

**Mona**

**Assistant Professor**

**Department of Economics**

**Maharaja Bahadur Ram Ranvijay Prasad Singh College**

**Veer Kunwar Singh University, Ara**

**B.A Economics**

**Sem- II**

**Paper - MDC-2**

**Topic- Quantity theory of money**

## **Quantity Theory of Money**

### **□ Introduction**

Irvin Fisher, an American economist in his well known book - The Purchasing Power of Money(1911) discussed the transaction version of the quantity theory of money. According to Fisher there is a direct and proposed relationship between Money supply and general price level. It means when money in circulation increases then the price level also increases proportionally ( other things remaining constant). And the value of money decreases ( $P= 1/v$ ) and vice versa.

### **Assumptions:**

- Constant velocity of money
- Price level is passive factor
- This theory is based on only one function of money i.e; Money acts as a medium of exchange. This theory ignores that money can be also used as a store of value.
- This theory is based on the assumption of a long period.
- Total volume of trade or transaction (T) is also assumed to be constant and it is not affected by changes in the quantity of money.

### **Equation of Exchange :**

The value of money and the price level is determined by the  $M_e$ (demand for money) and  $M_s$ (supply of money)

$$MV = PT$$

Where, **M= Quantity of money**

**V = transaction velocity of money**

**P= general price level**

**Y= Total transaction of goods and services (include both intermediate and finished goods)**

#### **Supply of Money (MV):**

The supply of money consists of the quantity of money in the economy (M) multiplied by the average number of times money circulate from one hand to another hand that is debited by V ( the transaction velocity of money)

Thus, MV refers to the total volume of money in circulation during a given period of time.

#### **Demand for money (PT):**

Demand for money is obtained by multiplying total transaction (T) by general price level (P)

Demand for money is equal to the total Market value of all goods and services transacted.

**Fisher's equation of exchange shows the equality between the supply of money (MS) and Demand for money (PT)**

$MV = PT$
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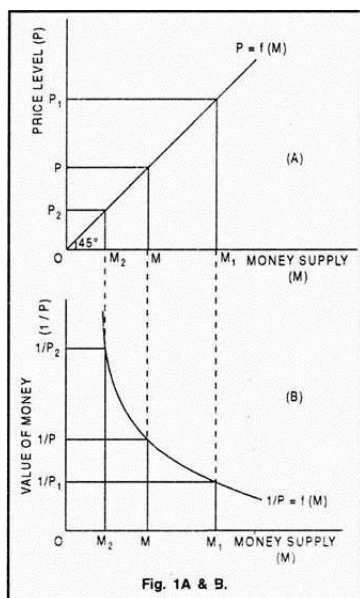
**or  $P = MV / T$**

Here, V ( transaction velocity of money) and T ( total transaction ) remain constant in the short run.therefore, if the quantity of money (M) increases in the economy it will cause a direct as well as proportional impact on the general price level..

**Example:** if quantity of money increases by 2 % then general level of price also increases by 2% and the value of money i.e;  $v = 1/P = \frac{1}{2} \%$

Fisher discussed a casual relationship between M and P.

## Graphical Presentation



(i) In Figure 1-A, when the money supply is doubled from  $OM$  to  $OM_1$ , the price level is also doubled from  $OP$  to  $OP_1$ . When the money supply is halved from  $OM$  to  $OM_2$ , the price level

is halved from  $OP$  to  $OP_2$ . Price curve,  $P = f(M)$ , is a  $45^\circ$  line showing a direct proportional relationship between the money supply and the price level.

(ii) In Figure 1-B, when the money supply is doubled from  $OM$  to  $OM_1$ ; the value of money money supply is halved from  $OM$  to  $OM_2$ , the value of money is doubled from  $O1/P$  to  $O1$

## Criticisms:

- This theory is based on the unrealistic assumption of Full employment.
- The assumption of Long run is also unrealistic.
- Static theory

- This theory does not discuss the concept of velocity of circulation of money, and the factors affecting it.
- It is a one -sided theory because it takes into concentration only the supply of money and its effects and assumes the demand for money to be constant.
- Keynes criticised this theory on the ground that there is no direct and Proportional relationship between quantity of money (M) and price level. A change in M influenced price indirectly through its effects on ROI, investment and output