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MA Assignment-3

A1)

The effectiveness of the monetary and the fiscal policy can be understood by using the help of the IS and the LM schedules. These are depicted below in the form of bullet points :-

Fiscal Policy Effectiveness and the Slope of the IS schedule

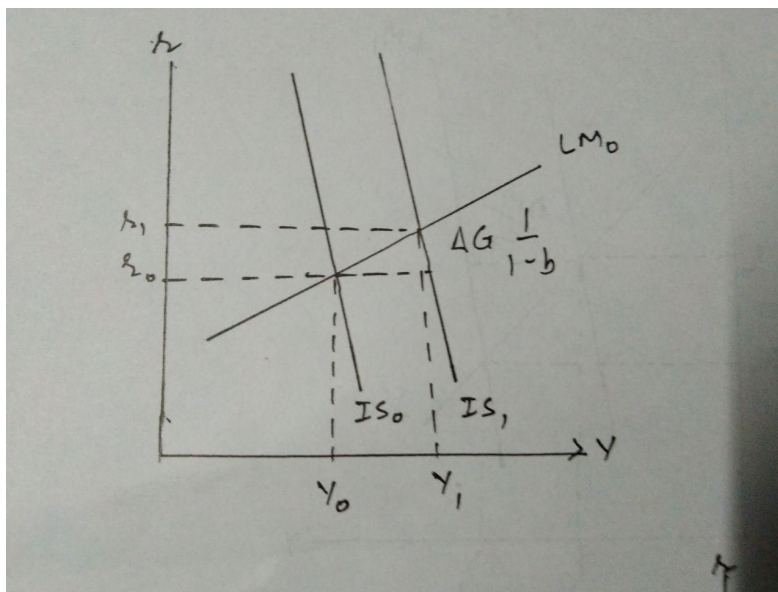
- The crucial parameter that determines the slope of the IS schedule turns out the interest elasticity of investment. If, the investment demand is highly dependent on interest elasticity i.e a slow rise in the interest rate would cause a large decline in investment, then the IS schedule would be quite flat in nature.
- This means that the lower the interest elasticity of investment demand, the steeper the IS schedule would look like. The tax and changes in the spending shifts the IS schedule and therefore, they are both effective and ineffective in the same situation. The effects of an increase in the government spending in both steep and flat cases shifts the IS schedule from IS_0 to IS_1 . The horizontal distance having the multiplier effect of $1/(1-b)$ is same in both of the cases.
- This indicates that the fiscal policy is much more effective when the IS schedule is steep or vertical. In the case of fiscal policy, the interest-rate change offsets the effects on fiscal policy. Whenever, there is a larger interest elasticity of investment it would have an expansionary effect to an increase in the government spending which would compensate with the decline in investment caused by the interest rate. Private investment plays a major role here which makes the fiscal policy more effective. In the case where the IS schedule is flat, the fiscal policy is much less effective.
- To evaluate the effectiveness of the fiscal policy we start by differentiating the effect of policy action on income to that asserted by the simple Keynesian model. The distance shift in the IS schedule for a given fiscal policy is equal to the income effect in the Keynes model. The multiplier effect comes into picture i.e $\Delta Y = \Delta G [1/(1-b)]$ for government expenditure changes. This simply means when the government expenditure in the economy

increases, the net income / investment does not increase at the same pace due to the b factor here involved.

