Value of Money and Theories of Value of Money

Meaning of Value of Money:

By the term value of money we mean the purchasing power of money or its buying capacity. It refers to number of goods and services which a unit of money can buy. Therefore, the larger the amount of goods and services money can purchase, the greater will be the value of money and vice-versa. Value of money is a relative concept.

Definitions:

According to G. Crowther "the value of money is that what it will buy"

According to D. H. Robertson "the value of money means the amount things in general which will be given in exchange for a unit of money".

In the words of J. M. Keynes "money as such has no utility except what is derived from its exchange value that is to say, from the utility of the things which it can buy".

Value of Money & Price Level:

The concept value of money is closely related to the price of goods and services. Since money itself is used as a unit of account and as measure of value of all other things, its own value can be seen only through the price of other things. Thus, the value of money depends upon the prices of goods and services to be purchased with money. Therefore, value of money is a relative concept. The higher the price level the smaller will be purchasing power money and the lower the price level the greater will be the purchasing power of money. It implies that there exists inverse relationship between the price level and value of money. ∴ Symbolically, $V_m = \frac{1}{P}$. According to Irving Fisher "the purchasing power of money is the reciprocal of the level of prices so that the study of purchasing power of money is identically with the study of price level".

Theories of Value of Money:

There are two main approaches to study the determination of value of money. Viz.

1. Cash Transaction Approach
2. Cash Balance Approach

1. **Cash Transaction Approach (Quantity Theory of Money):** Quantity theory of money indeed is one of the oldest theories in the determination of value of money. It was for the first time propounded by an Italian Economist Davanzatti and Montanari in 1588. Later, classical economists like David Ricardo, David Hume, J. S. Mill, etc. have not only accepted this theory but also they made some refinements to this theory.

However, the credit of popularizing this theory in recent years belongs to the well-known American Economist Prof. Irving Fisher, who in his book 'Purchasing Power of Money' published in 1911 gave it a quantitative form with his famous equation MV = PT.

According to this theory, other things being equal, value of money varies inversely with quantity of money, i.e. the higher the quantity of money, the lower will be the value of money and vice-versa.

Definitions: According to J. S. Mill "Value of money, other things being equal, varies inversely as its quantity, every increase of quantity lowers the value and every diminution raising it in a ratio exactly equivalent".

According to Prof. Taussig "Double the quantity of money and other things being equal, price will be twice as high as before and value of money one-half. Halve the quantity of money and other things being equal price will be one-half what they were before and value of money doubles".

Basic Assumptions of the Theory:

The theory is based on the following fundamental assumptions.

- There exists full employment condition in the economy.
- Money is used only as a medium of exchange (i.e. only for transactions)
- There exists spot cash transaction.
- Value of money is related to a period of time.

Based on these basic assumptions Fisher has used the following quantity equation:

MV = PT

Where,

M = Quantity of Money

V = Velocity of circulation of money

T = Total volume of goods

P = Price level

Since value of money can be measured with the help of price level, the equation is

$$P = \frac{MV}{T}$$

To apply some numerical examples to the equation, e.g. M = Rs. 2000, V = 5, T = 1000 units

$$\therefore P = \frac{2000 \text{ X } 5}{1000} = \frac{10000}{1000} = 10$$

It implies that Rs. 10 = 1 unit

But value of money $\left(\frac{1}{P}\right) = \frac{1}{10} = 0.1 \text{ unit} = 1 \text{ Re.}$

Now suppose, quantity of money doubles and other things are equal, M = 4000, V = 5, T = 1000 units

$$\therefore P = \frac{4000 \text{ X } 5}{1000} = \frac{20000}{1000} = \text{Rs. } 20$$

$$\therefore \frac{1}{P} = \frac{1}{20} = .05 \text{unit} = 1 \text{ Re.}$$

Now suppose, quantity of money halves, and other things are equal, M = 1000, V = 5, T = 1000units

$$\therefore P = \frac{1000 \text{ X } 5}{1000} = \frac{5000}{1000} = \text{Rs. } 5$$

$$\therefore \frac{1}{P} = \frac{1}{5} = 0.2\text{unit} = 1 \text{ Re.}$$

In addition to the money in circulation, Bank Money also plays an important role in the total supply of money in any economy. Therefore, to add bank money in the total supply of money Fisher has made a little addition to his original equation. The new equation is

