Aggregate Demand, Aggregate Supply, and the Self-Correcting Economy

Aggregate Demand and Supply

• Flexible Prices and the AD Curve
  – Effect of Changing Prices on the LM Curve
    • Assume constant M(s) and allow P to change
      » Figure 7-1
    • The AD curve: all possible Y and P consistent with
      – a fixed M(s)
      – a fixed IS curve
    • AD curve slopes downward to the right
      – all points are equilibrium in money & commodity market
    • AD curve is curved because
      – a decline in P boost M(s)/P by more the lower is P

Aggregate Demand and Supply

• Shifting the AD Curve with Monetary and Fiscal Policy
  – Effects of a Change in the Nominal M(s)
    » Figure 7-2
  • Where is the new equilibrium?
Aggregate Demand and Supply

- Shifting the AD Curve with Monetary and Fiscal Policy (continued)
  - Effects of a Change in Autonomous Spending
    - Consumer or business confidence
    - G, T(a), or t
    - NX(a)
    
      - Where is the new equilibrium?

Aggregate Demand and Supply

- Alternative Shapes of the Short-Run Aggregate Supply Curve
  - SAS Curve shows how businesses what businesses are willing to produce at different P
  - How an increase in AD is divided between Y and P depends on the shape of the SAS curve
  - Comparative statics versus dynamics

Aggregate Demand and Supply

- The AS Curve When the Nominal Wage Rate is Constant
  - The Short-Run AS Curve
    - The demand for labor with fixed factors of production
      - Land, capital, materials, energy, and technology
    - The production function with fixed productivity
    - The Short-run Aggregate Supply Curve
      - Upward sloping
        - Assumes fixed W, therefore short-run
Aggregate Demand and Supply

• How the Wage Rate is Set
  – The Equilibrium Real Wage Rate
    • Distinguishing the nominal and real wage rates
  – Determinants of the equilibrium real wage rate
    – The Demand for and Supply of Labor
      » Figure 7-7
    – Factors that shift the labor supply curve
  • Disequilibrium dynamics
    » Figure 7-7

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Aggregate Demand and Supply

• Fiscal and Monetary Expansion in the Short and Long Run
  – Initial Short-Run Effect of a Fiscal Expansion
    • The effect on the Price level
    • The effect on the multiplier

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Aggregate Demand and Supply

• Fiscal and Monetary Expansion in the Short and Long Run (continued)
  – The Rising Nominal Wage Rate and the Arrival at Long-Run Equilibrium

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Aggregate Demand and Supply

- Fiscal and Monetary Expansion in the Short and Long Run (continued)
  - The Long-Run Aggregate Supply Curve (LAS)
    - Vertical at \( Y(n) \)
    - \( W/P = W/P(e) \)

Aggregate Demand and Supply

- Fiscal and Monetary Expansion (continued)
  - Short-Run and Long-Run Equilibrium
    - Short-Run Equilibrium
      - \( Y = E(p) \), i.e. anywhere on the AD curve
      - \( P \) is sufficient to generate output, i.e. anywhere on the SAS curve for a specified \( W(0) \)
      - \( AD = SAS \)
    - Long-Run Equilibrium
      - \( W/P = W/P(e) \)
      - \( AD = SAS = LAS \)
  - The Process of Dynamic Adjustment

Aggregate Demand and Supply

- Classical Macroeconomics: The Quantity Theory of Money and the Self-Correcting Economy
  - Based on flexible wages and prices
  - The Quantity Equation and the Quantity Theory of Money
    - \( M(s) \cdot V = P \cdot Y \)
    - True by definition because
      - \( V = M(s) / \left[ P \cdot Y \right] \)

Aggregate Demand and Supply

- Classical Macroeconomics (continued)
  - The Quantity Theory (continued)
    - Key assumption: \( V \) is fixed
    - Key assumption: \( Y = Y(n) \)
    - Then \( M(s) \) is proportional to \( P \)
Aggregate Demand and Supply

- The Keynesian Revolution:
  The Failure of Self-Correction
  - Monetary Impotence and the Failure of Self-Correction in Extreme Cases
    - Unresponsive expenditures: The vertical IS curve
      - Changes in M(s) are impotent
      - Changes in P are impotent; AD curve is vertical
    - The liquidity trap: A horizontal LM curve
      - Changes in P are impotent; AD curve is vertical

- The Keynesian Revolution (continued)
  - Fiscal Policy and the Real Balance Effect
    - Introduction
      - Fiscal policy can be used with a vertical IS curve
      - Keynes effect: changes in M/P affect r
      - Pigou effect: changes in M/P directly influence spending
        » AD curve must be negatively sloped
    - Destabilizing effects of falling prices
      - The expectations effect
        » May offset Pigou effect
      - The redistribution effect
        » From high spending debtors to low spending savers

Aggregate Demand and Supply

- Classical Macroeconomics (continued)
  - Classical View of Unemployment and Output Fluctuations
    - Unemployment was transitory and due to nominal wage inflexibility

Aggregate Demand and Supply

- The Keynesian Revolution (continued)
  - Nominal Wage Rigidity
    - Nominal wage rigidity implies little price deflation
    - Keynes, Pigou, expectations and redistribution effects become irrelevant
    - Disequilibrium dynamics
      » Figure 7-11
Aggregate Demand and Supply

• The Keynesian Revolution (continued)
  – Nominal Wage Rigidity (continued)
    • Failure to attain equilibrium in the labor market
      – Explains persistent unemployment
    • Why would nominal wages be rigid?
      » Is this a realistic assumption? Is the SAS fixed?
      » Can disequilibrium persist? Market-clearing versus non-market clearing
      » What about countercyclical wage movements?

Aggregate Demand and Supply

• What Caused the Great Depression?
  – Introduction
    • Was aggregate demand so low because of monetary policy impotent or a failure of self-correction?
    • Did aggregate supply shift to generate self-correction or were nominal wages rigid?
    • Were nominal wages rigid? Did real wages fluctuate countercyclically?

Aggregate Demand and Supply

• The Great Depression (continued)
  – Explanations of Weak Aggregate Demand
    • Investment spending collapsed
      • Real money supply soared
    • Vertical IS curve or horizontal LM curve?
      » Vertical IS requires changes in r not to stimulate I
      » Horizontal LM requires changes in M/P not to affect r
    • Monetary versus non-monetary factors

Aggregate Demand and Supply

• The Great Depression (continued)
  – Prices and the Output Ratio
    • Were nominal wages rigid or was there self-correcting?
      » Figure 7-12
    • Absence of self-correction
      – Data suggests shift in AD not movement along AD
      » Figure 7-12
    • Behavior of nominal and real wage rates
      – Nominal wages decline only modestly, short-circuiting self-correction

Figure 7-11
Effect of a Decline in Planned Spending When the Nominal Rate Is Fixed at $W_w$

Figure 7-12
The Price Level ($P$) and the Ratio of Actual to Natural Real GDP ($\frac{Y}{Y_N}$) During the Great Depression, 1929–41