IS – LM Model, Part 1

Agenda

• The IS Curve

The IS Curve

• Interest Rate Assumption:
  ➢ There is only 1 interest rate.

• Spending Assumptions:
  ➢ Cp depends primarily on YD (+) and a little bit on R (-).
  ➢ Ip depends primarily on R (-).
  ➢ Gp is exogenous.
  ➢ Xp depends on εr (-) and on Yf (+).
  ➢ Mp depends primarily on Y (+) and on εr (+).
  • (X - M) depends primarily on Y (-), on Yf (+) and on εr (-).

Deriving the IS Curve

• In the Keynesian Cross model, find Ye
  ➢ Change r, find the new Ye
  ➢ Change r again, find the new Ye

• Plot the pairs of Ye’s and r’s

Deriving the IS Curve, 1

Y1

Deriving the IS Curve, 2

Deriving the IS Curve, 3
The IS Curve

- The IS Curve is the combinations of \( Y \) and \( R \) that establish equilibrium in the market for goods and services, i.e., where \( Y = E_p \).
  - This is where \( I = S \)
- The slope of the IS curve reflects the combined interest rate sensitivity of \( C, I, X \) and \( M \).

### Changes in Interest Rates

Changes in Exogenous Spending

Changes in Interest Sensitivity, 1

Changes in Interest Sensitivity, 2
The IS Curve

- Observations:
  - Changes in R, move along a given IS curve.
  - Changes in \( \Delta_p \) related to changes in \( r \), shift the IS curve.
    - If \( \Delta_p \) increases, IS curve shifts right.
    - If \( \Delta_p \) decreases, IS curve shifts left.
  - Changes in the Interest Rate sensitivity of spending, rotate the IS curve.
    - More interest sensitive \( \Rightarrow \) flatter IS curve.
    - Less interest sensitive \( \Rightarrow \) steeper IS curve.

The IS Curve

- Disequilibria Adjustment:
  - Suppose we are off the IS curve.

Disequilibria Dynamics

- Disequilibria Adjustment:
  - Suppose we are off the IS curve to the right.
    - At the given R, \( \Delta_p < Y \) so either:
      - R must decrease to stimulate more \( \Delta_p \), or
      - Y must decrease to meet \( \Delta_p \).
  - Suppose we are off the IS curve to the left.
    - At a given R, \( \Delta_p > Y \) so that either:
      - R must increase to dampen \( \Delta_p \), or
      - Y must increase enough to meet \( \Delta_p \).
  - Adjustment is primarily through changes in Y.