$$\frac{MV + M^1V^1}{T}$$

where,

M^1 = Quantity of Bank Money

V^1 = Velocity of Circulation of Bank Money

Now suppose M = Rs. 1000, M^1 = 500, V = 3, V^1 = 2, T = 4000units

$$\therefore \frac{MV + M^1V^1}{T}$$

$$P = \frac{(1000 \text{ X } 3) + (500 \text{ X } 2)}{4000}$$

$$= \frac{3000 + 1000}{4000} = \frac{4000}{4000} = \text{Re. } 1$$

$$\therefore VM = \left(\frac{1}{P}\right) = 1 \text{ unit} = \text{Re.} 1$$

Now suppose money supply doubles in the economy. M= 2000, M^1=1000, V = 3, V^1 = 2, T = 4000units

$$P = \frac{(2000 \text{ X } 3) + (1000 \text{ X } 3)}{4000}$$

$$= \frac{6000 + 2000}{4000} = \frac{8000}{4000} = \text{Rs. } 2$$

$$\therefore VM = \left(\frac{1}{2}\right) = 0.5 \text{ unit} = \text{Re.}1$$

Now suppose money supply decreases in the economy. M = Rs. 500. M^1=250. V = 3. V^1 = 2. T = 4000units

$$P = \frac{(500 \text{ X } 3)+(250 \text{ X } 2)}{4000}$$

$$= \frac{1500+500}{4000} = \frac{2000}{4000} = \text{Rs. } 0.5$$

$$\therefore VM = \left(\frac{1}{2}\right) = 2 \text{ unit} = \text{Re.}1$$

This theory can be explained with the help of following diagram.

