6 Money and Functions of Money

Money is one of the most fundamental inventions made by man. It is the pivot around which the economic science revolves. It regulates the whole of the commercial side of man's social existence. Since the primitive times, man has remained engaged in the exchange of goods he needed more with goods he needed less. Anything through the medium of which goods, services and all other assets get exchanged, is treated as money. In the present chapter, we shall discuss the evolution, definitions, functions and significance of money.

1. BARTER EXCHANGE

Since the earliest times, man could recognise that the maximisation of his satisfaction required exchange of goods and services between different individuals and social groups. They relied upon exchanging goods for goods. The direct exchange of one good for some quantity of another good is termed as the barter exchange. One person producing wheat could give over surplus quantity of it in order to get back cotton, rice, oil, fruit and vegetables from the other persons. One person may give over two cows and get one horse in exchange. A tailor or cobbler pay for the services of a physician in term of shirt or shoes respectively. Thus barter exchange involved exchange of goods for goods, goods for services or services for services. In the words of **Jevons**, "Barter is the exchange of comparatively superfluous with comparatively necessary." In the case of barter exchange, single transaction involves both buying and selling activity at the same time.

The system of barter exchange has several merits. *Firstly*, this system is simple. It does not involve the complexities of the modern monetary system. *Secondly*, since goods are exchanged with goods, the problem of over-production or under-production can not arise under this system. *Thirdly*, there can be ideal or optimum utilisation of both personal and natural resources. Therefore, no wastage of resources occurs under the barter system. *Fourthly*, the system of barter exchange ensures division of labour and self-sufficiency in the society. *Fifthly*, under barter system, all the individuals exhaust their surplus produce. Consequently, there can be no accumulation or shortage of goods or assets. It implies that there can not be concentration of wealth or economic power in the hands of a few persons. *Sixthly*, this sytem is very suitable in the field of international trade. The problems like balance of payments deficit and foreign exchange crisis can not exist under the barter exchange.

2. PROBLEMS IN BARTER EXCHANGE

The system of barter exchange involving direct exchanges of goods and services was highly inconvenient. It involved several problems or difficulties because of which it was eventually abandoned.

(i) Lack of double coincidence of wants : The barter exchange can be possible only if the commodity required by one person is available with another person and the commodity required by the latter is available with the former. For instance, person A requires shoes but these are not available with person B, who possesses cloth. Shoes are available with person C but he is not willing to exchange them with rice possessed by person A. Thus there is lack of double coincidence of wants among these persons. Consequently, barter exchange among then is not possible. In the absence of the double coincidence of wants, either a person will have to wait for long periods of time to become able to make transactions

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or alternatively he will have to go through a series of unnecessary intermediary transactions to have finally the commodity required by him.

(ii) Lack of common measure of value : Even if there is double coincidence of wants among the transactors, a serious problem arises in the barter exchange that there is lack of a common measure of value. In case of each commodity, the exchange rate is expressed in terms of the quantities of all other commodities. In the absence of a common measure of value, the rate of exchange is likely to be fixed in an arbitrary manner and one party involved in exchange will be at some disadvantage. In a system, suppose there are 1,000 commodities, the exchange rates between them or prices will be expressed in terms of remaining 999 goods. The number of exchange rates for each commodity will be mind-boggling 4,99,500. For computing it, J.M. Culburston[1] gave the following formula :

$$R = \frac{n(n-1)}{2}$$

where R = Number of exchange rates or prices

and n = Number of commodities to be exchanged.

In the above illustration, we shall have

$$R = \frac{n(n-1)}{2} = \frac{1000(1000-1)}{2}$$

$$= 500 \times 999$$

$$R = 4{,}99{,}500$$

Given such complexity, the evaluation of a specific good is extremely difficult. In contrast, if there is a common measure of value of money, there are 1000 commodities including money as one of the commodities. In this case, the number of exchange rates on prices will be

$$R = (n-1) = 1000 - 1 = 999$$

It means there will be 999 prices for the 999 commodities in the economic system. Thus the use of money as a common measure of value makes the exchange convenient, exact and less costly.

(iii) Problem of divisibility : Some of the goods in the economic system are indivisible. Under the barter system, the problem can arise in determining the rate of exchange in case of such goods. Suppose a tailor, having a suit, wants to exchange it with bread. Unless suit is sub-divided into smaller parts, the exchange will not take place. But suit being indivisible, the problem will arise in barter exchange.

