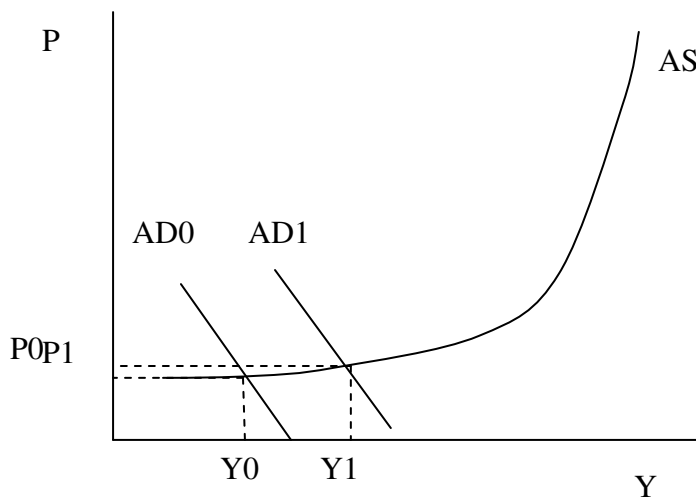


ECO136 Quiz 3 Question and Answer

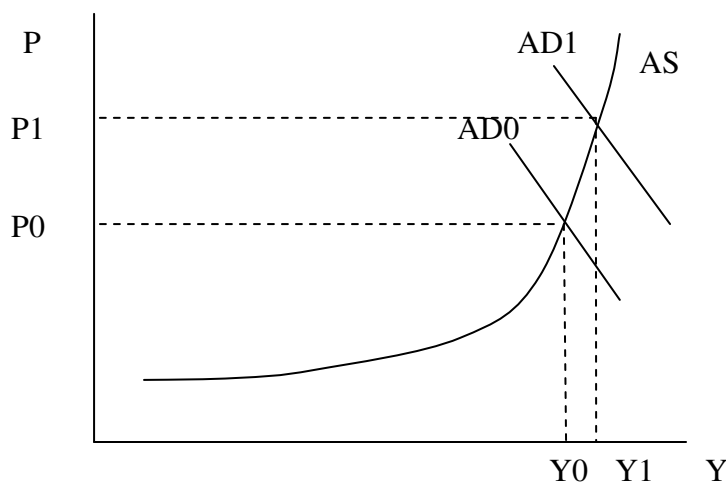
By using aggregate supply and demand curves, discuss the impacts of the following events on the price level and on the equilibrium Y in the short run for questions a,b,c and d and in the long run for question e.

a. An increase in the money supply during a period of high unemployment and excess industrial capacity. \Leftarrow means that the current situation of the economy is observed at the lower Y where AS curve is close to flat. An increase in money supply shifts AD curve to the right.

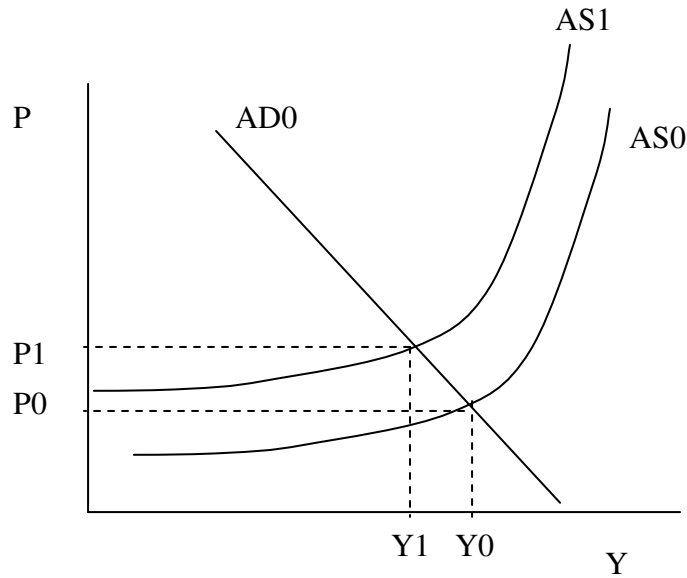


b. An increase in the government spending when the economy is operating at near full capacity.

\Leftarrow means that the current situation of the economy is observed at the higher Y where AS curve is almost vertical. An increase in the government spending shifts AD curve to the right.