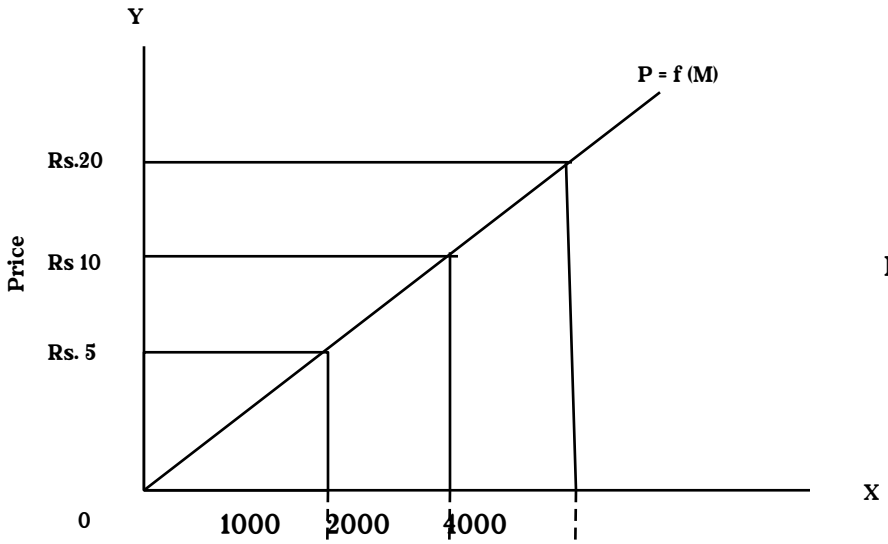

Fig. A

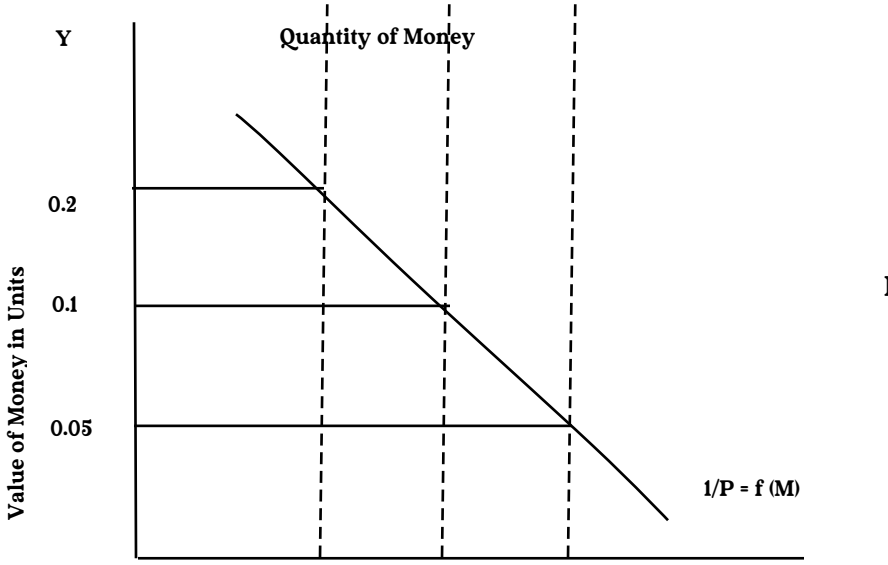

Fig. B

The fig. A shows that when the quantity of money supply increases, the price also increases. Therefore, the curve P= f (M) is upward slopping, which shows the direct relationship between quantity of money and price level.

The fig. B shows the relationship between money supply and the value of money. With the every increase in money supply, the value of money decreases and every decrease in money supply increases the value. The curve 1/P = f (M) is therefore downward slopping which indicates inverse relationship between the quantity of money and value of money.

Other Assumption of the Theory:

Fisher's Quantity Theory is based on the following assumptions:

1. In the short period V, V^1 & T remains constant.
2. The change in quantity of money (M) will not have much effect on the velocity of circulation of money.
3. The change in quantity of money (M) will not have much effect on the total turnover of goods (T).
4. Based on the assumption of full employment
5. Based on the assumption of 'other things remaining constant'
6. 'P' is a passive factor in the equation.
7. Money is used only for the transaction purpose.

Criticisms of the Quantity Theory of Money:

Fisher's Exchange Equation has been criticized vehemently by the modern economists like J. M. Keynes, Milton Friedman, etc., on the following grounds:

1. The assumption that in the short period V, V^1 and T remains constant has been criticized.
2. Fisher's Theory ignores the short period effects.

3. **Fisher's equation is merely a tautology.**
4. **There is no direct and proportionate relationship between money supply and the price level as assumed in Fisher's Theory.**
5. **The assumption of full employment is far from the reality.**
6. **The quantity theory is not comprehensive theory.**
7. **Quantity theory is mechanical and neglects human elements in the price level.**
8. **Quantity theory is incomplete because it is based on only one function of the money i.e. medium of exchange function.**
9. **The theory ignores the role of rate of interest as a determinant of price level. It is because when the money supply increases the rate of interest comes down.**
10. **It is difficult to measure the velocity of circulation of money in precise terms.**

Conclusion:

Though the quantity theory of money in the determination of value has been criticized by the modern economist on the basis of its unrealistic assumptions. it is one of the fundamental theories in determination of value of money. Here after. on the basis of this theory modern economist like J. M. Keynes. Milton Friedman. etc. have developed modern version of quantity theory of value of money.

Cash Balance Approach (Cambridge Equation):

Introduction: Cash transaction version was popular in the USA as it was pioneered by American Economist like Irving Fisher. But in Europe. particularly in England a slightly different approach was attempted by the Cambridge economist like Alfred Marshal. A. C. Pigou. D. H. Robertson and J. M. Keynes.

The approach is known as cash balance as it is based on the assumption of 'Store of Value Function of Money'. It is also known as Cambridge equation as it is developed by the Cambridge Universities Professor.

According to this theory the higher the cash balance with the people. the higher shall be value of money and vice-versa. which implies direct relationship between the cash balance (K) and the value of money and there is an inverse relationship between K & the price level.

Basic Assumption of the Theory:

1. According to cash balance approach value of money is determent by demand for and supply of money.
2. Demand for and supply of money is related to a point of time
3. Demand for money arises on account of 'Liquidity Preference' of the people. viz. a) Transaction Motive b) Precautionary Motive a c) Speculative Motive
4. Based on the assumption of store of value function of money

Marshall's Equation:

$$M = PKY \text{ or}$$

$$P = \frac{M}{KY}$$

where,

M = Quantity of Money

Y = Aggregate Real Income

K = Cash Balance with the people (Fraction of real income people would like to hold in liquid cash)

P = Price Level

eg.1. M = Rs. 500, Y = 10,000 units, K = 1/10 , P = ?

