

ECONOMIC FLUCTUATIONS

1. Some Facts about Economic Fluctuation

- Significant short-run variations in aggregate output and employment

- No simple regular or cyclical pattern: output changes very considerably in size and spacing
 - The economy is perturbed by disturbances of various types and sizes at more or less random interval
- Fluctuations are distributed very unevenly over the components of output
 - Investment is the most volatile component
 - consumption, government purchases, and net exports are relatively stable
- The behavior of some important macroeconomic variables during recession
 - procyclical or countercyclical

2. The Classical Dichotomy

- Nominal variables vs. Real variables

- Nominal variables: variables expressed in terms of money
- Real variables: variables measured in physical units, such as quantities and relative prices

- Classical dichotomy: theoretical separation of real and nominal variables
 - Monetary neutrality: changes in the money supply do not influence real variables (Y).

3. Time Horizons in Macroeconomics

- Short Run (SR) vs. Long Run (LR)
 - LR: prices are flexible and can respond to changes in supply or demand
 - SR: many prices are “sticky” at some predetermined level
- Economic policies have different effects over different time horizon.
- The Model of Aggregate Supply (AS) and Aggregate Demand (AD)
 - Flexible prices are a crucial assumption of classical macroeconomic theory
 - supplies of capital and labor + available technology
 - the economy’s ability to supply goods and services
 - ↓ flexible price
 - the amount of output = total demand

- Sticky prices
- Output also depends on the demand for goods and services
- Demand is influenced by monetary policy and fiscal policy,
- Monetary policy and fiscal policy may be useful in stabilizing the economy in the short run

4. Aggregate Demand (AD)

- The relationship b/t the quantity of output demanded and the aggregate price level
- The quantity equation as AD
 - Quantity equation: $M \times V = P \times Y$
 - $M / P = kY$, where $k = 1/V$
 - For any fixed k (or V), the quantity equation yields a negative relationship b/t the price level and output (fig. 9-2, p.243)
- Why the AD curve slopes downward
 - Since the velocity of money is fixed, the money supply determines the dollar value of all transactions in the economy

- 1) If the price level rises, so that each transaction requires more dollars, the number of transactions and thus quantity of goods and services purchased must fall
 - 2) If output is higher, people engage in more transactions and need higher real balances.
 - For a given money supply, higher real balances imply a lower price level
- Shift in the AD curve (fig. 9-3, p.244)
 - AD curve is drawn for a fixed value of the money supply
 - the possible combinations of P and Y , given M
 - If M changes, the possible combinations of P and Y change → shifts in AD curve

5. Aggregate Supply (AS)

- The relationship b/t the quantity of output supplied and the aggregate price level
- The firms that supply goods and services have flexible prices in the LR but sticky prices in the SR
 - AS depends on the time horizon

(1) The Long Run: The vertical AS curve (LRAS)

- The amount of output produced in the LR depends on the fixed amounts of capital and labor and on the available technology
 - $Y = F(\bar{K}, \bar{L}) = \bar{Y}$, where \bar{Y} : the full-employment (natural) level of output
 - output does not depend on the price level (fig. 9-4)
- Change in AD → classical dichotomy (fig. 9-5)

(2) The Short Run: The horizontal AS curve (SRAS)

- Sticky price → a horizontal AS curve (fig. 9-6)
- Change in AD → changes in real variables (fig. 9-7)

(3) Transition from the Short Run to the Long Run

Ex) Fed reduces the money supply (fig. 9-9)

6. Stabilization Policy

- Fluctuations in the economy come from changes in AS and/or AD
 - demand shock & supply shock
 - disrupt economic well-being by pushing output and employment away from their natural values
- Stabilization policy: the policy actions aimed to reducing the severity of SR economic fluctuations

(1) *Shocks to AD*

Ex) the introduction and expanded available credit cards

→ reduce the quantity of money people choose to hold

→ k falls (V rises) → AD shifts outward

- SR and LR effects (fig. 9-10)
- The Fed can reduce M^S to offset the increase in V

(2) *Shocks to AS*

Ex) changes in the cost of producing goods and services

- The organization of an international oil cartel

→ SRAS shifts upward (fig. 9-11)

- The Fed can increase M^S to accommodate the supply shock (fig. 9-12)

7. Advances in Business Cycle Theory

(1) *REAL BUSINESS CYCLE (RBC) THEORY*

- Short-run economic fluctuations should be explained while maintaining the assumptions of classical model
- RBC assumes that prices are fully flexible, even in the short run, and macroeconomic analysis should be based on this assumption

- consistent with classical dichotomy
- nominal variable, such as the money supply and the price level, do not influence real variable, such as output and employment
- In order to explain fluctuations in real variables, RBC emphasizes real changes in the economy, such as changes in production technologies
- “Real” → Exclusion of nominal variables in explaining short-run economic fluctuation

1) THE ECONOMICS OF ROBINSON CRUSOE

- Technological progress and economic growth may occur unevenly
- There might be shocks to the economy that induce SR fluctuations in the natural rates of output and employment
- Crusoe’s decisions
 - Leisure: swimming
 - Work: fish (consumption), nets (investment)
 - $GDP = \text{the number of fish caught} + \text{the number of net made}$
 - Allocate time among swimming, fishing, and making nets based on preferences and the opportunities
- Crusoe’s decisions change as shocks impinge on his life
 - a big school of fish
 - productivity and employment rise
 - GDP rises (boom)

- a storm
 - productivity and employment fall
 - GDP falls (recession)
- Fluctuations in output, employment, consumption, investment, and productivity are all the natural and desirable response of an individual to the inevitable changes in his environment
 - Fluctuations have nothing to do with monetary policy, sticky prices, or any type of market failure

(2) *NEW KEYNESIAN ECONOMICS*

- Keynes: abandon the classical presumption that wages and prices adjust quickly to equilibrate market
- Aggregate demand is a primary determinant of national income in the short run
- New Keynesian economists develop more fully the Keynesian approach to economic fluctuations
 - Accept IS-LM model as the theory of aggregate demand and try to refine the theory of aggregate supply
 - How wages and prices behave in the short run by identifying more precisely the market imperfections that make wages and prices sticky and that cause the economy to deviate from its natural rate
 - Stickiness makes the SRAS curve upward sloping
 - Fluctuations in aggregate demand cause SR fluctuations in output and employment
- Examining the microeconomics behind SR price adjustment