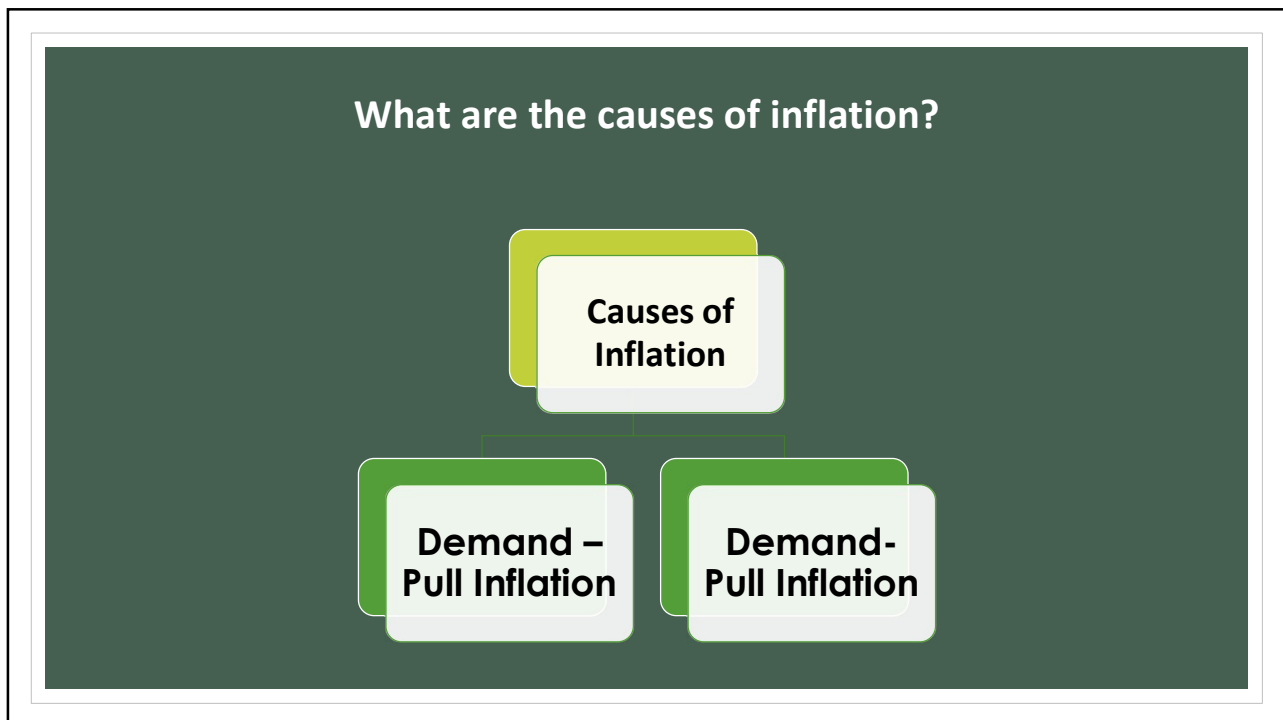
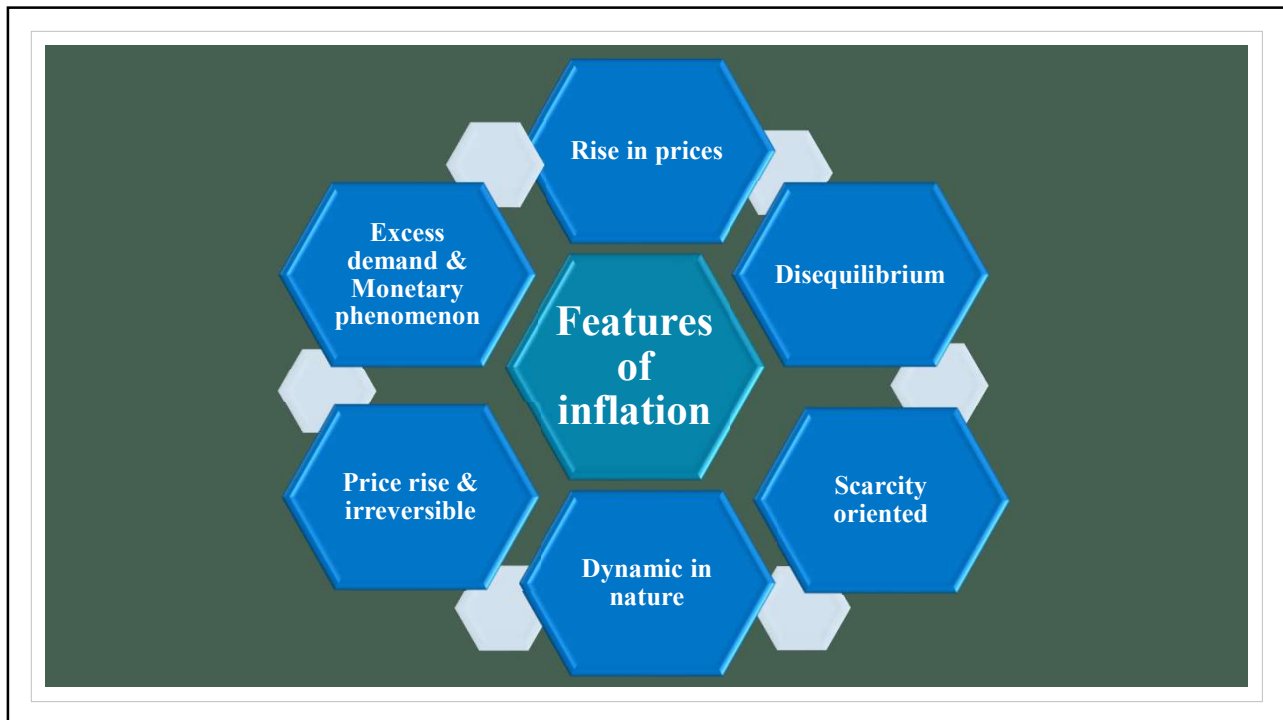