$$\therefore P = M/KY = \frac{\text{Rs. } 500}{\frac{1}{10} \text{ X } 10{,}000} = 500/1000 = ½$$

i.e. Re. 0.50 = 1 unit

1/P (Value) = KY/M = 1000/500 = 2Units = Re. 1

eg. 2. Suppose cash balance with the people (K) increases to 1/5

$$\therefore P \frac{\text{Rs. } 500}{\frac{1}{5} \text{ X } 10{,}000} = 500/2000 = ¼$$

i.e. Re 0.25 = 1 unit

1/P (Value) = KY/M = 2000/500 = 4 units = Re. 1

eg. 3. Now suppose cash balance with the people (K) decreases to 1/20

$$\therefore P = M/KY = \frac{\text{Rs. } 500}{\frac{1}{20} \text{ X } 10{,}000} = 500/500 = 1$$

i.e. Re. 1 = 1 unit

1/P (Value) = KY/M = 500/500 = 1 Units = Re. 1

2. **A. C. Pigou's Equation:** According to A. C. Pigou also the cash balance with the people determines the value of money.

   His equation is $P = \frac{KR}{M}$

Where.

P= Purchasing power of money (Value of Money)

R= Aggregate Real Income in terms of commodity

K= Proportion of real income people desired to hold with them (Cash balance

M= Quantity of Money

Pigou makes 2 statements in connection with the value of money:

a) **Value of money (P) varies directly with the cash balance (K)**

b) $\frac{1}{P}$ **(price) varies inversely with K**

eg. to examine these statements:

M=Rs. 2500, R=10000Units, K=1/50, 1/20, 1/10, 1/5

Eg. 1. $\therefore P = \frac{\frac{1}{50} \times 10000}{\text{Rs. } 2500} = \frac{200}{2500} = 0.08$

$1/P(\text{Price}) = \frac{2500}{200} = \text{Rs. } 12.50 = 1 \text{ unit}$

Eg. 2. $\therefore P = \frac{\frac{1}{20} \text{ X } 10000}{\text{Rs. } 2500} = \frac{500}{2500} = 0.2$

$1/P(\text{Price}) = \frac{2500}{500} = \text{Rs. } 5 = 1 \text{ unit}$

Eg. 3. $\therefore P = \frac{\frac{1}{10} \text{ X } 10000}{\text{Rs. } 2500} = \frac{1000}{2500} = 0.4$

$1/P(\text{Price}) = \frac{2500}{1000} = \text{Rs. } 2.50 = 1 \text{ unit}$

Eg. 4. $\therefore P = \frac{\frac{1}{5} \text{ X } 10000}{\text{Rs. } 2500} = \frac{2000}{2500} = 0.8$

$1/P(\text{Price}) = \frac{2500}{2000} = \text{Rs. } 1.25 = 1 \text{ unit}$

$\therefore K\updownarrow$ -- Value of money increases

$\therefore$ 1/50 1/20 1/10 1/5

Vm = 0.08 0.2 0.4 0.8

$\therefore K\updownarrow$ -- $\downarrow P$ (Price Level)

$\therefore$ 1/50 1/20 1/10 1/5

Rs. 12.50 Rs. 5 Rs. 2.50 Rs. 1.25

It should be noted that money is held by the community not merely in terms of hard cash but also in terms of bank deposits. In order to include such bank deposits Prof. Pigou has made little addition to its original equation.

$$\therefore P = \frac{KR}{M}\{C+h\ (1-C)\}$$

Where,

C= Proportion of money which public keeps in the form of legal tender money

(1-C) = Proportion of money that community keeps in the form of bank deposits

h = Proportion of cash reserves to deposits held in the banks.

Robertson's Equation:

Robertson's cash balance equation is similar to Marshall's equation and also resembles with Pigou's equation. According Robertson 'the higher the cash balance with the people the higher will be the value of money & vice-versa. His equation is M = PKT

$$\therefore P = \frac{M}{KT}$$

where,

P = Price level

M = Money supply

T = Total amount of goods & services (Aggregate real income)

K = Portion of T (Cash balance with the people)

Eg.: M = Rs. 2000, T = 500 units, K = 1/5, 1/10, 1/25

Eg. 1. $\therefore P = \frac{\text{Rs. 2000}}{\frac{1}{5} \text{ X } 500} = \frac{\text{Rs. 2000}}{100} = \text{Rs. 20}$

$\therefore \frac{1}{P} = \frac{100}{\text{Rs. 2000}} = \frac{1}{20}$ units = 1Re

Eg. 2. $\therefore P = \frac{\text{Rs. 2000}}{\frac{1}{10} \text{ X } 500} = \frac{\text{Rs. 2000}}{50} = \text{Rs. 40}$