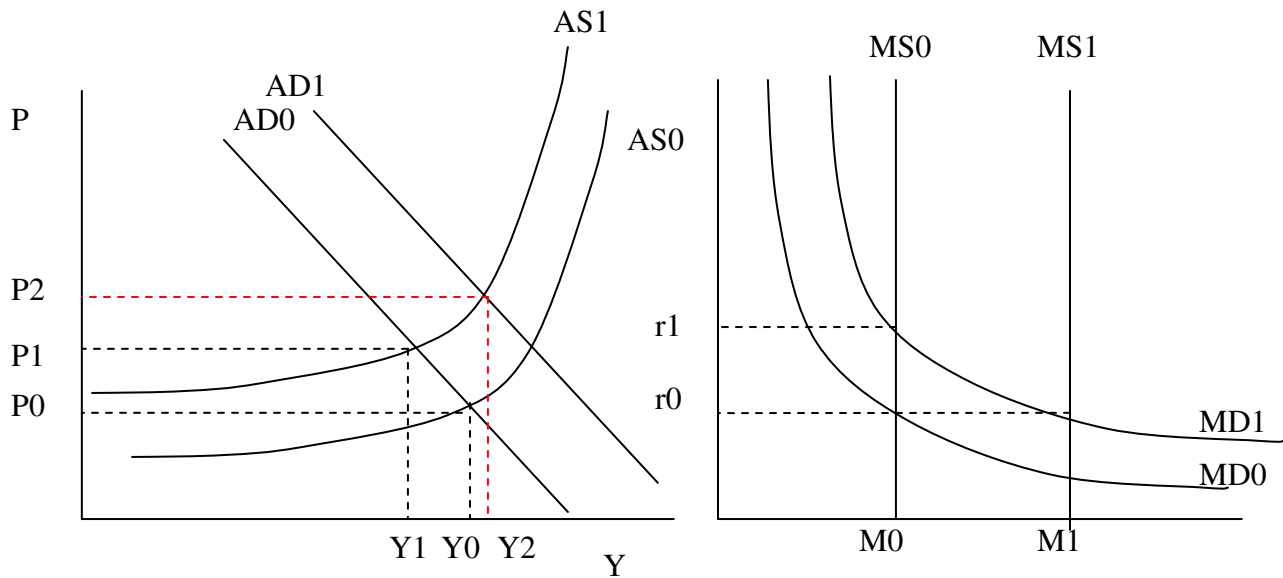
c. An increase in the price of oil.



Any events which are unfavorable to the production process (e.g. an increase in input costs, higher corporate taxes, natural disasters) shift AS curve to the left. An increase in the oil price means the increase in the production costs (input costs), therefore, AS curve should be shifted left.

d. An increase in the price of oil. At the same time, the government attempts to keep the interest rate constant. [Draw the changes in money market as well.]

Case 1: $P \uparrow$ dominates $Y \downarrow$



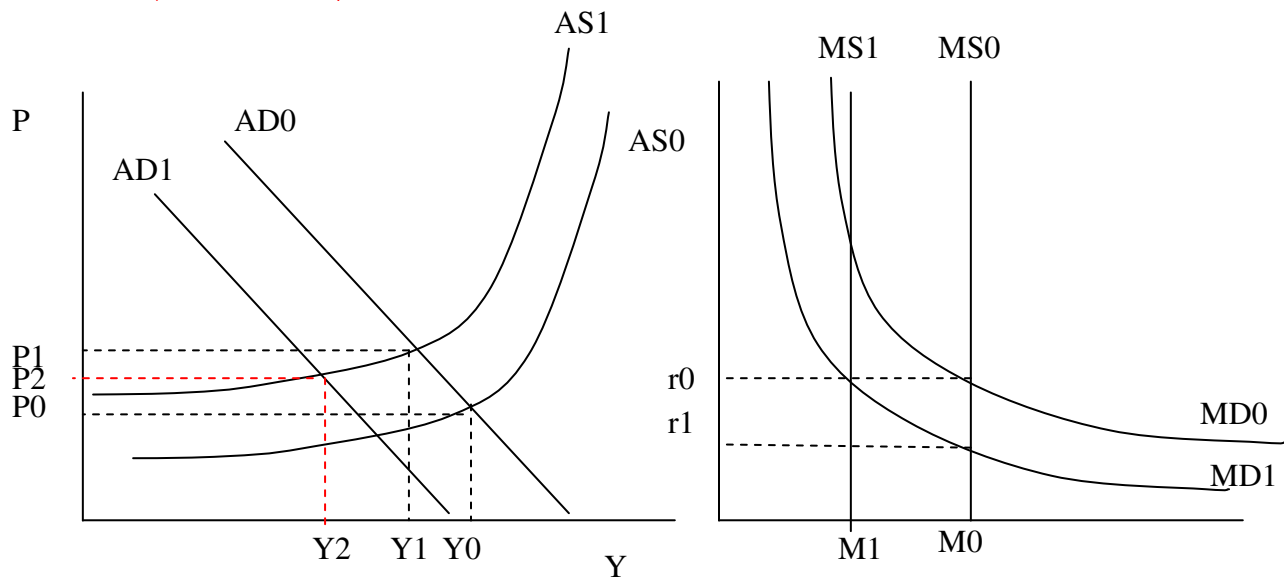
Step 1: AS curve shifts to the left due to the input price increase. As the result of the shift, now Y is lower, and P is higher. Consider in this case that the effect of the increase in P dominates the