(iv) Problem in storing wealth : A serious problem in the barter exchange is that the assets or wealth are difficult to be stored. Before the advent of money, the exchange used to take place in terms of such goods as wheat, rice, fruit, vegetables, sheep, goats, cows, horses etc. Most of agricultural produce and animals being perishable, their storage was difficult. Another difficulty arose on account of fluctuations in their values. In addition, the storage of agricultural goods and animals involved heavy cost and much space. Those assets could not act as a store of value for future use.

(v) Difficulty in transportation : Under the barter system, the exchange of goods takes place with other goods. In this connection, it may be pointed out that goods like wheat, rice, cotton, oil etc. were bulky and their transportation to other places for exchange was difficult and quite expensive. The same problem was faced in case of herds of sheep, goats, horses, cows etc. Such problems or inconveniences donot exist in case of money.

(vi) Difficulty in deferred payment : In the system of money exchange, many contracts involve the deferred or future payments. Under the barter system, since exchange takes place through goods, the future or deferred payments are not possible. According to Chandler[2], the parties donot agree to deferred or delayed payments for three reasons. *First*, there would be disagreement between the two parties regarding the quality of goods or services to be repaid in future. *Second*, the two parties may have disagreement about the specific commodity to be used for repayment. *Third*, both the parties would be faced with the risk that the commodities to be repaid might increase or decrease in value over the period of contract. Thus serious problems are present in determining the most appropriate payments involving future contracts under barter exchange.

(vii) Lack of market information : The transactions between two parties require information about who offers a particular commodity, who desires

1. J.M. Culbertson : *Money and Banking* (1972).
2. L.V. Chandler : *The Economics of Money and Banking* (1977), P.4.

to buy it, what is the desired quantity, what is quantity of that commodity offered for transaction, what is the quality of the goods to be exchanged and what is the rate of exchange of the commodities. There is generally a lack of such information. This problem would reduce the number of transactions and restrict the size of market.

(viii) Lack of specialisation : In case of the barter system, each person is likely is produce small quantities of a number of commodities so that he or his family is economically self-sufficient. In addition, the possession of a number of commodities can enable him to make barter exchanges more easily. Thus specialisation in production does not exist and each producer produces the commodities on a small scale and attempts to exchange them locally.

The problems or difficulties involved in barter system led to the evolution of money.

3. EVOLUTION OF MONEY

Although origin of money is lost in antiquity, yet man required at every stage of human development something for facilitating transactions with other human beings in the society for the maximisation of his well-being. Over the different stages of the development of civilisation, money or the medium of exchange took the different forms which are discussed below :

1. Commodity money : In the earliest stage of human development, man was generally engaged in the hunting activity and relied upon the exchange through such commodities as bows, arrows, axes, animal skins, furs etc. The next stage of social development was the pastoral stage in which people were engaged in grazing different types of animals. The exchanges between people involved the animals like goats, sheep, cows, bulls, buffaloes and other animals. The pastoral stage was followed by the development of agriculture. People started growing different crops and exchanges involved such commodities as wheat, rice, tea, cotton, cloth, vegetables, fruit etc.

When animals and commodities were used as money or the medium of exchange, the exchanges involved several defects : (*i*) All animals and commodities were not alike or uniform in quality. (*ii*) Supply of these commodities was uncertain. There were abrupt changes in their supplies. (*iii*) These commodities and animals were difficult to be stored. (*iv*) They were largely perishable. (*v*) There was difficulty in their sub-division. (*vi*) The portability of commodities and animals was difficult and quite expensive. In view of such problems, they were subsequently replaced with the metallic money.

2. Metallic Money : As society moved from the pastoral and agricultural stages to the stage of commercial development, metals like gold, silver, copper etc. were used as the means of exchange or money in several countries. However, the use of metallic money also had some shortcomings. (*i*) There were often qualitative differences in metals. (*ii*) The metallic money was expensive. (*iii*) Since the metallic money was heavy, its portability from one place to another was difficult. (*iv*) Since metals were precious, it was allways inconvenient and unsafe to make transactions through them. There was the fear of metallic money to get lost or stolen. (*v*) Metals involved double coincidence of wants. The quick transactions through them were not possible. (*vi*) In view of scarcity of metals, it was difficult to adjust the supply of mettalic money according to the requirements of the nation.