$\therefore \frac{1}{P} = \frac{50}{\text{Rs. 2000}} = \frac{1}{40}$ units = 1Re

Eg. 3. $\therefore P = \frac{\text{Rs. 2000}}{\frac{1}{25} \text{ X } 500} = \frac{\text{Rs. 2000}}{20} = \text{Rs. 100}$

$\therefore \frac{1}{P} = \frac{20}{\text{Rs. 2000}} = \frac{1}{100}$ units = 1Re

Keynes equation:

It is also known as 'Real Balance Equation'. In his book "A Tract on Monetary Reforms" Keynes has given the following equation:

$$n = PK \quad \text{or} \quad P = \frac{n}{K}$$

where,

n(eta) = Supply of Money

P = Price Level

K = Cash balance with the people

Eg. 1 Suppose, n = Rs. 1000, K = 200

$$\therefore P = \frac{1000}{200} = \text{Rs. } 5$$

$$\frac{1}{P} = \frac{200}{1000} = \frac{1}{5} \text{ unit} = 1\text{Re}$$

Eg. 2 Suppose, K increases Rs. 400, other things being equal

$$\therefore P = \frac{1000}{400} = \text{Rs. } 2.5$$

$$\frac{1}{P} = \frac{400}{1000} = \frac{1}{2.5} = 0.4 \text{ unit} = 1\text{Re}$$

Eg. 3 Suppose, K increases to Rs. 100, other things being equal

$$\therefore P = \frac{1000}{100} = \text{Rs. } 10$$

$$\frac{1}{P} = \frac{100}{1000} = \frac{1}{10} = 0.10 \text{ unit} = 1\text{Re}$$

Keynes has extended his equation to include bank deposits in total money supply. The extended equation is $n = P(K + rK')$ or $P = \frac{n}{K+rK'}$

where,

r = Cash reserve ratio of banks against the public deposits

K' = Bank deposits of the public

Merits of Keynes Equation:

The 'real balance' equation of J. M. Keynes contains twin merits.

1. **The demand for money in a country according to Keynes does not depend upon the**

total quantity of goods & services produced within the country but it is determined by 'propensity to hold cash' of the community.

2. Price level in the country depend upon the consumption habit of the people.

Criticisms of Keynes Equation:

1. In Keynesian equation 'P' indicates the price level of consumption goods only. Therefore it gives partial explanation of value of money. It should also include capital goods and investment goods.

2. Keynes assumed that people demand money to secure consumption goods only. But demand for money by the community arises on account of multiplicity of business. personal commitments. etc. In his General Theory he gives three motives for demand for money viz. transaction motive. precautionary motive and speculative motive.

3. Keynes assumed that K. K' and r remains constant in the short period and that there exists direct and proportionate relationship between the supply of money and price level.

4. It is not possible to have an accurate measurement of K & K'

5. No place has been accorded to the velocity of circulation of money (V) in Keynes equation.

6. Keynes considered current consumption only. But money may be saved and can be used in the future period.

7. Keynes has not considered the effect of 'bank rate' on K'.

Comparison between Fisher's Equation & Cambridge Equation:

There are many similarities and dissimilarities between these two approaches of value of money.

Similarities:

1. Both the approaches concludes the same thing i.e. value of money depends upon the quantity of money in supply.

2. MV + M'V' of Fisher's equation. M of Robertson's. Marshall. Pigou and n of Keynes

equation refers to the same thing i.e. supply of money

3. The cash equation of Robertson (M = PKT) closely resembles with Fisher's equation MV = PT

4. Both the approaches are not fundamentally different.

Dissimilarities:

Fisher's Equation	Cambridge Equation
1. Developed by Irving Fisher	1. Developed by Cambridge Economist like Marshal. Pigou. Robertson and Keynes
2. Popular in the USA	2. Popular in the UK
3. Based on medium of exchange function of money	3. Based on the store of value function of money
4. Money is demanded for transaction purpose	4. Money is demanded for storing purpose
5. M & V are important factors	5. K is an important factor
6. V is reciprocal of K (i.e. V=1/K)	6. K is reciprocal of V (i.e. K=1/V)
7. Mechanical in nature	7. Realistic in nature
8. One sided approach	8. Balanced approach
9. Related to a period of time	9. Related to a point of time
10. Long period approach	10. Short period approach

Measurement of Value of Money (Index Numbers):

The value of money does not remain constant over a period of time. It rises or falls and is inversely related to the changes in the price level. Arising price level lowers the value of money and vice-versa. Therefore changes in value of money are reflected by the changes in the general price level over a period of time.