INFLATION

“inflation refers to a continuous rise in general price level which reduces the value of money or purchasing power over a period of time”

INTRODUCTION

- ❑ “inflation is a state in which the value of money is falling i.e. the prices are rising”. ... **Crowther**
- ❑ “inflation occurs when the general level price and costs are rising”.... **Samuelson**
- ❑ “increase Price after the level of full employment is reached is true inflation”.. **J. M. Keynes**



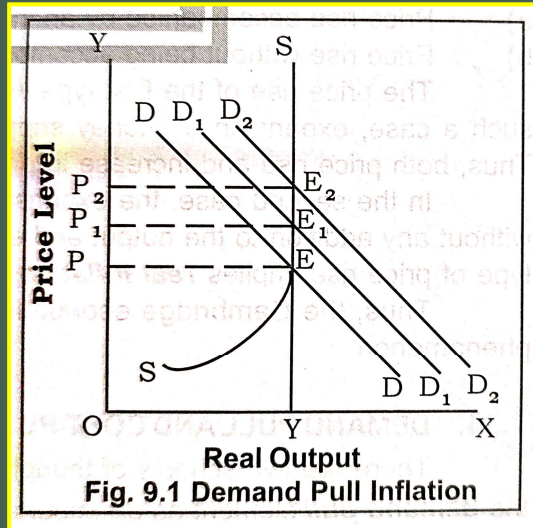
1. Causes of Demand pull Inflation

❏ "when there is an excess of AD against the available AS goods and services"

❏ Features

$$\text{AD} = C + I + G + (X - M) + (R - P)$$

❏ "when there is an excess of AD against the available AS goods and services"

