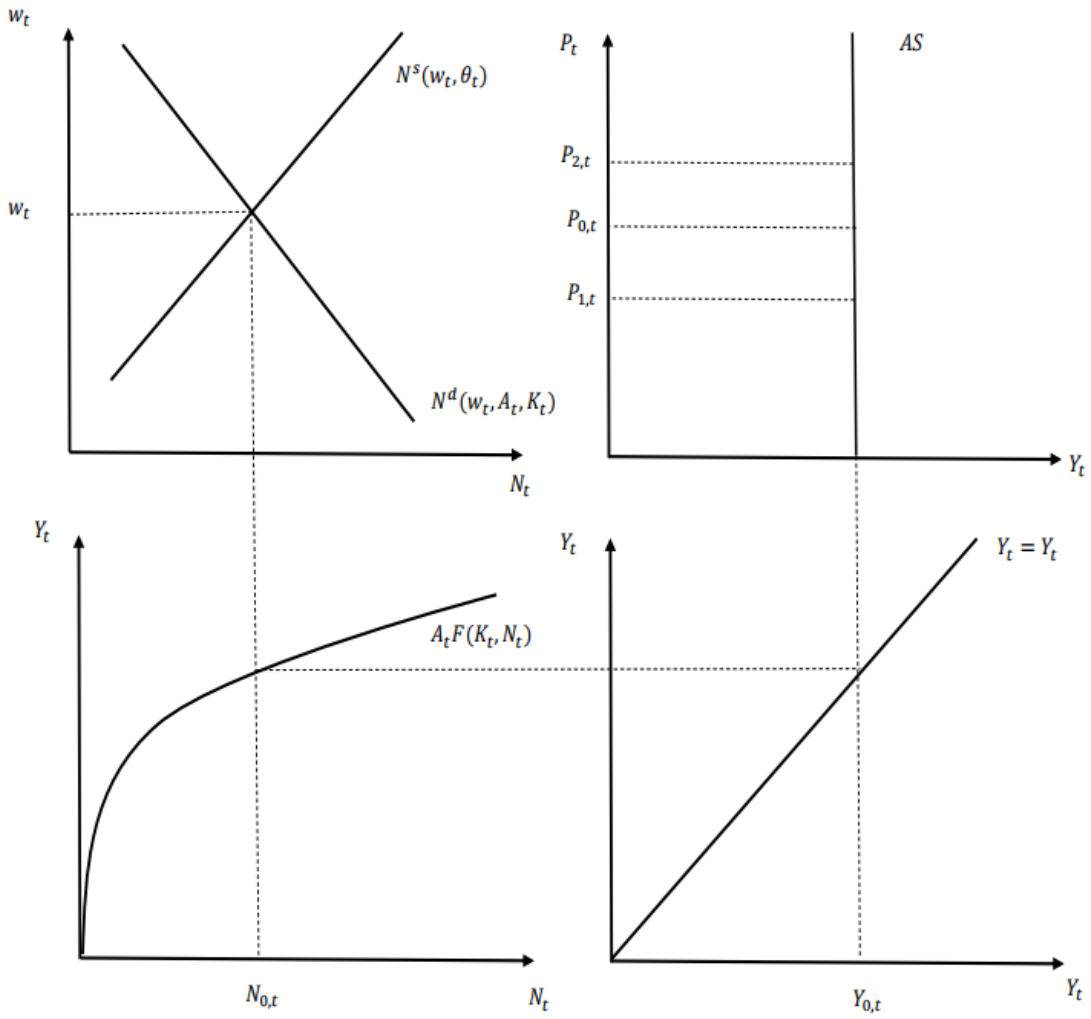

Figure 3: The derivation of AS curve (Neoclassical)