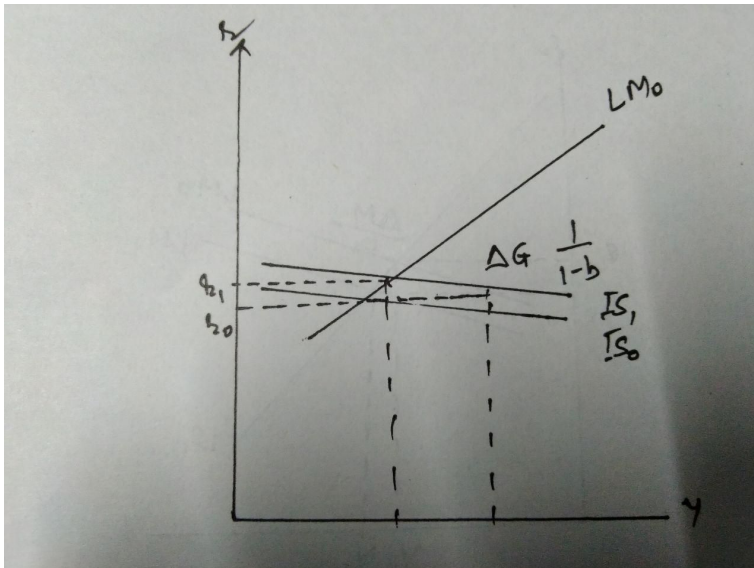
Graphs :-

Here b in all the graphs causes makes the difference in money more even though the IS curve shifts by a major difference.

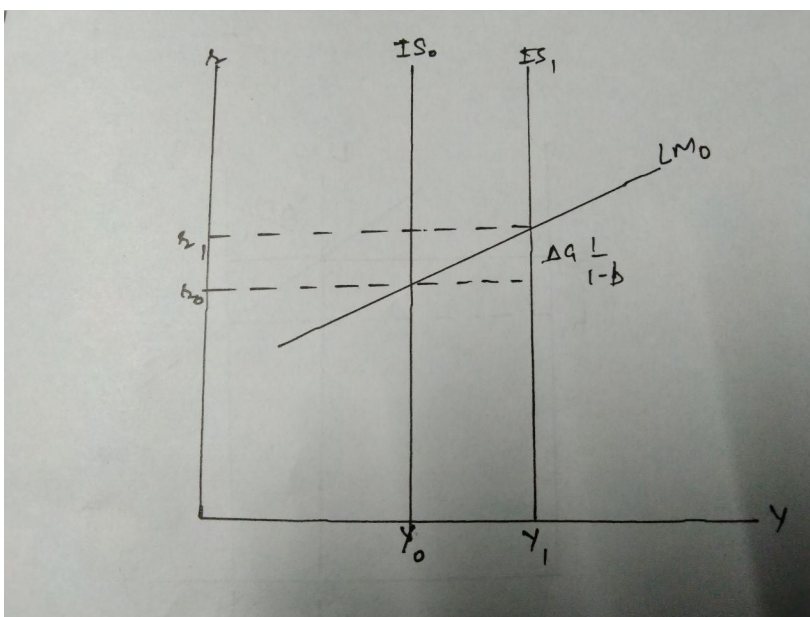
When the graph is steep. The investment here is not very sensitive to changes in the rate of interest. Here the interest rate increase would only cause small drop in the investment or income.



When the graph is flat. The investment here is highly interest sensitive, meaning that the interest rate will reduce the investment a lot. The interest has a huge impact on the income / investment.



When the graph is vertical. In this case, the investment is interest insensitive meaning that any increase in government expenditure would cause the rate of interest to rise but does not have a decline in the income / investment.



Monetary Policy Effectiveness and the Slope of the LM schedule

- The crucial parameter that determines the slope of the LM schedule is in the interest elasticity of money demand. Whenever, the LM schedule is flat, the interest elasticity of money demand is high. The curve becomes steeper with the low values of the interest elasticity of money demand. If the demand for

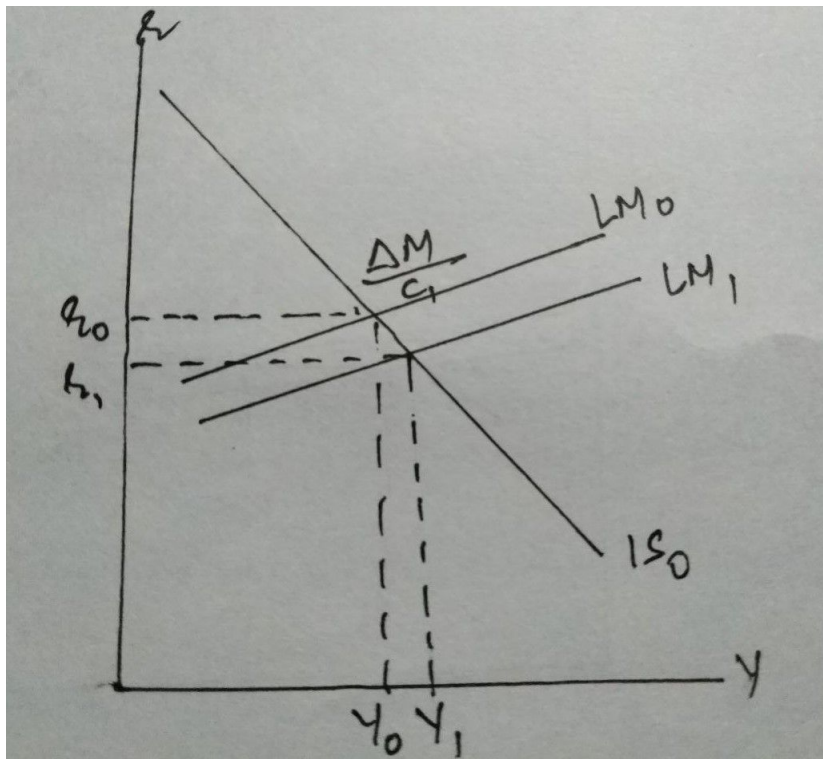
the money does not depend majorly to the interest rate, then the LM curve becomes vertical.