Change in the general price level is measured by a statistical device known as 'Index Numbers'. Index number is a device to measure changes in the level of any economic

phenomena. It may be change in price level, production, wages, national income, etc.

However, price index numbers indicates the changes in price level over a period of time. Price index number is used to measure changes in the value of money.

According L. V. Lester "An index number of prices is a figure showing the height of average prices at one time relative to their height at some other time which is taken as the base period".

Features of Index Numbers:

1. Index numbers are a special type average – It shows the relative height of prices from the base year to current year.
2. Index numbers are meant to study the changes in the effects of such factors which cannot be measured directly.
3. The technique of index number measures changes in one variable or a group of related variables.
4. The technique of index number is used to compare the level of a phenomenon of two periods.

Type of Index Numbers:

1. General Purpose Index Number: This type of index number is constructed to measure the changes in general price level and the purchasing power of money in general. The construction of this type of index number is rather difficult and cumbersome as it includes the prices of all commodities produce in a country over a period of time. Therefore, it is considered as 'hotchpotch' index.
2. Wholesale price index number: It is constructed on the basis of the wholesale prices of certain important commodities exchange in the wholesale market. It includes mainly raw materials, semi-finished goods, finished products, etc. Therefore it does not indicate the comprehensive picture of the economy.
3. Retail price index number: This index number is prepared to measure the changes in the value of money on the basis of retail prices of the final good available in the retail market. But retail price fluctuates very often.

4. **Cost of leaving index number: This type index number is constructed with reference the important goods and services which are consumed by general public. It indicates cost of leaving of an area.**

5. **Working class cost of index number: It aims at measuring the changes in the cost of leaving of workers community in an economy. Goods and services used by the workers are taken into consideration while preparing this type of index number.**

6. **Consumer Price Index Number (CPIN): It reflects the changes in price of consumption goods. While constructing this type of index number price of the consumer goods between the base year and the current year will be taken into consideration.**

7. **Wage Index Number: It is constructed to measure the average changes in the wage rate of workers in a country. It indicates the 'real wage' of the workers.**

8. **Industrial Index Number: This type of index number is constructed to measure the changes in industrial base in a country. It reflects changes in the total volume of industrial production over a period of time.**

Steps in the construction of Price Index Number(How to construct Price Index?):

An Index Number is a figure showing the height of average prices at one time relative to their height at some other time that is taken as a base year. The construction of index number involves the following steps:

1. **Selection of the base year: The base year is that year with reference to which changes in the price level are measured. Base year should be normal one. If the previous year is taken as a base year, such index number is known as the 'Chain Index Number'.**

2. **Selection of the Commodities: While selecting commodities, we have to choose those commodities which are in current demand in the market. It should be representative of taste and habits of all consumers in the market. Commodity should be commonly used by the people for consumption.**

3. **Selection of Price Data: Price data of the selected commodities both in the base year and current is essential requirement in the construction of price index number. Data should be comprehensive, accurate and systematic. It should be collected from the reliable and authentic sources like CSO, NSSO, Census Department, etc.**

4. **Average in the Price of the base year:** That is average in the price of both the base year and the current year by using simple arithmetic methods. Base year price will be reduced to a common denominator of 100.

5. **Calculation of price relatives:** It is nothing but percentage variation in the price of commodities in relation to price of the base year. Price relative is calculated by using the formula

$$I = \frac{P_1}{P_0} X\ 100$$

$$\text{i.e., Price Relatives} = \frac{\text{Price of commodity X in the current year}}{\text{Price of commodity X in the base year}} X\ 100$$

6. **Assigning the weights:** Assigning weights refers to giving preference or priority to the selected commodities. It is helpful while preparing weighted index number.

7. **Selection of the methods:** For construction of index number there are three important methods viz., Arithmetic Method, Harmonic Method & Geometric Method. Any one of these three methods can be used for the construction of index number or all the three methods can be used. However, it depends upon the discretion of the analyst.

