ECON 3123: Macroeconomic Theory I

Tutorial Note 4: Basic IS-LM Framework

Teaching Assistant: Harlly Zhou

Derivation of IS-LM Model

Recall that in the goods market, the deamnd for goods is

$$Z = C + I + G.$$

Recall that consumption depends on disposable income $Y - T$. And in reality, investment depends on output and interest rate:

$$I = I(Y, i),$$

where I increases with Y and decreases with i. (Think about the intuition.)

Then we rewrite the demand as

$$Z = C(Y - T) + I(Y, i) + G.$$

At equilibrium, we have

$$Y = Z.$$

This determines the equilibrium output Y^*. When the nominal interest rate increases, the investment will decrease, shifting the ZZ curve downwards. We have the new equilibrium output Y', shown as Figure 1.

If we put the interest rate and the output together, then we get the IS relation (Figrue 2).

Note that all the pairs (i, Y) is a pair of **equilibrium** values of nominal interest and output.

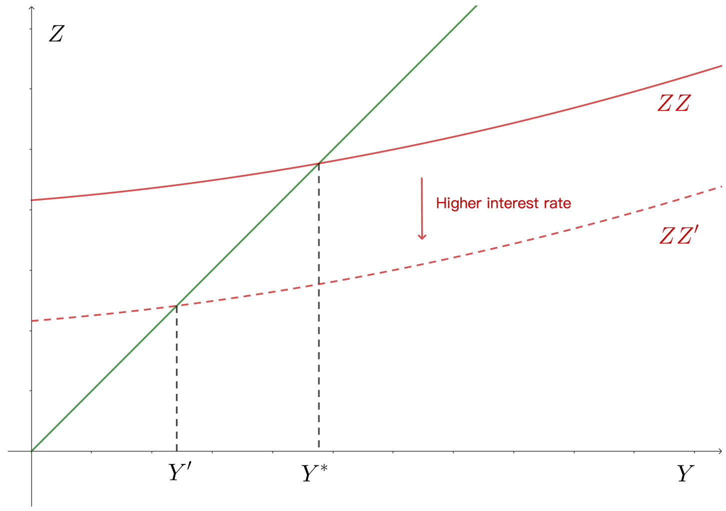

Figure 1: Goods Market Equilibrium

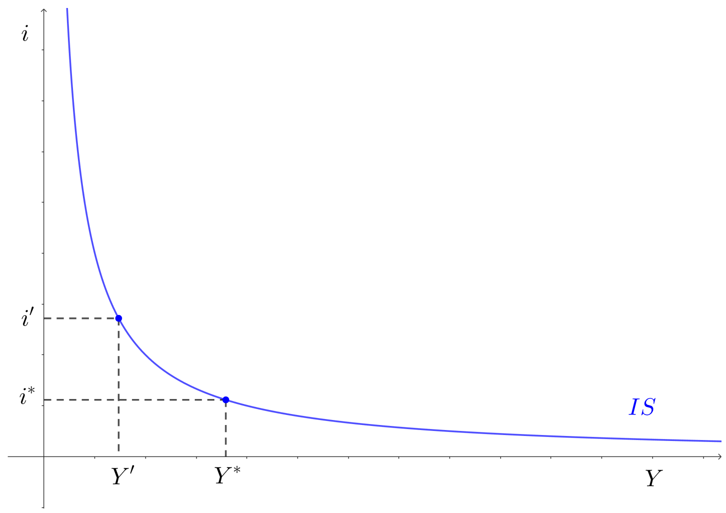

Figure 2: Deriving IS curve from goods market equilibrium