- Monetary policy is ineffective the most when the LM curve is flat meaning the interest elasticity of money demand is quite high. The monetary policy according to the IS LM Curve tends to be most effective in case when the LM curve just gets vertical. At the beginning level of income and interest rate, the money supply causes an excess supply of money which makes the interest rate fall in the economy. A lower interest rate would foster more investment in the economy which would gradually enhance the income.
- When the elasticity to the interest rate is high, the effect of income is greater. When the supply of money increases, there exists a fall in the interest rate. Since, monetary policy effectiveness makes fiscal policy ineffective, therefore the effectiveness of the monetary policy enhances with the decline in the interest elasticity of money demand. In the case of monetary policy, the interest rate and the income gets affected. The greater the interest-rate response, the more effective the monetary policy would be. This condition of liquidity trap where the interest rates tends to be too low makes the monetary policy most ineffective. A good example for this would be the 2008 crisis.
- To evaluate the effectiveness of the monetary policy we start by differentiating the effect on income of the change in the supply of money to the shift in the LM schedule. The shift in the LM curve equals to $\Delta M (1/c_1)$. Here c_1 is the coefficient on income in the money demand function. It gives us the amount of the change/increase in the money demand per unit income. Therefore, the shift gives the increase in income for an increase in the supply of money if all balances increased transactions demand form. The change in the money demand i.e delta M isn't the difference b/w the LM curves but comes out to be quite less due to c_1 .

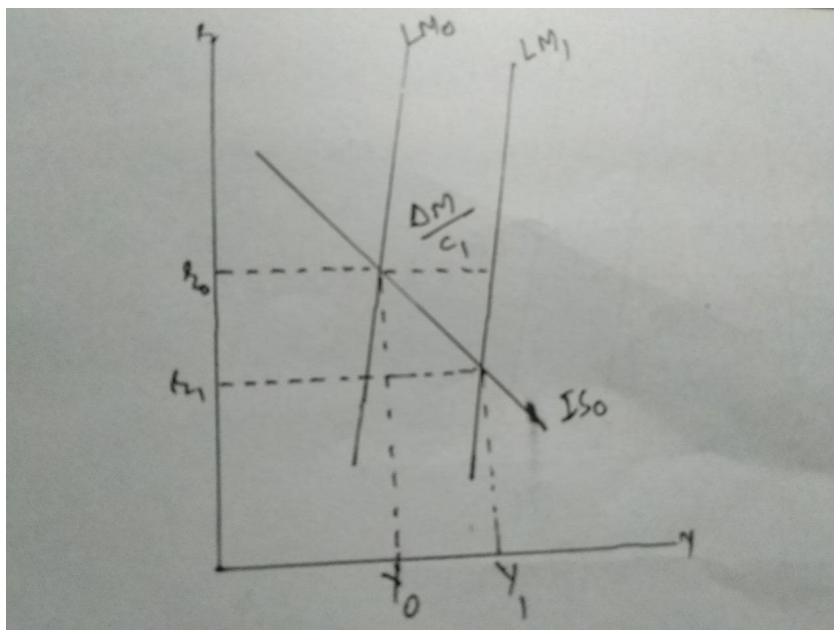
Graphs :-

Here c_1 in all the graphs causes makes the difference in money less even though the LM curve shifts by a major difference.