3. Coinage : The next stage in the evolution was the discovery of coinage. The coins were minted originally by the merchants. The task was subsequently taken over by the governments in most of the countries. The coins were minted out of gold, silver, copper and some other base metals from time to time. Such coins initially used to be the full-bodied coins. Their face value was equal to their intrinsic value (value of the metal content). The exchange through metal coins could remove many of the problem associated with barter. The use of coins for exchange greatly increased the acceptability of this form of money. It became possible to make even the transactions of smaller denominations. The metal coins proved to be a much more convenient means of exchange. However, the use of metal coins, in course of time, resulted in certain problems or difficulties. (*i*) As gold and silver coins were precious, the people developed a tendency to hoard them. (*ii*) There was many often a lack of uniformity of coins. (*iii*) The dishonest people in the course of time started melting and debasing the coins. (*iv*) When coins were made of gold and silver, there used to be often the scarcity of such coins. (*v*) Since coins had quite high value, it was unsafe and inconvenient to

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carry them upto distant places. (*vi*) The variations in the prices of metals created much instability in the values of coins. (*vii*) After base metals like copper, zinc, tin, iron etc. were used for coinage, the face values of the coins became invariably greater than their intrinsic values.

4. Paper Money : The metallic money and coins of gold and silver involved the problems of portability and safety apart from being expensive. People started keeping their gold and gold coins with the goldsmiths for safe-keeping. The goldsmiths, in return, used to issue receipts to the depositors to return the gold on demand. These receipts came to be used by the people for buying commodities. The receipts of goldsmiths thus acted as substitutes for money. These were backed by gold and were convertible into gold on demand. That led to the development of paper money. The paper money first of all came to be used in China in 807 A.D. Subsequently, the central banks and governments in several countries started issuing notes made of paper. The paper money has many merits of cheapness, easy convertibility into gold or silver and easy portability from one place to another. In addition, the supply of paper money can be easily varied according to requirements.

5. Credit money : With the development of trade, commerce and banking and credit institutions, a highly significant innovation took place. It was the development of credit money. A large part of transactions in a country today take place through the use of credit instruments like cheques, bank drafts, bills of exchange etc. rather than money proper or cash (notes and coins). The growth of structure of financial institutions and diversification of assets has led to the use of treasury bills, bonds, debentures, equities, saving certificates etc. as the money-substitutes or *near-money* assets. During the recent times with development of electronic systems, the electronic monetary transfers from bank to bank, from bank to individuals and from individuals to individuals have materialised. This is certainty a revolutionary development in the long process of the evolution of money.

4. MEANING OF MONEY

The most fundamental question about money – what money is, resulted in a lot of controversy among economists. There are two main approaches to the definition of money–the functional approach and the empirical approach.

1. Functional Approach : The functional or conventional approach to the definition of money views money from the angle of the functions that money performs in an economic system. **F.A. Walker** said, "Money is what money does." This definition is too wide and not clear as money performs diverse functions in an economy. In this connection, **George Ranlett** remarked, "Money is anything that is spendable and is defined as the unit of account."[3]

The spendability of money means that money is the medium through which goods, assets and services are bought and sold, *i.e.*, money acts as the medium of exchange. The spendability of money requires that it should be generally acceptable as a means of payment. Money as the unit of account means that businessmen maintain accounts related to all exchanges in terms of money. In other words, the evaluation of all goods, services, assets and libilities is made in terms of money. For instance, all transactions in India are made in terms of rupees and it is also a unit of account. The essential requirement for money to act as a unit of account is that the value of a unit of money should remain fixed or unvarying. The writers like Robertson, Cole, Hawthorne, Richard Ely and J.R. Hicks defined money on the basis of different functions of money. **Scitovsky** too, while recognising the difficulty in defining money, stressed upon the functions of money as they provide the criterion of moneyness or liquidity to money. In his words, "Money is difficult to define, partly because it fulfils not one but three functions, each of them providing a criterion of moneyness .... Those of a unit of account, a medium of exchange, and a store of value."[4]

2. Empirical Approach : The functional approach to money was often wide and it failed to specify what should precisely be regarded as money. A large number of economists adopted the empirical approach to determine what money is. In this approach, the emphasis is upon investigating what should be included in the supply of money.

In the empirical approach, one viewpoint is held by the writers like E. Feige and R. Teigen. These

3. G. Ranlett : *Money and Banking* (1965), P.5.
4. T. Scitovosky : *Money and Balance of Payments* (1969).

writers interpret money in the traditional sense that it is constituted by currency in the hands of public *plus* demand deposits. This viewpoint is generally regarded as too narrow and clearly inadequate. It does not consider time deposits of commercial banks and the liabilities of the non-bank financial institutions as the components of money stock.

The second viewpoint is held by the writers like Milton Friedman, Schwartz and Meiselman. According to them, money is constituted by currency, demand deposits and time deposits of commercial banks. The crucial issue in this view point was that time deposits and demand deposits have close substitutability between them. They maintained that there is *high correlation between income and the money stock*–inclusive of demand deposits and time deposits. In addition, there is relatively timeless and costless ease in converting time deposits into the demand deposits. Several empirical studies attempted to determine the substitutability between time deposits and demand deposits on the basis of *cross elasticity* of demand. A high degree of positive cross elasticity of demand between these two types of assets can suggest that time deposits are substitutable with the demand deposits. However, the studies made by Feige and T.H. Lee found negative cross elasticity of demand between the demand and time deposits. Therefore, they did not accept the validity of inclusion of time deposits in the stock of money.

