Equilibrium in the Labor Market

• Equilibrium in the labor market leads to employment at its full-employment level ($N$) and output at its full-employment level ($Y$).

  ➢ The full employment level of output is determined by the full-employment level of employment and the current levels of capital and productivity.

The IS – LM Model, Part 3

Agenda

• General Equilibrium in the IS – LM Model

The FE Line
The FE Line

- Factors that shift the FE line:
  - The full-employment line shifts right because of:
    - A beneficial supply shock,
    - An increase in labor supply, and/or
    - An increase in the capital stock.

Equilibrium in the Goods Market

- The goods market is in equilibrium when desired investment, $I^d$, equals desired national saving, $S^d$.
  - That is, when $I^d = S^d$.
- If the goods market is not in equilibrium, then the real interest rate adjusts to bring about equilibrium.

The IS Curve

- Factors that shift the IS curve:
  - The IS curve shifts to the right because of:
    - an increase in expected future output,
    - an increase in wealth,
    - an increase in government purchases,
The IS Curve

- Factors that shift the IS curve:
  - The IS curve shifts to the right because of:
    - a decline in taxes,
      - if Ricardian equivalence doesn’t hold,
    - an increase in the expected future marginal product of capital, and/or
    - a decrease in the effective tax rate on capital.

Asset Market Equilibrium

- The asset market is in equilibrium when the real demand for money \( L = M^d/P \) equals the real supply of money \( M^s = M/P \).
  - That is, when \( L = M^s \).
- If the asset market is not in equilibrium, then the real interest rate adjusts to bring about equilibrium.

The LM Curve

- Factors that shift the LM curve:
  - The LM curve shifts to the right because of:
    - an increase in the nominal money supply,
    - a decrease in the price level,
    - an increase in expected inflation,
    - a decrease in the nominal interest rate on money,
The \textit{LM} Curve

- Factors that shift the \textit{LM} curve:
  - The \textit{LM} curve shifts to the right because of:
    - a decrease in wealth,
    - a decrease in the risk of non-money assets,
    - an increase in the liquidity of non-money assets, and/or
    - an increase in the efficiency of payment technologies.

General Equilibrium in the \textit{IS-LM Model}

- \textit{General equilibrium} requires simultaneously:
  - Labor market equilibrium,
  - Goods market equilibrium, and
  - Asset market equilibrium.

- This only occurs where the \textit{FE}, \textit{IS}, and \textit{LM} curves intersect.

General equilibrium in the IS-LM model

An increase in government purchases
An increase in government purchases

- An increase in government purchases shifts the IS curve to the right.
  - This increases $Y$ directly,
  - which also increases $M^d/P$.
  - At the initial real interest rate ($r_0$), $L > M$, and $r$ begins to rise.
  - A rising $r$ increases $S^d$ and decreases $I^d$,
  - which reduces $Y$ and $M^d/P$.
  - This process continues until general equilibrium is re-established.

An increase in government purchases

- Net result:
  - An increase in both $Y$ and $r$.
  - Composition of spending has changed:
    - Consumption is higher,
    - Investment is lower,
    - Government spending is higher.

An increase in the real money supply

- An increase in the real money supply shifts the LM curve to the right.
  - This increases $M^d/P$ directly.
  - At the initial real interest rate ($r_0$), $M > L$, and $r$ begins to fall.
  - A falling $r$ decreases $S^d$ and increases $I^d$,
  - which increases both $Y$ and $M^d/P$.
  - This process continues until general equilibrium is re-established.
An increase in the real money supply

- Net result:
  - An increase in $Y$ and a decrease in $r$.
  - Composition of spending has changed:
    - Consumption is higher,
    - Investment is higher,
    - Government spending is the same.

An increase in the real money demand

- An increase in the real money demand shifts the LM curve to the left.
  - This increases $M^d/P$ directly.
  - At the initial real interest rate ($r_0$), $L > M$, and $r$ begins to rise.
  - A rising $r$ increases $S^d$ and decreases $I^d$.
  - Which decreases both $Y$ and $M^d/P$.
  - This process continues until general equilibrium is re-established.

- Net result:
  - A decrease in $Y$ and an increase in $r$.
  - Composition of spending has changed:
    - Consumption is lower,
    - Investment is lower,
    - Government spending is the same.
Key Diagram: The IS-LM model