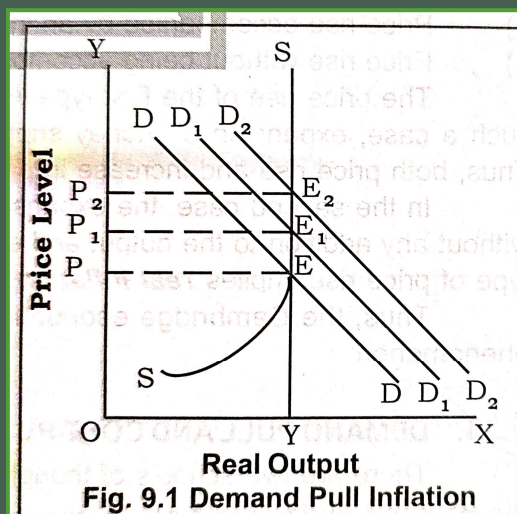


Causes of Demand pull Inflation

❏ SS is the upward sloping aggregate supply curve. It becomes vertical after point E when the full employment situation is reached.

❏ E is the equilibrium point at which the price is OP. With an increase in demand, the demand curve shifts to the right i.e. D₁D₁ Supply being fixed, the price rises to OP₁

❏ With further increase in demand, the demand curve shifts further to the right i.e. D₂D₂ and the price rises to OP₂.



Causes of Demand pull Inflation

❖ During demand pull inflation,



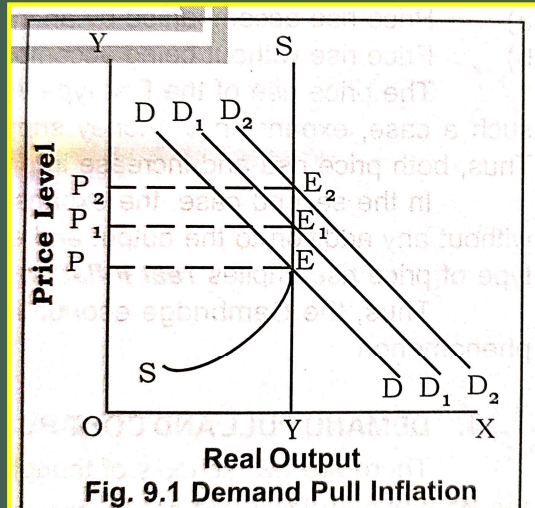
❖ Rise in wages accompanies the price rise.



❖ Rise in prices leads to higher profits and more investment by producers.



❖ This will generate more demand for factors of production leading to an increase in their incomes (wages).



Causes of Demand pull Inflation

1) **Increase in the quantity of money when the economy is operating at the full employment level:**

When the quantity of money increases, rate of interest will fall leading to an increase in investment, money incomes, aggregate consumption expenditure and effective demand. Thus when aggregate demand rises faster than aggregate supply, prices rise.

2) **Increase in government expenditure:** When the state expenditure is in excess of its revenue, the government may resort to deficit financing. This implies an increase in money supply creating excess demand and inflation.

3) **Increase in MPC and MEC:** An increase in marginal propensity to consume or marginal efficiency of capital will raise consumption and investment expenditures. This leads to an increase in aggregate demand and inflation.

4) **The burst of pent-up demand:** The pent-up excessive demand accumulated during the war period bursts open and supply lagging behind prices rise.

5) **Increasing exports:** An increase in export earnings leads to excess demand for goods causing prices to rise.

2. Causes of Cost Push Inflation

1. Cost-push inflation may be due to either **wage-push or profit-push**. When there are monopolistic labour organisations, prices may rise due to wage-push.

2. When there are monopoly elements in the product market, the monopolists may raise the prices to fetch high profits. This would lead to **profit-push inflation**.

Profits are generally a small fraction of the total price. Wages constitute a large fraction of the total price. Hence cost-push inflation is mainly due to wage-push.

