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ECON 312
Intermediate Macroeconomics

Chapter Outline for “Chapter 10—Aggregate Demand I: Building the IS-LM Model,” N. Gregory Mankiw, *Macroeconomics*, Sixth edition (New York, N.Y.: Worth Publishers, 2007)

IS-LM model

IS curve

LM curve

See Figure 10-1

10-1 The Goods Market and the IS Curve

The Keynesian Cross

Planned Expenditure

$$E = C + I + G$$

$$C = C(Y - T)$$

$$I = \bar{I}$$

$$G = \bar{G}$$

$$T = \bar{T}$$

$$E = C(Y - \bar{T}) + \bar{I} + \bar{G}$$

See Figure 10-2

The Economy in Equilibrium

Actual Expenditure = Planned Expenditure

$$Y = E$$

See Figures 10-3 and 10-4

Fiscal Policy and the Multiplier: Government Purchases

Government purchases multiplier

See Figure 10-5

$$\Delta Y = \Delta G + MPC \times \Delta G + MPC^2 \times \Delta G + MPC^3 \times \Delta G + \dots$$

$$\Delta Y = (1 + MPC + MPC^2 + MPC^3 + \dots)\Delta G$$

$$\Delta Y = [1 / (1 - MPC)]\Delta G$$

Fiscal Policy and the Multiplier: Taxes

Tax multiplier

See Figure 10-6

$$\Delta Y = [-MPC / (1 - MPC)] \times \Delta T$$

CASE STUDY: Cutting Taxes to Stimulate the Economy

The Interest Rate, Investment, and the IS Curve

$$I = I(r)$$

See Figure 10-7

How Fiscal Policy Shifts the IS Curve

See Figure 10-8

In summary, the IS curve shows the combinations of the interest rate, and the level of income that are consistent with equilibrium in the market for goods and services. The IS curve is drawn for a given fiscal policy. Changes in fiscal policy that raise the demand for goods and services shift the IS curve to the right. Changes in fiscal policy that reduce the demand for goods and services shift the IS curve to the left.

A Loanable-Funds Interpretation of the IS Curve

$$Y - C(Y - T) - G = I(r)$$

See Figure 10-9

10-2 The Money Market and the LM Curve

The Theory of Liquidity Preference

$$(M / P)^s = \bar{M} / \bar{P}$$

$$(M / P)^d = L(r)$$

See Figures 10-10 and 10-11

Case Study: Does a Monetary Tightening Raise or Lower Interest Rates?

Income, Money Demand, and the LM Curve

$$(M / P)^d = L(r, Y)$$

See Figure 10-12

How Monetary Policy Shifts the LM Curve

See Figure 10-13

In summary, the LM curve shows the combinations of the interest rate and the level of income that are consistent with equilibrium in the market for real money balances. The LM curve is drawn for a given supply of real money balances. Decreases in the supply of real money balances shift the LM curve upward. Increases in the supply of real money balances shift the LM curve downward.

A Quantity-Equation Interpretation of the LM Curve

$$M \times V(r) = P \times Y$$

10-3 Conclusion: The Short-Run Equilibrium

IS curve: $Y = C(Y - T) + I(r) + G$

LM curve: $M / P = L(r, Y)$

See Figures 10-14 and 10-15

Questions for Review: 1, 2, 3, 4

Problems and Applications: 1, 2, 3, 4, 5