AS curve

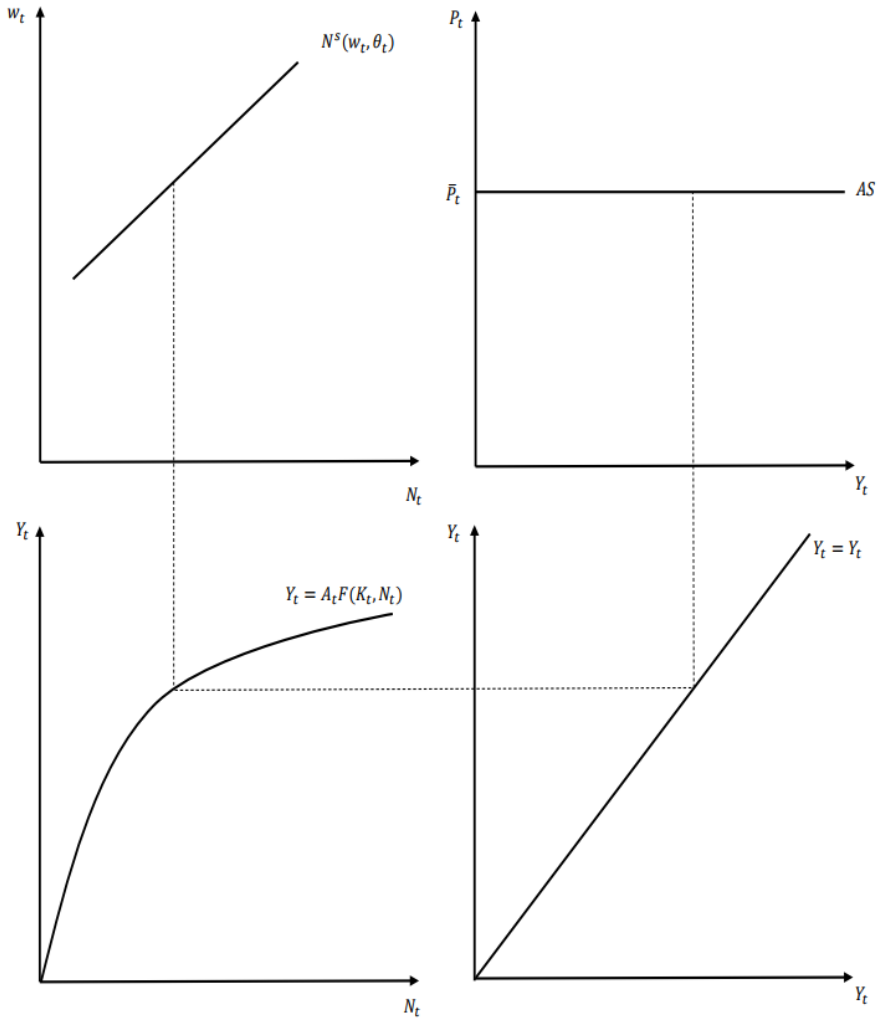

Figure 4: The derivation of AS curve (Simple Sticky Price)

AS curve

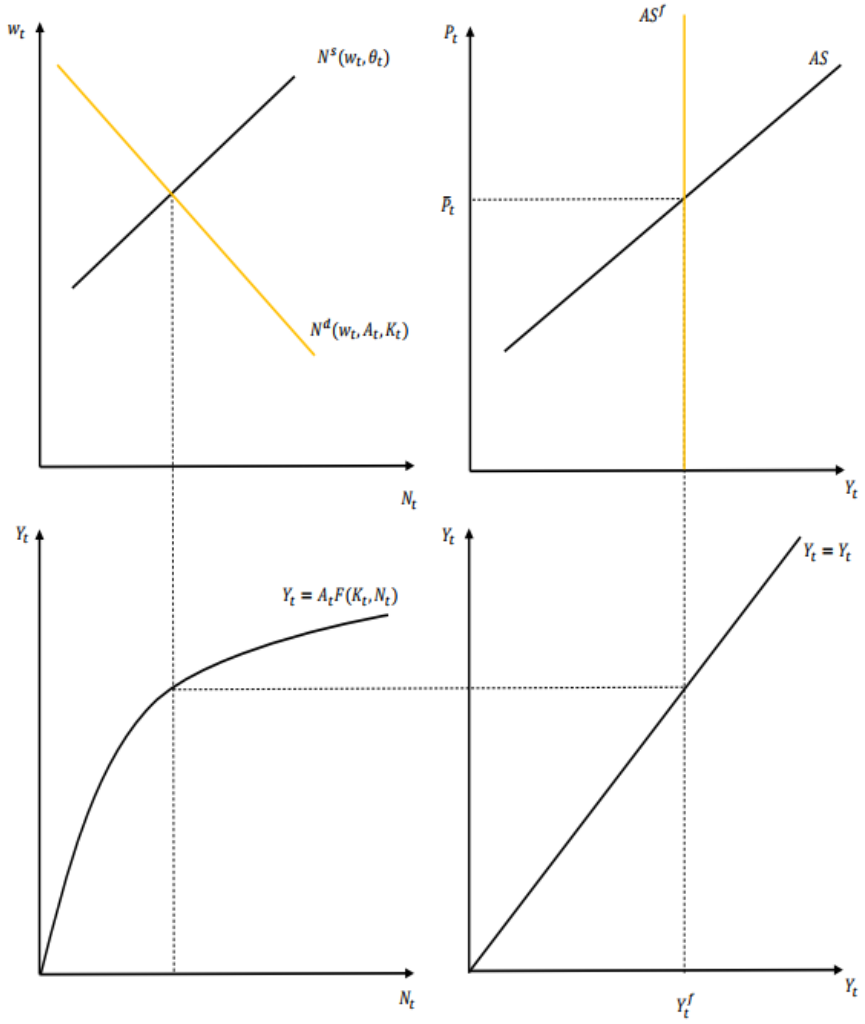

Figure 5: The derivation of AS curve (Partial Sticky Price)

Exercise

An economy is hit by higher θ_t and lower A_t shocks.

- Analyze the equilibrium. How the results depend on γ?
- The central bank of the economy wants to conduct a monetary policy to restore the output to the level before shocks hit. How the bank should change its money supply? How the amount depends on γ?