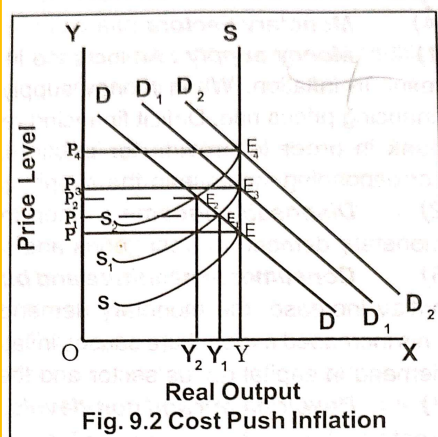


Fig. 9.2 Cost Push Inflation

- **SS is the upward sloping supply curve which becomes vertical at the full employment level OY. DD is the original demand curve and the equilibrium point is E at which the price is OP.**
- With an **increase in wages** the supply curve shifts upward to the left i.e. **S1S**. The new equilibrium point is **E1** and the price rises to **OP1**. Point **E1** indicates that the level of output and employment declines from **OY** to **OY1**. Thus a rise in wage reduces employment.
- When the trade unions demand still **higher wages due to price rise**, the supply curve shifts to **S2 S**. If the demand curve remains **DD2** the new equilibrium point is **E2**, and the price rises to **OP2**. This will again lead to unemployment (**OY2**).
- In order to maintain full employment, the **government will increase its expenditure**, creating more demand. The demand curve shifts to the right **D1D1**. The full employment equilibrium point is **E3** and the price will rise to **OP3**.
- The government will undertake **more public expenditure to increase employment**. This will increase demand and the demand curve shifts further to the right i.e. **D2D2**. The full employment equilibrium is **E4** and the price rises to **OP4**. Thus **the wage-price spiral develops**.

Causes of Cost Push Inflation

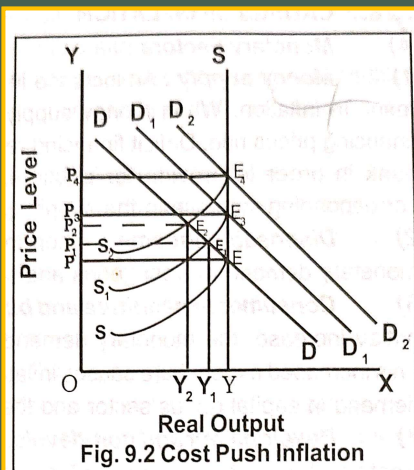


Fig. 9.2 Cost Push Inflation

The End

Q. Explain the inflation targeting instruments of monetary policy.

Central banks use various instruments to implement this policy and influence the money supply and interest rates.

- ❑ **Policy Interest Rates:** The central bank adjusts its benchmark interest rates to influence borrowing and lending costs in the economy. By raising interest rates, the central bank aims to reduce consumer spending and investment, which can help lower inflation.
- ❑ **Open Market Operations (OMO):** Central banks buy or sell government securities (bonds) on the open market to control the money supply and influence short-term interest rates. When the central bank buys government bonds, it injects money into the economy and lowering interest rates, Selling government bonds does the opposite, reducing the money supply and raising interest rates.
- ❑ **Reserve Requirements:** Central banks may require commercial banks to hold a certain percentage of their deposits as reserves. amount of money banks can lend and the overall money supply in the economy.



Inflation targeting instruments of monetary policy.

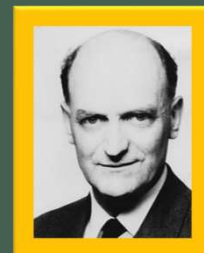


- ❑ **Forward Guidance:** Central banks often communicate their future monetary policy intentions to guide market expectations, interest rates or other policy actions to influence consumer and investor behavior.
- ❑ **Quantitative Easing (QE):** during deflationary pressures, central banks may implement quantitative easing. This involves purchasing long-term government or private sector securities to further reduce long-term interest rates and increase the money supply.
- ❑ **Inflation Forecasts and Targets:** Central banks set explicit inflation targets (e.g., 2% annually) to guide their policy decisions.
- ❑ **Currency Intervention:** Central banks may intervene in foreign exchange markets to influence the value of their currency. A weaker currency can boost inflation by making imports more expensive, while a stronger currency can help reduce inflationary pressures.