The third viewpoint about money was held by Gurley and Shaw. According to them, money stock should be comprised of currency with the public, demand and time deposits of commerical banks and liabilities of the non-bank financial institutions. J.G. Gurley suggested that the moey stock may be defined as a *weighted sum of currency, demand deposits, time deposits and liabilities of non-bank financial institutions*, with weights assigned to them on the basis of the degree of their substitutability. V.K. Chetty assigned a weight of unity for time deposits, of 0·88 for saving bank deposits and of 0·615 for saving and loan shares. Therefore, this viewpoint led to the conclusion that time deposits of commercial banks and liabilities of non-bank financial institutions should be included in the stock of money.

The controversy related to what money is, still goes on unabated among the economists. They have still to reach the most satisfactory and workable definition of money.

5. FUNCTIONS OF MONEY

Money performs several functions in an economic system. Money has not only removed the difficulties involved in the barter exchange, it has made a very significant contribution in the advancement of the society. Kinley has classified the functions of money as the primary, secondary and contingent functions.[5]

1. Primary Functions

The primary functions of money are those basic functions of money that are performed by it at all the times, under all conditions and in all the countries. These functions are the medium of exchange and the common measure of value.

(*i*) ***Medium of exchange*** : The most prominent function of money is that it acts as the medium of exchange or the means of payment. All the buyers and sellers make transactions related to goods, services and assets through money because it has the general acceptability. It has helped in avoiding the difficulties and inconveniences involved in the barter exchange. It does not require the double coincidence of wants as it bifurcates the act of barter into two separate transactions, *i.e.* the sales and purchases through the medium of money. As money facilitates transactions with minimum effort and time, it promotes the transactional efficiency. Money has contributed in greatly enlarging the multilateral trade. By improving the allocation of productive factors, money has facilitated specialisation in production and trade. The exchange of goods and services through money has greatly enlarged the range of choices of the consumers and producers in the economic system. The system of exchange through money has widened the extent of market and has also increased the degree of competition.

(*ii*) ***Common measure of value*** : Under the system of barter, there was a serious problem that value of each commodity was expressed in terms of the other commodities. For each product, there used to be as many values as the number of products. If there were n products under the barter system, the

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number of exchange ratios would be $\frac{n(n-1)}{2}$. So there was no common measure of value or common denominator of value. Under money exchange system, the number of exchange ratios is only $(n-1)$, money being one of the commodities. In this way, money has greatly simplified the complicated value calculations. The *value of each commodity expressed in terms of units of money is its price.* Suppose price of a table is Rs. 500 and that of a chair is Rs. 250, it implies that 1 table is worth 2 chairs. Thus money has not only made the transactions more simple and easy,it has provided a common denominator of value. Monetary evaluation has rendered the non-comparable goods as comparable. This can enable an individual to rank his preferences correctly and thereby maximise his satisfaction.

When money acts as a common measure of value for all goods, services and factors, the business firms can keep their accounts in terms of money. Thus money has greatly simplified and systematised book-keeping and accounting, when it acts as a unit of account.

Medium of exchange function and the unit of account functions of money are, undoubtedly, the primary or basic functions of money. In almost all the countries including India, money acts at the same time both the medium of exchange and the unit of account. However, necessary requirement for money acting as a common measure of value or the unit of account is that the value of money should be stable or non-fluctuating. If there are variations in the length of measuring rod, the measurement of cloth can not be accurate. In the abnormal conditions of inflation, when there is much instability in price level or the value of money, it may not simultaneously act as the medium of exchange and unit account. For instance, during the German inflation of 1923-24, German Mark was being used as the medium of exchange but it was not the unit of account or common measure of value. For accounting purposes, Germany made use of the US dollar or Swiss France at that time.

2. Secondary Functions

According to Kinley, the secondary or derivative functions of money are standard of deferred payments, store of value and transfer of value.

(i) Standard of deferred payments : The term 'deferred payments' means the postponed payments or the payments in future. The people often take loans and the repayment of those loans and interest thereon are made on some future date. The borrower is expected to pay back to the lender the same value which he had borrowed. Money is used invariably to specify the value which the borrower should pay back to the lender. The measurement of the deferred payments in terms of physical goods, animals, etc. used to be done under barter, was unsatisfactory because of the parishable nature of goods or animals as well as the frequent fluctuations in their values. Money, which is relatively much more stable can serve as a better standard of deferred payment or the repayments of debt obligations.