decrease in Y . In such case, M_d curve shifts to the right (upwards) to reflect the increase in monetary demand.

Step 2: M_d curve shifts to the right. In order to keep the interest rate at r_0 level, the government increases the money supply. Therefore, M_s curve shifts to the right to keep r_0 level of interest rate.

Step 3: The increase in M_s causes AD to shift to the right (upward). Now the new equilibrium is where AS_1 and AD_1 cross. Depending on the magnitudes of AD shifts, Y may or may not be higher than Y_0 . However, P is always higher.

Case 2: $Y \downarrow$ dominates $P \uparrow$



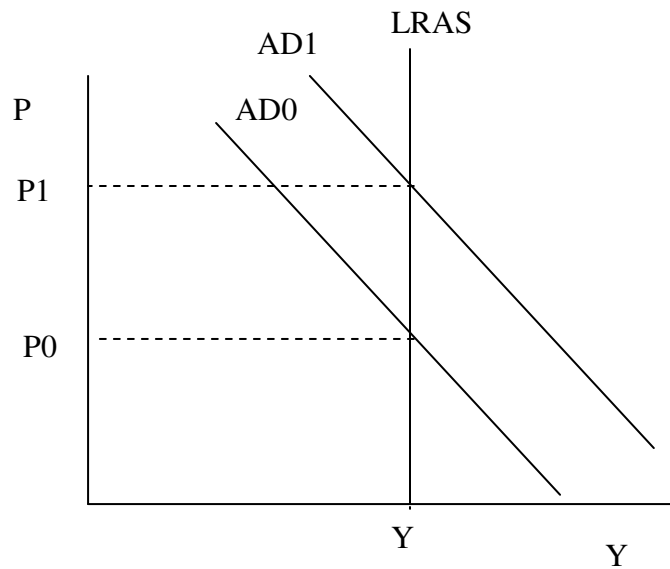
Step 1: AS curve shifts to the left due to the input price increase. As the result of the shift, now Y is lower, and P is higher. Consider in this case that the effect of the decrease in Y dominates the increase in P . In such case, M_d curve shifts to the left (downwards) to reflect the decrease in monetary demand.

Step 2: M_d curve shifts to the left. In order to keep the interest rate at r_0 level, the government decrease the money supply. Therefore, M_s curve shifts to the left to keep r_0 level of interest rate.

Step 3: The decrease in M_s causes AD to shift to the left (downward). Now the new equilibrium is where AS_1 and AD_1 cross. Given the initial shift in AS , the shift in AD decreases Y , but the effect on P is ambiguous. It can be higher, same as or lower than P_0 .

*For this quiz, if you described one of the two cases correctly, you got the full point.

e. A decrease in tax rate. [Long run analysis]



A decrease in tax rate shifts AD to the right (upward). Since long run AS curve is vertical, the level of Y does not change from the “potential GDP (output)” level while the price level increase. Therefore, we know that in the long run, the impact of any expansionary fiscal policy (G increase, T decrease) or monetary policy (MS increase) does not have any impact on Y. [It all comes down to “how long is the long run?”.]