The effectiveness of these instruments may vary based on the specific economic conditions and the responsiveness of various stakeholders in the economy. Central banks often use a combination of these tools to achieve their inflation targeting objectives.

Q. Explain short run Phillips Curve.

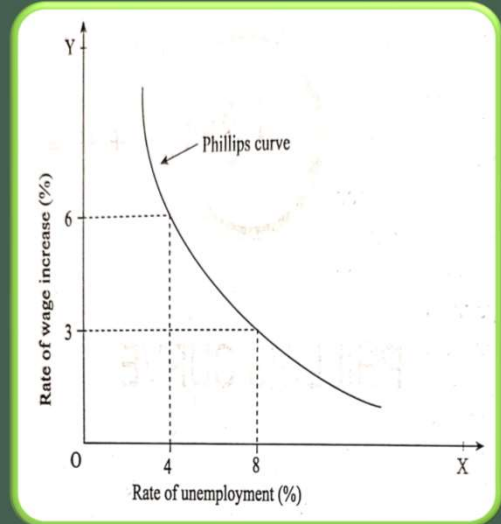
- ❑ Prof. A.W. Phillips introduced the Phillips curve, an empirical theory of inflation.
- ❑ In his article titled "The relation between unemployment and rate of change of money wages in the United Kingdom, 1861-1957," he demonstrated a correlation between the rate of wage increase and the rate of unemployment.
- ❑ By studying the economy, Prof. Phillips illustrated the connection between the percentage of wage increase and the percentage of unemployment using a curve he coined as the 'Phillips Curve.'



<https://upload.wikimedia.org>

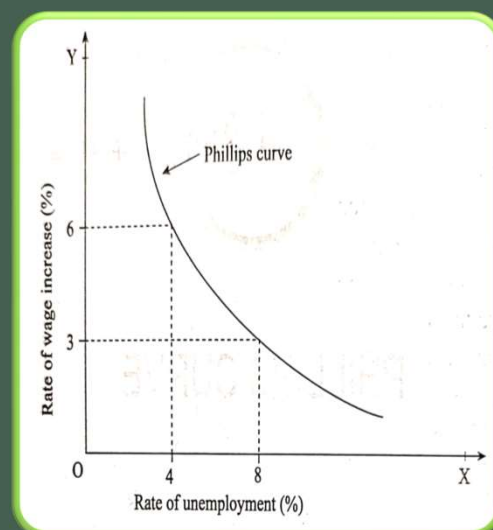
Shortrun Phillips Curve.

- In the given diagram, the **X-axis** represents the **rate of unemployment**, and the **Y-axis** represents the annual **rate of wage increase** or price.
- The Phillips curve illustrates **an inverse relationship** between the **rate of wage** increase and the rate of **unemployment**.
- **Example:** As the rate of wage increase decreases from **6% to 3%**, the rate of unemployment increases from **4% to 8%**, and vice versa.
- When the **unemployment level is very low**, there will be a **higher demand for labor**, leading to a **demand-pull effect on wages**, wage rates will be high.
- When **unemployment increases**, the rate of wage-increase will tend to diminish.



Short run Phillips Curve.

- ❖ **Decrease in unemployment** leads to **increase in the wage**.
- ❖ But when wage increases, the **firm cost of production increases** which leads to **increase in price** and therefore inflation i.e.
- ❖ Thus, assuming that the **price level changes** in accordance with the **wage rate**.
- ❖ Thus, follows that if we desire to have a lower rate of inflation, we must be prepared to accept a higher rate of unemployment. This is known as the **trade off dilemma**.



Q. Explain the long run Phillips Curve.

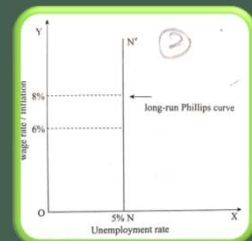
Long-run phenomenon, economists like Milton Friedman and E. S. Phelps have introduced the concept of "natural rate of unemployment".

