

Quiz EE212

Time allowed: 1 hour from 19.00 – 20.00

Submission time: 15 minutes

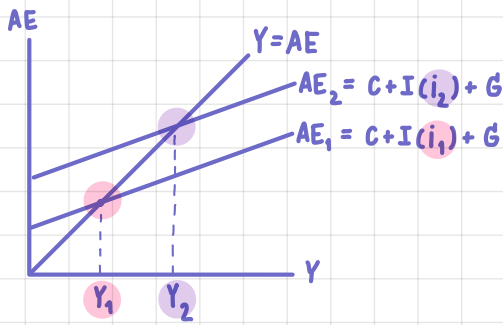
Latest submission by 20.15

Do not write too much. Brief explanation is sufficient.

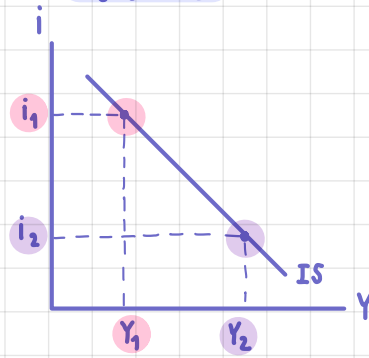
1. Use TWO relevant diagrams to explain how the IS curve is derived from the goods market.
2. Use TWO relevant diagrams to explain how the LM curve is derived from the money market.
3. Use relevant diagrams to explain how the AD curve is derived from the IS-LM model.
4. Use relevant diagrams to explain how the SRAS curve is derived from the labor demand and the production function.

① Derive IS from Keynesian Cross (Goods-Market)

Keynesian Cross (Goods-Market)



IS Curve



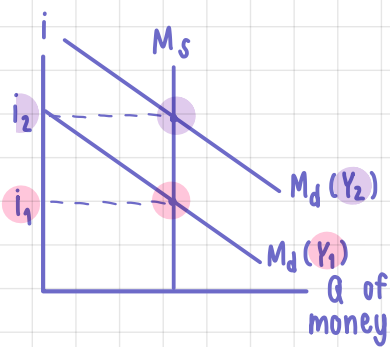
$$i_1 > i_2$$

Suppose i decrease from i_1 to i_2
Lower interest rate encourages investors to invest more.
Then AE raises, and Y also raises

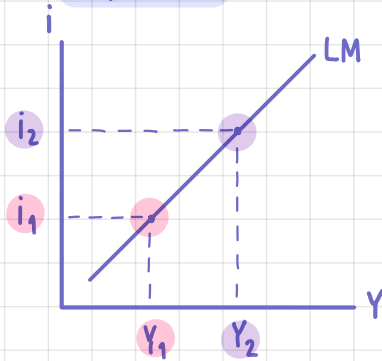
$$i \downarrow \rightarrow I \uparrow \rightarrow AE \uparrow \rightarrow Y \uparrow$$

② Derive LM from Money Market

Money Market



LM Curve



Suppose i increase from i_1 to i_2
 M_d will drop, so we have to increase income to shift M_d to the right

When i change, Y has to change too in order for the equality to hold

Whenever i goes up, Y has to go up as well

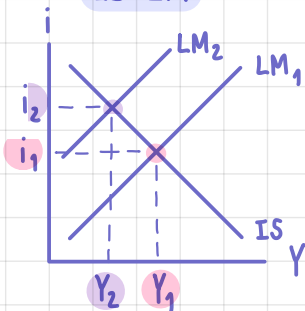
because when $i \uparrow \rightarrow M_d \downarrow$ and when $Y \uparrow \rightarrow M_d \uparrow$

The two change in M_d cancel out each other, so M_d remains the same and equal to M_s

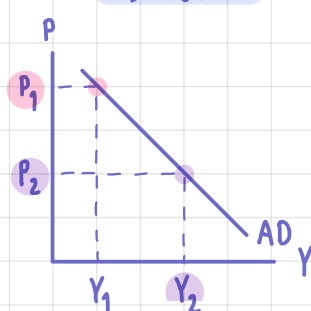
$$\left. \begin{array}{l} Y \uparrow \rightarrow M_d \uparrow \\ i \uparrow \rightarrow M_d \downarrow \end{array} \right\} M_d = M_s$$

③ Derive AD from LM

IS-LM



AD Curve



In money market an increase in price (P) will reduce the real money supply ($M = \frac{M}{P}$)
Smaller real M_s will drive up interest rate (i)
Higher i discourages investment (I)
Lower I reduces output (Y)

Money Market (LM): $P \uparrow \rightarrow \frac{M}{P} \downarrow \rightarrow i \uparrow$

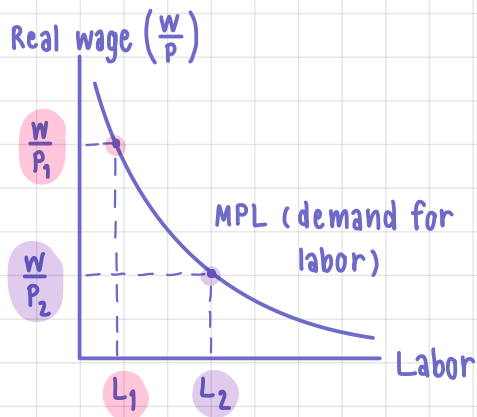
Goods Market (IS): $i \uparrow \rightarrow I \downarrow \rightarrow AE \downarrow \rightarrow Y \downarrow$

AD relationship: $P \uparrow \rightarrow Y \downarrow$

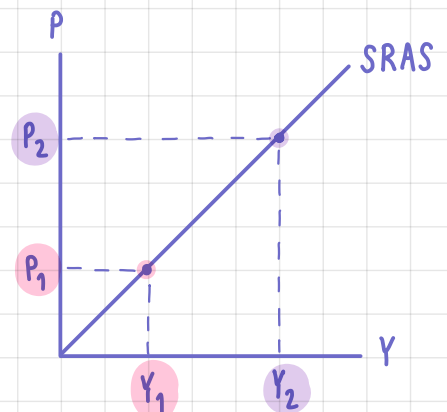
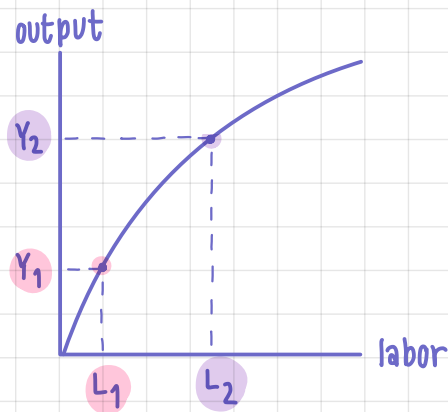
Interest rate links two markets and make the AD downward sloping

④ Derived SRAS from labor demand & production function

Labor demand diagram



Production Function



When price increase, real wage become cheaper. So firms demand more labor.
When labor increase, the production increase and lead to increase in output (Y)

$$P \uparrow \rightarrow \frac{w}{p} \downarrow \rightarrow \text{labor demand} \uparrow \rightarrow L \uparrow \rightarrow Y \uparrow$$