ECON2020

Recitation 11

The fiscal multiplier measures how much total output (e.g., GDP, aggregate consumption, or aggregate expenditure) increases for every $1 of government spending.

Fiscal Multiplier $= \frac{1}{1-MPC}$

$$\Delta AD = \Delta G * \frac{1}{1-MPC}$$

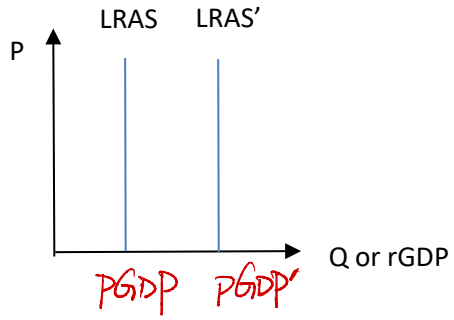
AS – AD Model:

LRAS: rGDP = pGDP → independent of P, perfectly inelastic

SRAS: Holding w constant the relationship between P and rGDP is positive (if wages are stuck, production costs don't increase)

(1) LRAS shifts only when pGDP changes.

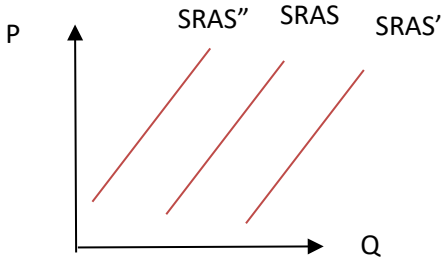
technology/full employment/capital stock ↑→ pGDP ↑



(2) LRAS shifts only when pGDP changes or wage changes.

technology/full employment/capital stock ↑→ pGDP ↑

w ↑→ SRAS ↓



Shift of AD:

GDP = C + I + G + NX. Anything can affect C I G NX, will affect AD.

For example:

Expected future income: E (Y) ↑→ Consumption ↑→ AD ↑

Expected future profits: E (profit) ↑→ Investment ↑→ AD ↑

1. **Fiscal multiplier**
   a. **How much did consumption increase in the economy if the government increased its spendings by $250 million and the marginal propensity to consume is 0.75?**

$$\Delta AD = 250million * \frac{1}{1-0.75} = 1billion$$

   b. **After an increase in government spending the aggregate expenditure in the economy increased by $1.5 billion. Determine the size of the original increase if MPC=0.9!**

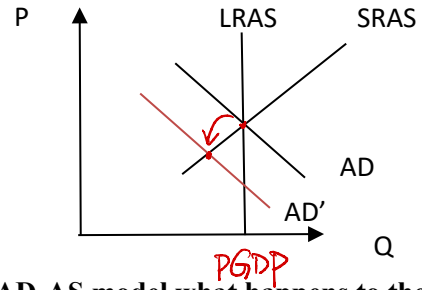
$$1.5\ billion = \Delta G * \frac{1}{1-0.9}$$
$$\Delta G = 150\ million$$

   c. **How much is the marginal propensity to consume in the economy if a $400 million increase in government expenditure resulted in a $8 billion increase in aggregate expenditure?**

$$8\ billion = 400\ million * \frac{1}{1-MPC}$$
$$20 = \frac{1}{1-MPC}$$
$$MPC = 0.95$$

2. **AD-AS model**
   a. **Illustrate using the AD-AS model what happens to the short-run macroeconomic equilibrium when due to a late freeze agricultural workers expect to have less income next year!**

When the expected income decreases, only AD will be affected. Since people are gone save more for the future, the consumption will decrease, thus shift the AD curve left.



   b. **Illustrate using the AD-AS model what happens to the long-run macroeconomic equilibrium when a wildfire destroys a fifth of the US forests!**

The wildfire destroy forest, decreasing capital stock. Thus pGDP decreases, both LRAS and SRAS decrease (shifting left).
To maintain the p, the government have to decrease MS. With MS decreasing, AD decreases.