

(v) ΔN^d has stronger effect than ΔN^s and ΔY^s has stronger effect than ΔY^d

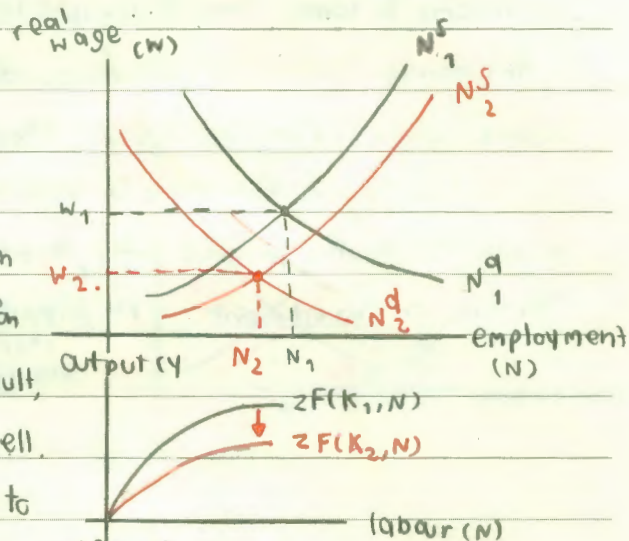
Assume that there is only a decrease in current capital (K), ceteris paribus.

Here is the chain effect when K decreases.

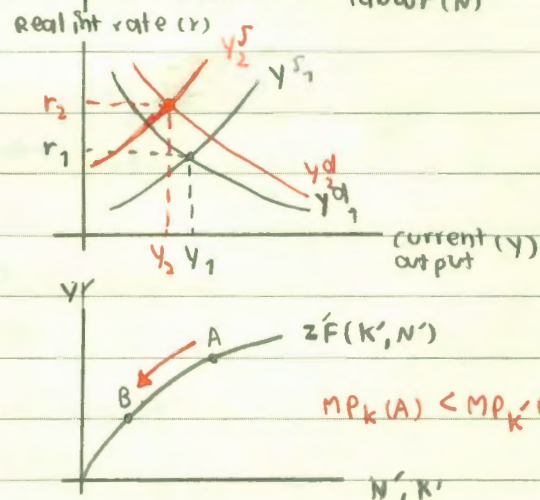
$$K \downarrow \rightarrow MP_N \downarrow \rightarrow N^d \downarrow \rightarrow N \downarrow \rightarrow Y^s \downarrow \rightarrow r \uparrow \rightarrow \text{Income} \downarrow \rightarrow S \downarrow \rightarrow M^d \downarrow (\text{fixed } M^s) \rightarrow P \uparrow$$

$$K \downarrow \rightarrow MP_K \uparrow \rightarrow I^d \uparrow \rightarrow Y^d \uparrow \rightarrow B+I^d \uparrow$$

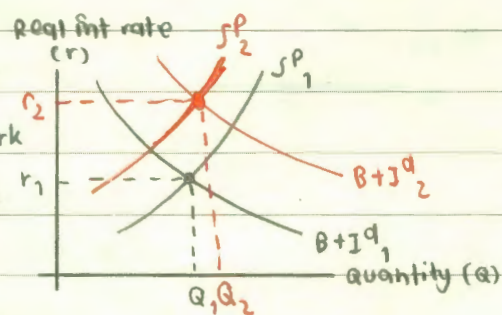
- When the current capital stock (K) decrease, it decreases the marginal product of labour (MP_N) which lead to a decrease in labour demand (N^d). So, N^d curve shifts to the left. Since MP_N decreases, the production function will decrease as well. The graph of production fn will rotate downward as well as the slope. As a result, the employment (N) decrease and wage decrease as well. Therefore, the output supply (Y^s) decreases and shifts to the left in the goods market due to the decrease in employment. The result is that the real interest rate (r) goes up, and the output fall down as well.



- Moreover, a decrease in K affects the future capital stock (K') to go down which lead to an increase in MP_K' in future period. The future output tend to be higher. With this expectation, it makes the investment demand in current period to be higher. Therefore, the output demand increases and shifts to the right in the goods markets.



- The result is r increase and the output (Y) fall. Due to an increase in r , people have to leisure less and work more, so they will supply more labour. Labour supply (N^s) rise and shifts rightward in the labour market. Given an increase in N^s has less effect than a decrease in N^d , the result is the decrease in real wage and employment.



- When people have less income, they'll save less as well. So, private saving will decrease and shift leftward in the credit market.

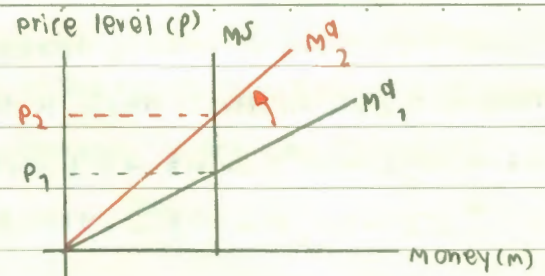




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due to an increase in I^d , it makes $B+I^d$ increase as well and shift rightward in the credit market. So, the result is an increase in quantity and interest rate. Lastly, in the money market, when people's real income is lower, they'll demand less money. So, the money demand (M^d) decreases and rotates



inward, given the money supply is fixed. The result is an increase in price level.

