The Keynesian System III: Policy Effects in the IS-LM Model

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Graduate Macroeconomics I
ECON 309
Increasing the Money Supply

The diagram illustrates the effects of increasing the money supply on the economy. The IS-LM model is used to show the interaction between the interest rate (r) and the real GDP (Y).

- The IS curve shows the equilibrium level where the investment equals the saving, which is represented by the intersection of the IS and LM curves.
- The LM curve represents the relationship between the interest rate and the real GDP, showing how changes in the money supply affect the interest rate and real GDP.
- Increasing the money supply shifts the LM curve rightward, which in turn shifts the IS curve to the right, resulting in a higher real GDP (Y1) and a lower interest rate (r1).

Mathematically, this can be represented by:

- \( Y_0 \rightarrow Y_1 \) as the money supply increases from \( M_0 \) to \( M_1 \).
- \( r_0 \rightarrow r_1 \) as the interest rate decreases due to increased money supply.

The diagram includes the money supply curve (Ms) and the demand for money curve (Md), illustrating the equilibrium at the point where the demand for money equals the supply of money.
Increase in Gov’t Spending

Recall that:
\[ Y = C + I + G + NX. \]
When \( G \downarrow \) then \( Y \downarrow \).
NOTES:

1. G rises, increasing AD.

2. Employment and output result from AD increases.

3. Prices (P) also rise.

4. As prices rise, the real wages fall, making labor more attractive.

5. As more workers are employed, and unemployment falls.
Increase in Taxes

Recall that:
\[ Y = C + I + G + NX. \]
When \( T \uparrow \) then \( Yd \downarrow \), and so must \( C \downarrow \) and \( Y \downarrow \).
Recall that:
\[ Y = C + I + G + NX. \]

When \( I \downarrow \) then \( Y \downarrow \).
NOTES:

1. Rising taxes or falling investment reduces AD.

2. Final sales and output (Y) fall.

3. As prices fall, the real wages rise, making labor more expensive to firms.

4. Firms require fewer workers to build products and find workers more expensive, so they lay off workers.

5. Unemployment rises.
Monetary Policy Effectiveness

Investment not responsive to interest rate changes

Investment is responsive to interest rate changes
Fiscal Policy Effectiveness

Money demand is responsive to interest rate changes

Money demand not responsive to interest rate changes
Keynesian Theory of Inflation

Keynesian or Depression Region

Bottleneck Region

Classical Region

\[ \Delta P = 0 \]

\[ \Delta Y = 0 \]