8. **Obtaining Index Number of Prices:** While obtaining price index number the summation of price relatives to be divided by the total number of commodities used in the index number. Symbolically, $\text{Price Index Number} = \frac{\in I}{N}$

   where,

   $\in$ = Sum or total

   I = Price Relatives

   N = Number of Commodities

Illustration of Construction of Simple Price Index Number(CPIN)

A hypothetical case of Simple Price Index Number may be constructed by taking an example of five different consumer goods viz. Rice, Cloth, Edible Oil, Fruits, and Milk. Its

price in the base year is Rs. 10, Rs. 15, Rs. 20, Rs. 25 and Rs. 30 respectively.

Commodity	Price of the Base Year (P0)	Price in the Current Year (P1)	Price relative $I = \frac{P_1}{P_0} X\ 100$
1. Rice	10 = 100	20 = 200	$\frac{20}{10} X100 = 200$
2. Cloth	15 = 100	45 = 300	$\frac{45}{15} X100 = 300$
3. Edible Oil	20 = 100	80 = 400	$\frac{80}{20} X100 = 400$
4. Fruits	25 = 100	100 = 400	$\frac{100}{25} X100 = 400$
5. Milk	30 = 100	90 = 300	$\frac{90}{30} X100 = 300$
N = 5	$\frac{500}{5} = 100$	1600	1600

$$\therefore \text{Index number} = \frac{\sum I}{N} = \frac{1600}{5} = 320$$

It implies that price of the selected consumer goods increased by 3.2 times from the base year to the current year, as Index Number of the base year increased from 100 to 320.

Weighted Index Number:

Index number constructed by assigning certain weight or importance to the selected commodities from the consumption point of view is known as Weighted Index Number.

Suppose, as per the previous example Rice, Cloth, Edible Oil, Fruits and Mils are the selected commodities and weight assigned to these commodities is 5, 4, 3, 2, and 1 respectively.

$$\text{Weighted Index Number} = \frac{\sum IW}{NW}$$

Where,

$\sum IW$ = Sum of Weighted Price Relatives

NW = Number of Weight

Commodity	Weight	Base year Price (P_0) in Rs.	Base year Index (PR X W = WPR)	Current Year Price in Rs.	P_1 / P_0 X 100	Current Year Index PR X W = WPR
Rice	5	10=100	100X 5=500	20	20/10X100=200	200X5=1000
Cloth	4	15=100	100X4=400	45	45/15X100=300	300X4=1200
Oil	3	20=100	100X3=300	80	80/20X100=400	400X3=1200
Fruits	2	25=100	100X2=200	100	100/25X100=400	400X2=800
Milk	1	30=100	100X1=100	90	90/30X100=300	300X1=300
	∑w=15		∑Iw=1500/15=100			∑Iw=4500 / 15=300

It implies that weighted index number increased from 100 to 300 from the base year to current year. Price Level increased by 3 times from the base year to current year.

Difficulties in the construction of Index Number: Construction of index number is not so easy task. There are number of conceptual as well as practical difficulties in the construction of index number

I. Conceptual Difficulties:

1. Vague concept of value of money: The concept of value of money is vague. abstract and cannot be clearly defined. It is a relative concept therefore it cannot be measured accurately.

2. In accurate measurement: A rise or fall in the general price level as indicated by price index number does not mean that price of every commodity has risen or fallen to the same extent. e.g. Price of agriculture goods increased by 50% and price of industrial goods decreased by 50%. In the averaging system there is no any change in the price level as this illustration.

3. Reflects only general changes: Price index numbers are a special type of average and measures only general changes in the value of money. Therefore they are not of much significance for a particular individual.

II. Practical difficulties:

1. Problem of selection of the base year: The base year should be normal year as

per the guidelines of preparation of index number. But it is very difficult to find out fully a normal year in any country.

2. **Problem of selection of commodities: With the lacks of time quality of commodities undergo change. Similarly, the relative importance of goods and services also undergo change. Hence, it is difficult to select the same commodity in the base year and current year.**

3. **Difficulty in collection of price data: It is very difficult to collect accurate and authentic data from the reliable institutions. Lack of institutions creates problems in the collection of data.**

4. **Problem of assigning weights: As there is no hard and fast rule to give weight to the commodities, weights are decided on arbitrary basis by the analyst.**

5. **Problem of selection of methods of averaging: There are three alternative methods for averaging the given data viz. arithmetic averaging, harmonic averaging and geometric averaging. Therefore, Prof. Marshall advocates 'chain index number'.**

III.