In conclusion, a decrease in k result in a decrease in employment, a decrease in current output, the higher interest rate, the fall in real interest rate and current consumption and the fall in investment.

and ΔN^d has stronger effect than ΔN^s

Assume there is a decrease in total factor productivity (z), ceteris paribus.

Here is the chain effect when total factor productivity (z) decreases

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$$z \downarrow, MP_N \downarrow \rightarrow N^d \rightarrow W \downarrow \rightarrow r \uparrow \rightarrow \text{income} \downarrow \rightarrow SP \downarrow \rightarrow M^d \text{ (fixed } M^s) \rightarrow P \uparrow$$

$\downarrow N^s \uparrow$

- When the total factor productivity (z) decreases, the production function falls which rotates the production

curve down and has less slope at N , so, the marginal product

of labour fall down. Then, the labour demand will decrease

and shift left ward in the labour markets to N_2^d . As a result,

the real wage is falling and the employment is also dropping

- Due to the decrease in employment (N), the output supply will

decrease which shifts y^s leftward to y_2^s in the goods

market. The results are that the real interest rate (r)

will rise up but the output go down.

- Since r increase, the current consumption of people will

decrease because people have to leisure less and work more

Therefore, when people work harder, they will supply more

labour. The labour supply (N^s) will increase and shifts to

the right in the labour market. So, the result is that the

real wage (w) falls as well as the employment.

- When people have less income, it cause the fall in both

consumption and private saving (SP). In the credit market,

private saving (SP) decreases which shift leftward to SP_2

Therefore, the result is that the consumption will drop with the

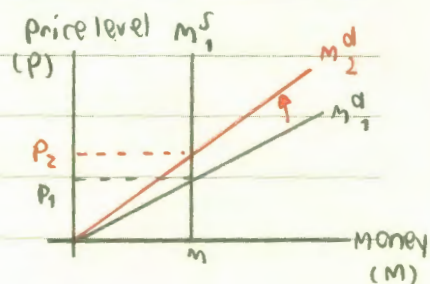
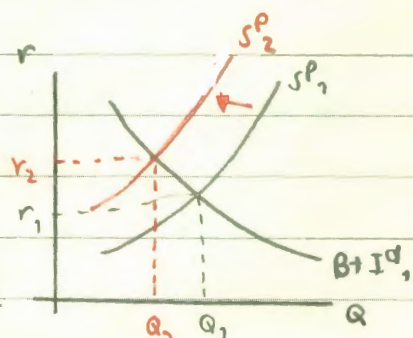
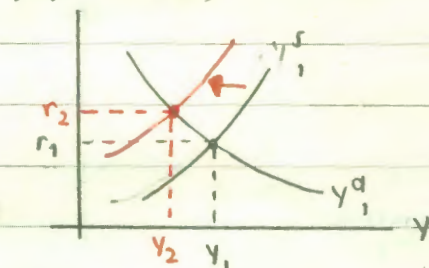
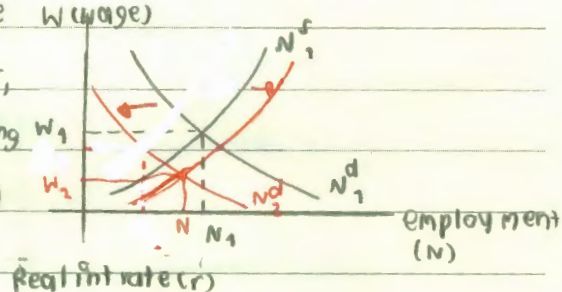
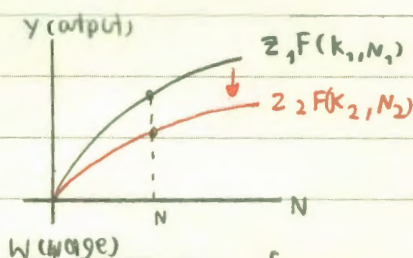
higher r .

Lastly, in money market, due to a decrease in income and increase

in r , people demand less money. Assume the money supply is fixed

money demand (M^d) will rotate inward leftward. So, the result is

that price level increase.





