Macroeconomic Equilibrium

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Outline: Unit V, Section SF4

I. Macroeconomic Equilibrium
   A. SR: Inflationary Gap
   B. SR: Recessionary Gap
II. Monetary Policy in AD/AS Model

I. Macroeconomic Equilibrium

Introduction

Y^{SR} and Y^{LR}	Car Analogy
$Y^{SR} = Y^{LR}$	Car is traveling at a steady 60 mph
$Y^{SR} > Y^{LR}$	Metal to the pedal => Acceleration => prices increase “inflationary gap”
$Y^{SR} < Y^{LR}$	Release the pedal => Deceleration => Prices decrease “recessionary gap”

II.A. SR: Inflationary Gap

- "Animal spirits" or business confidence => I ↑
- AE = C + I + G + NX
- What curves shift
  - AD shifts out
  - SRAS does not shift (at least not initially)
  - LRAS does not shift

AD/AS Curve

SR: $E_0 \rightarrow E_{SR}$

1. $\mu^{SR} < \mu^{LR} = natural\ rate\ of\ unemployment$
   - $\mu^{LR} = NAIRU$= Non-Accelerating Inflation Rate of Unemployment
2. Inflationary gap: $Y^{SR} > Y^{LR} \Rightarrow P\uparrow$
   - (L,K) used more than their normal rates
     => Economy is overheating
   - Upward pressure on prices
3. Sticky Price Theory
   - Heterogeneous menu costs => "sticky" prices
   - Some firms j raise P_j, some firms i raise Y_i

Transition: $E_{SR} \rightarrow E_{LR}$

- Inflationary gap => Tight labor markets

  => w↑ => P↑

- Sticky-price theory: P↑=> E[P] ↑
  - SRAS shifts in
  - Over time, firms adjust prices higher
- As SRAS shifts in

  => Inflationary gap exists, but smaller

II.B. SR: Recessionary Gap

- Consumer confidence ↓=> C ↓
- AE = C + I + G + NX
- What curves shift
  - AD shifts in
  - SRAS does not shift (at least not initially)
  - LRAS does not shift

AD/AS Curve

SR: $E_0 \rightarrow E_{SR}$

1. $\mu^{SR} > \mu^{LR} = natural\ rate\ of\ unemployment$
   - $\mu^{LR} = NAIRU$= Non-Accelerating Inflation Rate of Unemployment
2. Recessionary gap: $Y^{SR} < Y^{LR} \Rightarrow P\downarrow$
   - (L,K) used more than their normal rates
     => Economy is cooling down
   - Downward pressure on prices
3. Sticky Wage Theory
   - Long-term labor contracts => Wages “sticky”
   - Firms scale back production

Transition: $E_{SR} \rightarrow E_{LR}$

- Recessionary gap => Slack labor markets

  => w ↓ => P ↓
- Sticky-wage theory: P↓=> E[P] ↓
  - SRAS curve shifts out
  - Over time, w ↓ in labor contracts

    => Firm i's $\left(\frac{profit}{unit}\right)_i$ ↑ => Y_i ↑
- As SRAS shifts out

  => Recessionary gap exists, but smaller

II. Monetary Policy in AD/AS Model

- SR Money Market or "Building Block" Model
- E_0, E_{SR}, E_{LR} correspond to AD/AS diagram
- Fisher equation (with modification)

$$i = r + E[\pi]$$

Liquidity Market

AS/AD Diagram

SR: $E_0 \rightarrow E_{SR}$

- Fed buys bonds =>M^S shifts out => i↓=>r↓=>
  - C ↑
  - I ↑
  - NX ↑

=> AD shifts out

Transition: $E_{SR} \rightarrow E_{LR}$

- P↑ => (PxY) ↑ => M^D shifts out => i ↑=> r ↑
  - i and r increase until $i_{LR} = i_0$
- Note: As firms increase P => M^D shifts out
- LR Money Neutrality