The natural rate of unemployment is termed as the non- accelerating inflation rate of unemployment" (NAIRU).

In the long- run, the Phillips curve is vertical straight line intersecting the X-axis at a point of natural rate of unemployment.

which shows that the rate of inflation has no effect on unemployment.

It means that there is single rate of unemployment whatever the rate of inflation. (natural rate of unemployment).



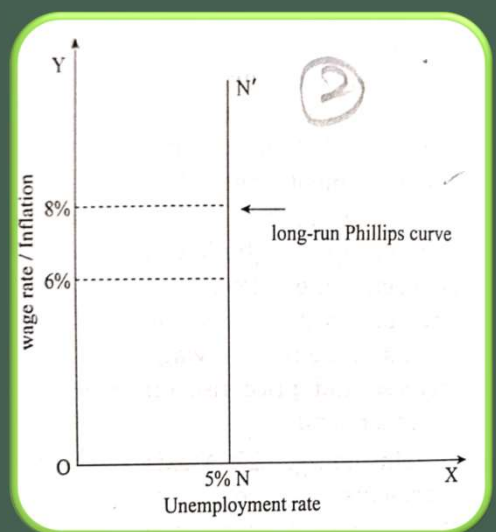
Suppose the economy currently experiences an unemployment rate of 5%. The government believes that this rate is too high and decides to implement expansionary fiscal and monetary policies to boost aggregate demand. As a result the unemployment rate decreases below 5%.

In the short run, more jobs are created, leading to increased bargaining power for workers who demand higher wages. This, in turn, causes production costs to rise, leading to higher prices in the economy. The increase in wage rates ultimately pushes the unemployment rate back to its original level of 5%.

In the long run, the Phillips curve takes the shape of a vertical straight line (NN) intersecting the X-axis at the point of the natural rate of unemployment. It Indicates that the economy **cannot achieve lower unemployment at the expense of higher inflation in the long run.**

Instead, the economy settles back to its natural rate of unemployment with higher prices and wage rates, but no change in the unemployment rate.

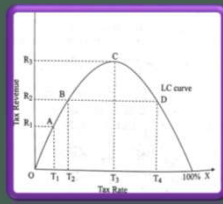
Long run Phillips Curve.



Q. Define Laffer curve to show the relationship between tax rate and tax revenue.

Ans:

Introduction: A supply-side economist, Arthur Laffer has shown the relationship between tax rates and tax revenue with the help of a curve called " " in the 1970s. .

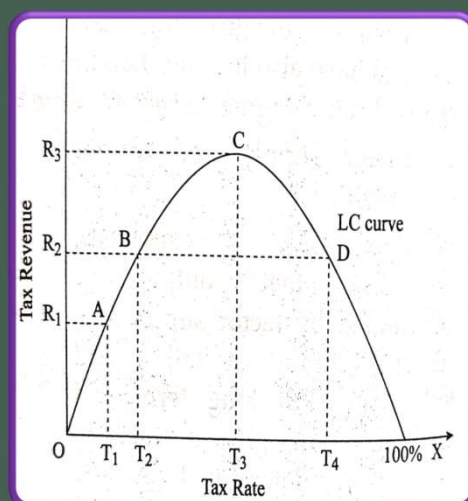


- ❖ The Laffer curve illustrates that raising tax rates can boost revenue up to a certain point but beyond a limit it decrease tax revenue.
- ❖ This occurs due to the negative impact on incentives for work, saving, and investment beyond that limit. As a result, there is a subsequent decline in national output and income.