When the graph is flat. Monetary policy is least effective in this graph. Here, the effect on income of the increment in the money supply is the greatest. Money demand is highly sensitive to the interest rate. A small change in the interest rate causes a large change in the income.

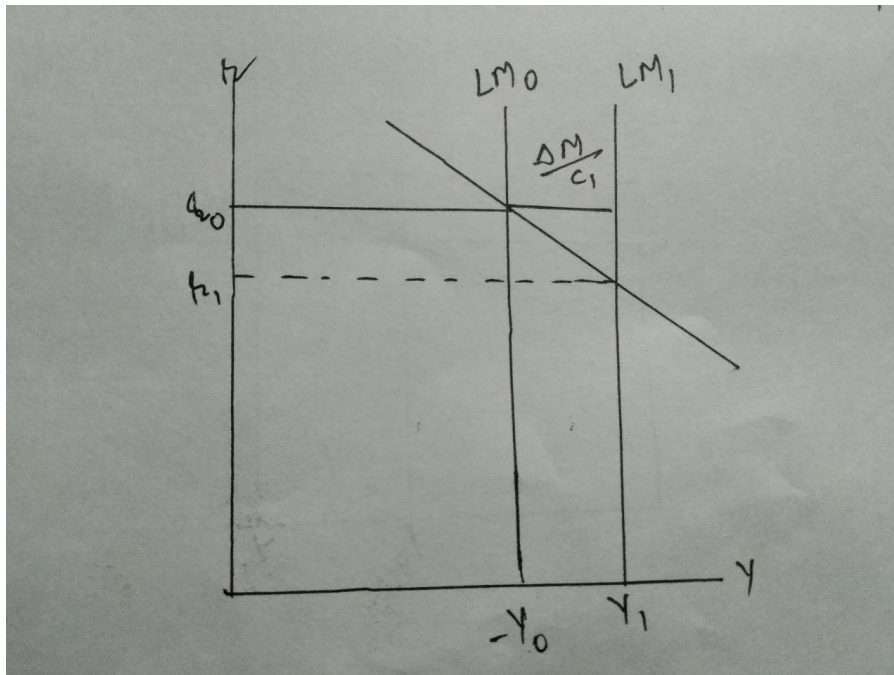


When the graph is steep. Monetary policy is more effective in this graph. Here the interest elasticity of money demand is lower. Due to this, a large decrement in the interest rate is required to cause equilibrium in the market. Only then, the income and the investment would increase by a large amount.



When the graph is vertical. Monetary policy is most effective in this graph. Here the interest elasticity of money is zero meaning the LM schedule is vertical. Here, the money demand is completely interest inelastic, i.e when the money supply increases

the interest rate falls. This causes the investment and the income to rise but doesn't enhance the demand for the money.