(ii) Store of Value : Money has the general acceptability. It also is measure of value. It is used by the people to repay their loan obligations. People not only make their day-to-day transactions in terms of money, they also hold their assets in terms of money or liquidity. Alternative to the spending or holding of goods is the holding of money. People hold money for transactions and precautionary purposes. They may also hold money or cash for speculative motive, *i.e.* earning through making intelligent anticipation of what the future will bring forth. The classical writers neglected the store of value function of money on account of their excessive preoccupation with medium of exchange function of money. Keynes considered this function as a highly dynamic function because the accumulation of wealth or store of value in the form of money can have highly significant effect on the future level of economic activities. The amounts saved in the form of money in the current period can be invested in future for financing the expansion of productive activities in future. That was the reason, Keynes considered money as a 'link between the present and future.' In this regard Stonier and Hague commented, "Money is a bridge from the present to the future. It is therefore essential that money commodity should always be one which can be easily and safely stored."[6] However, money to act as a satisfactory store of value, must have stability in its value over time.

(iii) Transfer of Value : Money has the highest degree of liquidity among all the assets. Moreover, money is generally acceptable and acts as a store of

6. A.W. Stonier and D.C. Hague : *A Textbook of Economic Theory (1972)*, P. 406.

value. Therefore, it serves as a means of transferring value easily and quickly from one person to another and from one place to another. A person can sell his assets at one place and buy the new assets at another place through money.

3. Contingent Functions

According to David Kinley, money has certain contingent functions apart form its primary and secondary functions. Such functions of money are as under :

(i) Basis of credit system : The entire structure of modern system of credit rests upon money. All business transactions in a country take place through either cash or credit. The use of money is economised through credit. The credit creation by commercial banks rests always upon money reserves available to them. In the absence of money reserves, no credit creation can take place.

(ii) Imparting liquidity to wealth : The different assets have varying degrees of liquidity. Land, building, consumer and capital goods are non-liquid. On the other extreme, bonds and securities, time deposits and demand deposits have successively increasing degree of liquidity. Money is the most liquid asset. When all assets are bought and sold through money, people can convert their non-liquid and less liquid assets into money and can hold them in the most liquid form. Thus money imparts liquidity to wealth.

(iii) Uniformity of wealth : As mentioned above, people can hold wealth or assets in diffrent forms. When those assets are disposed of and money is held, it implies that money can impart uniformity to wealth.

(iv) Measurement of national income : Under the barter system, measurement of national product or income was not possible. However, when all final goods and services produced in a country during a given year are evaluated in term of money, their aggregate provides the measure of national income of the country.

(v) Distribution of national income : Money not only helps in the exact measurement of national income, it also explains the distribution of national income among the different factors of production like labour, land, capital and enterprise. Since prices of all factors are determined in terms of money, it is possible to indicate how the national income is constituted. In addition, it can also be possible to determine whether the income distribution in a country is equitable or not. If a high proportion of national income is constituted by wage incomes, the income distribution is more equitable. On the opposite, if a high proportion of national income is constituted by rents, interests and profits, the national income is distributed in an inequitable manner.

(vi) Measurement of utility : The utility or want-satisfying power of a commodity is measured by the units of money a consumer is willing to spend on the purchase of that commodity. The marginal utility of a given commodity is supposed to be equal to its price (MU = Price). Price is always expressed in terms of money. Thus money is the measure of utility from every commodity.

(vii) Maximisation of satisfaction : A consumer secures maximum satisfaction, when the ratio of marginal utility from all the commodities being bought by the consumer and their respective prices get equilised. It has been mentioned above that both marginal utility and price are measured in terms of money. Moreover, the ratio of MU of the commodity, say X and the price of X is just equal to the marginal utility of money $\left(\frac{MU_x}{P_x} = MU_m\right)$. Thus money ensures the maximisation of the satisfaction for the consumer. Similarly a producer cam maximise his profits, when the ratio of the marginal productivity and price of each factor of production becomes exactly equal.

From the above discussion, it is clear that money performs such vital functions in the economic system that it has become a powerful catalyst of all economic activities in the modern economy.

6. STATIC AND DYNAMIC FUNCTIONS OF MONEY

The functions of money have been classified by Paul Einzig into two broad categories of the static and dynamic functions.

1. Static Functions : The static functions of money are such functions that are performed by money in an economic system under all conditions without bringing about any changes in the structure of the economy. The static function are also referred

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