

## • Cambridge Quantity Equation

According to Cambridge version, the value of money (or its ~~reverse~~ inverse, the price level) depends upon the demand for money and the supply of money. But money is demanded not for transactions but to serve as a store of value or to be kept as cash.

D. H. Robertson's equation which is a good example of Cambridge version of quantity theory is as follows:

$$M = PKT \text{ or } P = \frac{M}{KT} \text{ in which,}$$

P stands for price level (reverse of value of money)

T " for total amt. of goods & services

K " for the fractional part of T over which people wish to keep cash

Suppose that :

- (a) The current money supply in the form of cash and bank deposits ( $M$ ) = ₹ 1,000 crores
- (b) The annual national output ( $Y$  or  $T$ ) = 2,000 crore unit
- (c) The goods which the community wants to buy ( $K$ ) say  $[1/10 \text{ of } T] = 200$  crore units

Then,

$$\text{The value of 1 rupee} = \frac{200 \text{ crore unit}}{₹ 1,000 \text{ crores}}$$

$$= 0.2 \text{ unit of goods}$$

(Purchasing power of money)

$$\text{The price level, } P = \frac{₹ 1,000 \text{ crores}}{200 \text{ crore unit}}$$

$$= ₹ 5 \text{ per unit}$$

It will be clear that the purchasing power of money (or the value of money) is found out by dividing the total amt of goods which the community wants to hold out of total income ( $KY$ ) by the amt. of cash held by the public ( $M$ ). On the other hand, the price level is found out by dividing the money supply by the amt. of goods which the community wants to hold.

### Marshall's Equation

$$M = KPY, \text{ where}$$

$M$  is determined supply of money

$K$  is the fraction of real money income which people wish to hold in cash and demand deposit

$P$  is price level and  
 $Y$  is aggregate income of Community

### • Pigou's Equation

$$I \quad P = \frac{KR}{M} \quad \text{where,}$$

$P$  = Purchasing power of money or value of money (reciprocal of price level)

$K$  = the proportion of total real resources as income ( $R$ ) which people wish to hold in the form of fiat or legal tender

$R$  = is the total resources expressed (in terms of wheat or real income)

$M$  = No. of actual units of legal tender money

$$II \quad P = \frac{KR}{M} [c + h(1-c)] \quad \text{where,}$$

$c$  = is the proportion of total real income actually held by people in legal tender including token coins.

$(1-c)$  = is the proportion kept in bank notes & bank balances

$h$  = is the proportion of actual legal tender that bankers keep against the notes and balances held by the customer.

### • Keynes Equation

$$I \quad P = \frac{n}{K} \quad \text{where,}$$

$P$  = Price of the Consumption unit

$k$  = Real balance. It is measured as the amt of Consumption unit the Community prefers to hold in cash

$n$  = Quantity of money in circulation

II  $P = \frac{n}{k} + \eta k'$  where,

$\eta$  = cash reserve ratio i.e. the proportion of cash reserve maintain by banks against their deposits

$k'$  = Stand for the real bal. held in form of bank money.

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