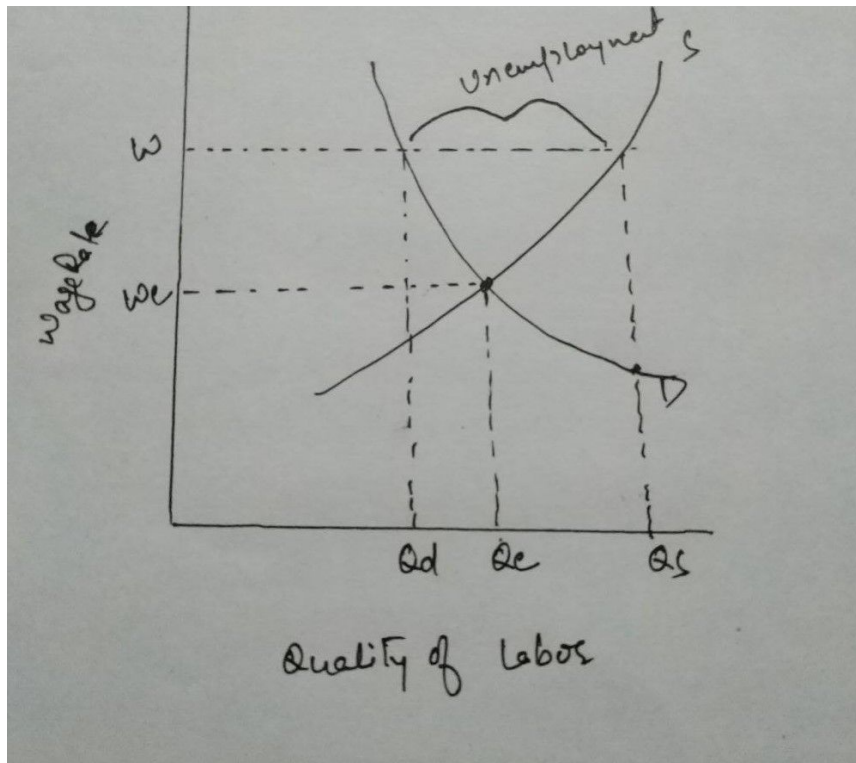


A2) a)

- According to the Sticky Wage Model, the wages in the labour market are sticky in nature. The stickiness in the wages suggests that the wages of the employees or the labourers in the market tend to have a slow response to the changes in the performance of the company or of an economy. The classical theory suggested that the suppliers of labour are aware of their real wage to which Keynes argued that it is safe to assume the labourers are aware of the money wage but not the price level. Generally, when we talk about the prices of the goods in the market, we know that they tend not to be sticky in nature since they are driven by supply and demand in the economy. However, it is assumed in Keynesian Economics that the money wage is sticky in the downward direction and most of the unemployment is caused by the failure of the money wage to clear the labour market.
- During the period of recession or bad economy the market should reduce the wages of the workers but due to stickiness the wages of already employed labourers tend to increase even though there is a decline in the demand of the labour. This is the main reason, why the state of equilibrium takes a long time to achieve due to stickiness.

- Here is the graph depicting the sticky wage case. The intersection of the demand curve and the supply curve causes the equilibrium point. Since, the wages for the employed workers are the same, the quantity of labour is now quite less as compared to the equilibrium value. This is because of the wages that don't come from the point W to W_e .

Graph :-



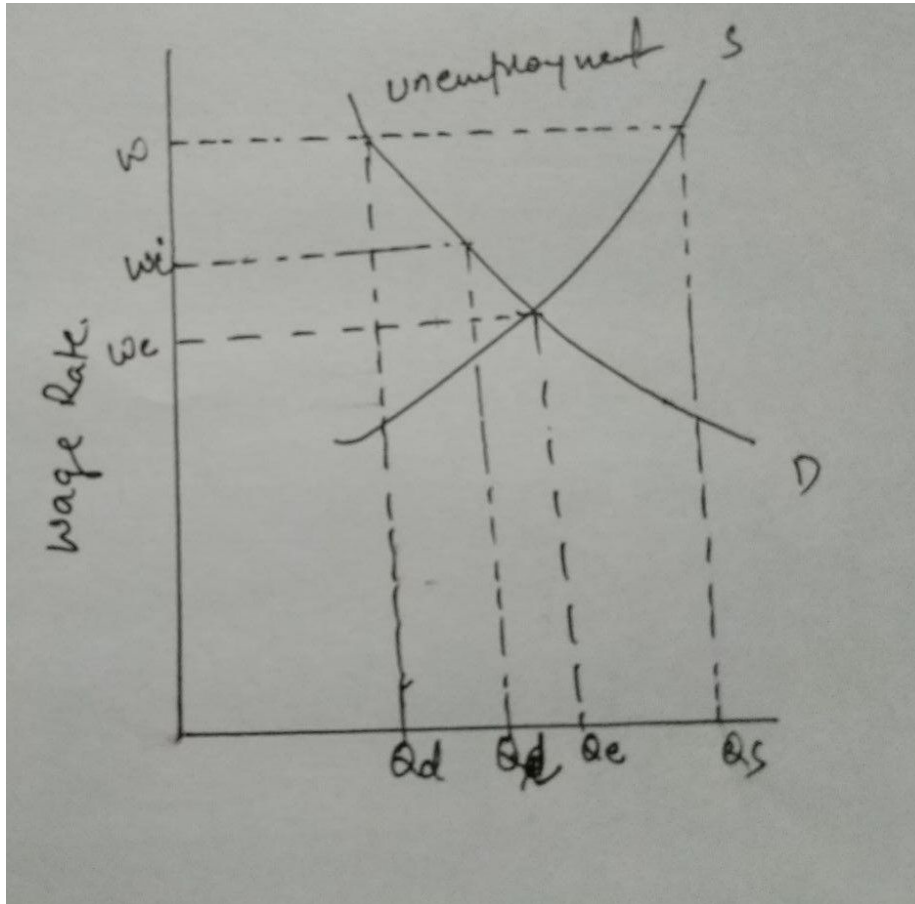
b)