<https://www.nytimes.com/>

Laffer curve

- ❑ The Laffer curve is a **bullet-shaped curve** which shows that the minimum and maximum points of tax rate yield zero revenue.
- ❑ **Tax rate** is measured on X-axis and **Tax revenue** is measured on Y-axis. The LC curve is the Laffer curve.
- ❑ The Laffer curve starts from the origin which shows that when the **tax rate is zero, tax revenue will also be zero**.
- ❑ In the diagram the Laffer curve is rising upto **point C** which shows that when tax rate increase upto **T3**, tax revenue also increases. But if the tax rate is increased beyond **T3**.
- ❑ Laffer curve slopes downward showing that tax revenue decreases. But when the tax rate increases to **100%**, tax revenue decreases **to zero**.

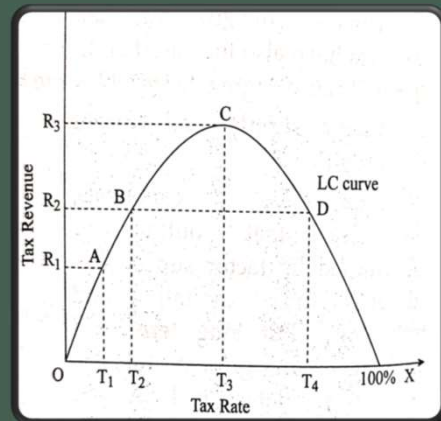


Laffer curve

For example: if tax rate increase from T_1 to T_2 , tax revenue also increase from R_1 to R_2 , when tax rates increase to T_3 , tax revenue increase to R_3 . But when tax rate increase beyond T_3 i.e. T_4 , tax revenue falls from R_3 to R_2 .

If the tax rates is increased to 100% then, the people will not have any incentives to work, save and invest and therefore tax revenue will reduce to zero.

As a result, national output, income and employment decrease and this proves disastrous for the economy.

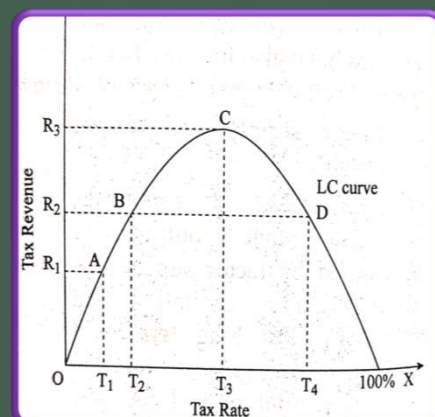


Laffer curve

Conclusion:

The Laffer curve is an important contribution of the supply-side economics. Supply side economists pointed out that lower tax rates will have dual effect:

1. The **lower tax rate** would increase tax compliance, further reduce tax evasion and other black market activities.
2. The **lower tax rate** will also reduce government transfer payments such as unemployment allowances, subsidies etc. and this will effects the economy.



Q. In a closed economy investment of Rs. 500 Cr. takes place. The marginal propensity to consume in this economy is of 0.60. What will be the national income in this economy? Calculate the investment multiplier. Show your working

Ans:

➤ calculate the national income and the investment multiplier, we can use the formula for the multiplier in a closed economy:

Multiplier (mm) = $1 / (1 - \text{marginal propensity to consume})$

Given that the marginal propensity to consume (MPC) is 0.60:

$$(mm) = 1 / (1 - 0.60) = 1 / 0.40 = 2.5$$

➤ Now, to find the national income, we'll use the formula:

National Income (Y) = Investment (I) x Multiplier

Given that the investment (I) is Rs. 500 Cr., and the multiplier is 2.5:

$$\text{National Income (Y)} = \text{Rs. 500 Cr.} \times 2.5 = \text{Rs. 1250 Cr.}$$

So, the national income in this economy will be Rs. 1250 Crores, and the investment multiplier is 2.5.

Home work:

Q. In a closed economy investment of Rs. 1000 Cr. takes place. The marginal propensity to consume in this economy is of $\frac{3}{4}$. What will be the national income in this economy? Calculate the investment multiplier. Show your working.

Q. In an economy new investment of RS. 2000 Cr takes place. MPC of this economy is 0.70. What will be this economy's national income? Calculate and show your working.

Reference:
Business Economics III.....Sheth Publishers

