Policy Analysis with the IS – LM Model

- Monetary policy:
  - Changes in the nominal money supply.

- Fiscal policy:
  - Changes in government purchases.
  - Changes in taxes.

Policy Analysis with the IS – LM Model

- Expansionary policies:
  - Increases in the nominal money supply.
  - Increases in government purchases.
  - Decreases in taxes (no Ricardian equivalence).

- Contractionary policies:
  - Decreases in the nominal money supply.
  - Decreases in government purchases.
  - Increases in taxes (no Ricardian equivalence).
Policy Analysis with the IS – LM Model

- Expansionary monetary policy:
  - Increases in the nominal money supply.

Expansionary monetary policy

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

Expansionary monetary policy

- 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.
Policy Analysis with the IS – LM Model

- Monetary policy objectives:
  - Money supply, $M$, targeting.
  - Interest rate, $r$, targeting.
  - Economic activity, $Y$, targeting.
    - A stabilizing central bank.

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Policy Analysis with the IS – LM Model

- Monetary policy objectives:
  - Money supply, $M^d$, targeting.
    - With a goods market shock.
    - With a demand for money shock.
Policy Analysis with the IS – LM Model

- Monetary policy objectives:
  - Interest rate, $r$, targeting.
    - With a goods market shock.
    - With a demand for money shock.

Interest rate targeting, Goods market shock

Interest rate targeting, $M^d$ shock

Policy Analysis with the IS – LM Model

- Monetary policy objectives:
  - Economic activity, $Y$, targeting.
    - With a goods market shock.
    - With a demand for money shock.
Policy Analysis with the IS – LM Model

- Expansionary fiscal policy:
  - Increases in government purchases.
Expansionary fiscal policy (gov’t purchases)

• An expansionary fiscal policy shifts the IS curve to the right.
  ➢ This increases $Y$ directly
  ➢ and increases $C^d$ by the marginal propensity to consume,
  ➢ which also increases $M/P$.
  ➢ At the initial interest rate ($r_0$), $L > M$, and $r$ begins to rise.
  ➢ A rising $r$ increases $S^d$ and decreases $C^d$ and $I^d$,
  ➢ which reduces $Y$ and $M/P$.
  ➢ This process continues until general equilibrium is re-established.

Net result:

➢ An increase in both $Y$ and $r$.

Composition of spending has changed:

• Consumption is higher,
• Investment is lower,
• Government spending is higher.

Policy Analysis with the IS – LM Model

• Expansionary fiscal policy:
  ➢ Decreases in taxes (no Ricardian equivalence).

Expansionary fiscal policy (taxes)
Expansionary fiscal policy (taxes)

- An expansionary fiscal policy shifts the IS curve to the right.
  - This increases $Y_D$ directly
  - and increases $C'$ by the marginal propensity to consume,
  - which also increases $M/P$.
  - At the initial interest rate ($r_0$), $L > M$, and $r$ begins to rise.
  - A rising $r$ increases $S'$ and decreases $C'$ and $I'$,
  - which reduces $Y$ and $M/P$.
  - This process continues until general equilibrium is re-established.

Expansionary fiscal policy (taxes)

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

Expansionary fiscal policy, Crowding out

- Expansionary fiscal policies lead to:
  - An increase in both $Y$ and $r$.
  - Composition of spending has changed:
    - Consumption is higher,
    - Investment is lower,
    - Government spending is constant.
  - Higher interest rates have “crowded out” investment.
Expansionary fiscal policy, Crowding out

- Can “crowding out” of investment be avoided when using an expansionary fiscal policy?

Avoiding Crowding Out

- “Crowding out” of investment can be avoided when using an expansionary fiscal policy by combining it with an expansionary monetary policy.
  - This is called “accommodating monetary policy.”

Policy Analysis with the IS – LM Model

- By using monetary and fiscal policy in conjunction, any desired level of economic output can be achieved.
  - Depending on the policy combination used, different interest rates will result.
  - This also implies a different composition of output.
Monetary Expansion, Fiscal Contraction

- A monetary expansion and fiscal contraction can maintain the same level of economic activity but with a lower real interest rate.
  - What happens to the composition of output?

Monetary Contraction, Fiscal Expansion

- A monetary contraction and fiscal expansion can maintain the same level of economic activity but with a higher real interest rate.
  - What happens to the composition of output?
Policy Analysis with the IS – LM Model

• Which composition of output is better?
  ➢ Higher or lower investment?
  ➢ What kind of investment?
  ➢ What kind of government purchases?
  ➢ What kind of taxes?