When wages are not strictly 100% sticky, then the wages come down a bit rather than staying at the same level. This causes the value of Q_d to be much closer to the equilibrium point which doesn't make the unemployment quite high in contrast to the case when the wages were 100% sticky. Rest of the properties and the effects remain the same as above.

Here is the graph depicting the sticky wage case (not 100%) . The intersection of the demand curve and the supply curve causes the equilibrium point. Since, the wages for the employed workers are not exactly same, the quantity of labour is now less as compared to the equilibrium value but much more than the 100% case. This would still cause the unemployment to fall but not to the lowest level. The wages now come

from the point W to W_i where $W_i < W$. The equilibrium in this case would be attained much faster as compared to the 100% sticky wage case.

Graph :-



c)

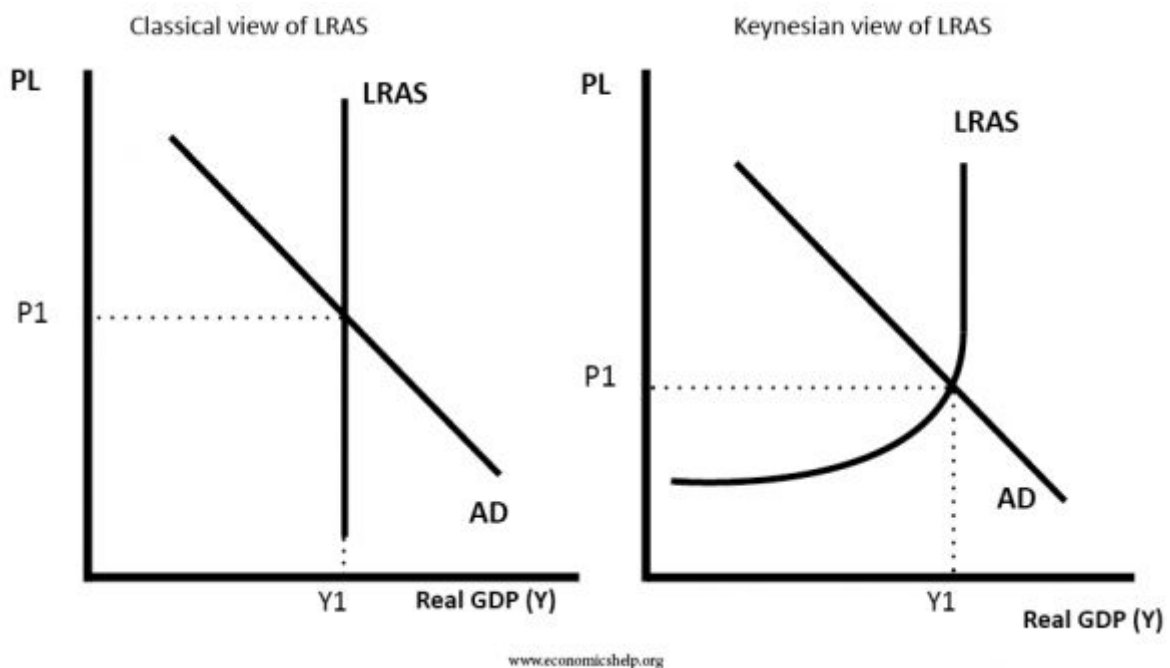
There is a major difference b/w the classical view of aggregate supply and the Keynesian view. Some of the differences are :-

- The Keynesians believed that the economy can be in a situation where it is much below the maximum capacity. This can be understood by looking at the multiplier effect when it comes to government expenditure and labour supply. Since, the wages are sticky in the downward direction as in the case of high unemployment, the equilibrium level tends to persist a lot longer as compared to the non-sticky case. The fall in aggregate supply is caused by the same reason as above. This enhances the purchasing power of people who remain employed as their wages are stuck while the economy is in the recession phase whereas the power gets reduced a lot for unemployed labourers. Also, the recession and the fall in aggregate supply is followed by

people losing confidence in the banking system and opt for higher liquid assets.