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In conclusion, a decrease in total factor productivity (z) is the result in a decrease in employment, a fall in the real wage, a decrease in current output, an increase in the real interest rate, a decrease in current consumption, and the rise in the price level.

as well as drawing all of the important graph. Use the Keynesian model to explain the situation

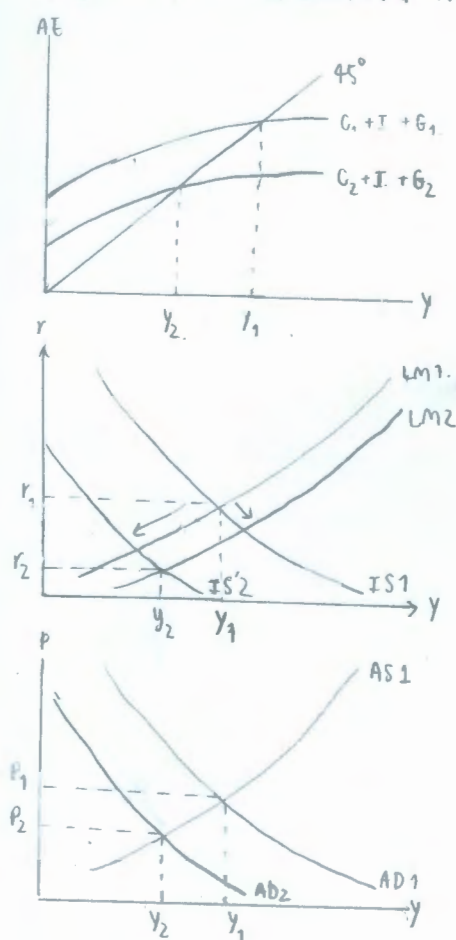
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For the Keynesian model, government can stabilize the economy through fiscal policy (by using G and T) and monetary policy (M^S). and The policy may result in negative or positive effect for both short run and long run.

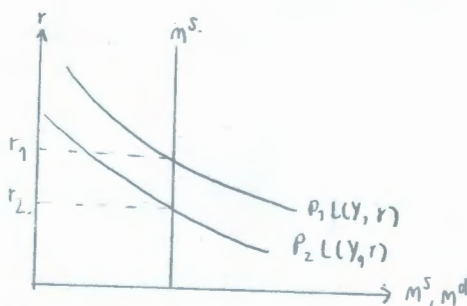
In reality, during the good time, people won't believe in Keynesian at all because the government will crowd out our consumption by increasing tax or spend more. We will act against government action. Finally government use contractionary policy or tight-money policy to smooth out the system by tax more and less government spending.
(lumpsum tax).

$TT, G \downarrow \rightarrow C \downarrow \rightarrow IS$ shift left $\rightarrow AD$ shift left. $\rightarrow P \downarrow \rightarrow M^d \downarrow \rightarrow r \downarrow \rightarrow LM$ shift right $\rightarrow Y \downarrow$.
 $\hookrightarrow r \downarrow \rightarrow N^s \downarrow$. $\hookrightarrow \frac{W}{P} \downarrow \rightarrow N^d \downarrow \rightarrow N \downarrow \rightarrow Y \downarrow$.

When the government increase tax and reduce government spending, this will shift Aggregate expenditure downward from Y_1 to Y_2 causing current consumption to reduce. When

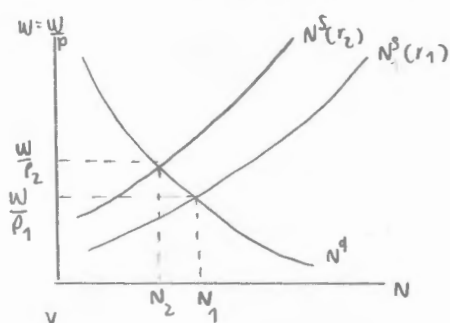


IS shift to the left as the effect of increase in tax and decrease in government spending assuming dominant substitution effect will result in. the decrease in interest rate from r_1 to r_2 . The lower aggregate expenditure reduces aggregate demand and cause AD to shift to the left from AD_1 to AD_2 , given the price level. The excess supply drive the price level down from P_1 to P_2 . The lower price level reduces money demand (M^d). This result in the lower interest rate. The decrease in money demand will make LM to shift to the right. from LM_1 to LM_2 associate with lower interest rate (at r_2). $\rightarrow$



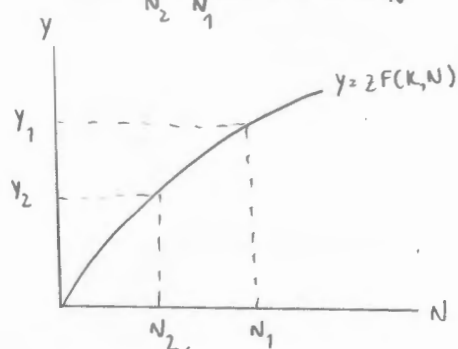
The decrease in price level also affect the labor market. The decrease in price level will cause the real wage to be higher. The higher real wage means cost of production is more expensive so the firm demand less labor. The higher real wage moves along N^d curve which make employment lower.

At the same time, a lower interest rate will make labor supply to be lower which make labor supply curve to shift to the left from $N^s(r_1)$ to $N^s(r_2)$. with the full employment



is at N_2 .

Also, lower labor input, ceteris paribus, can produce less output supply, providing less real income to the economy.



In conclusion, by using contractionary fiscal policy with increasing tax and lower government spending, will result in lower output, lower real income, lower real interest rate, lower price level, lower employment and higher real wage. However, as the lower interest rate will increase private consumption and investment but the reduce in real income will make people to consume less.

This is the crowding-out effect and there's the unclear final result.