- The classical view of aggregate supply believes that the real GDP level is dependent on the consumption, income, government expenditure and net exports in a country. They believe that a long term increase in aggregate supply would in the long run cause deflation in the economy. On the other hand the increase in aggregate demand would cause inflation which is always seen.

Graph :-



A3)

Keynesian economists believed that the economy is majorly controlled by affecting the demand for goods and services. They believed in consumption, government expenditures and net exports (i.e exports minus the imports) to be responsible factors for the change of state of the economy. On the other hand, monetarists like Friedman asserted that the quantity theory of money is the basic theory of the money demand. He also thinks that demand for money forms the major part of the capital. Some of the differences b/w the Keynesian Theory of money demand and Friedman's Theory of money demand are :-

- Friedman believed in a wider definition of money as compared to Keynes for explaining the money demand function. According to monetarists theory of money demand, money is considered as an asset which serves as a way for

defining the purchasing power. It is considered to be a medium for exchange. On the contrary, the Keynesian system defines money as a composition of demand deposits. He divided the money demanded into three major categories i.e transactions demand, precautionary demand and lastly speculative demand. Transactions demand for money is defined as the amount of money that is required for ongoing current transactions for the individuals and firms as a whole. According to Keynes, transactionary demand is positively determined by the level of income. Precautionary demand is defined as the demand for high liquid assets i.e they are easily convertible to cash. It is dependent on the size of income, credit availability and the rate of interest. Speculative demand for money is the demand for money storing in the form of wealth i.e in the form of bonds etc.

- Friedman uses two types of income to explain his theory of money demand. These are classified as nominal and personal income. However, on the other hand Keynesian theory simply opposes this concept of income in the economy. Nominal income is the one that is not adjusted to the effects of inflation in an economy whereas personal income is adjusted one. It is also dependent on how much the consumer can consume given his income. The prices of the goods in the market and the quantity are responsible for these types of incomes.
- The functions defined by Keynes are quite different to the monetarist functions for the aggregate demand of money in the economy. Friedman considered that the demand for money is dependent on different rates i.e he classified them into R_m , R_b , and R_e . On the other hand, Keynes equation for the demand of money involves the net income (Y) and the overall returns on the economy defined as r . He doesn't classify further the returns into three distinct categories like the monetarists do.
- The way in which Keynes and Friedman describe the balance of money tends to have a stark contrast. Keynes divides the balance money in the form of two different categories. The categories described as above are the ways in which he accommodates the transactionary and precautionary demands together along with the speculative demand. Friedman does not believe in this division.

Here are some of the graphs to explain the monetarists and Keynesian view on the money demand

Graph :-

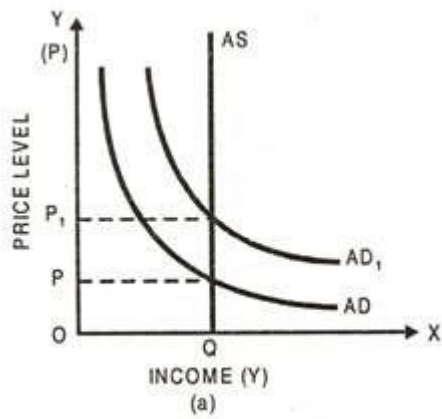


Fig. 1(a) Monetarist View

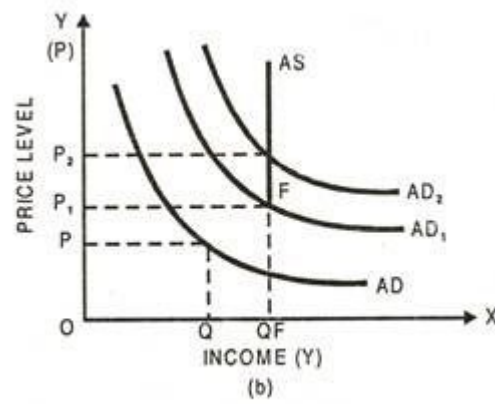


Fig. 1(b) The Keynesian View