

# A Critical Narrative on the Theories of Money

Ebney Ayaj Rana

Researcher at Unnayan Onneshan, an independent multidisciplinary think tank based in Dhaka, Bangladesh

Email: [earana@unnayan.org](mailto:earana@unnayan.org)

## Abstract

Although money is now used as a generally acceptable medium of exchange, the emergence of it was due to unintended consequence of human actions. Since the emergence as the medium of exchange, money underwent several theoretical developments as regards its nature, function and use in the economy. This paper aims at presenting a brief account of the dominant theoretical developments of money. Firstly, a brief analysis of the origin of money as a generally acceptable medium of exchange is developed in this paper. Secondly, the classical functions of money are revisited and finally, the dominant theoretical developments of money – the classical foundations, the quantity theory of money, Keynes' theory of money, neoclassical theories of money, monetarist school of thought, and post-Keynesian theory of money – are discussed critically on a brief account.

**Keywords:** Medium of exchange, Quantity theory of money, Barter system, Classical dichotomy, Commodity, Unintended consequence

## 1. Introduction

The emergence of money as a generally acceptable medium of exchange did not take place as a result of any common will or general agreement between people. With respect to the division of labor, individuals became dependent upon each other to meet their needs. As a result, individuals used to exchange one's goods for another's. The exchanges between individuals were becoming complex in line with the increased division of labor. Thus there emerged the medium of exchange – the money – as a way out to the difficulties of complex barter system. However, the discussion of the nature and use of money occupies a large space in the literature of classical political economy. Subsequently, it took place in the literature of Neoclassical, Keynesian, and post-Keynesian economics. Furthermore, particular school of thought on the analysis of money, namely monetarist school led by Milton Friedman has also emerged. Each of the theoretical developments of money has emerged to address particular economic problems related to the use of money. However, these theoretical developments of money have also remained under the critical appraisals from different perspectives of economics science. This paper aiming to draw a brief account of the theoretical developments of money explains how money as a generally acceptable medium of exchange emerged and functions of money in the first and second sections and then presents the critical analyses of different theoretical developments of money in the subsequent sections.

## 2. The Origin of Money

On the question of how money emerged as a medium of exchange, Carl Menger (1883) puts forward two compelling explanations. First, it is argued whether money emerged as a result of any common will or purposeful human activities and second, whether the origin of money was due to unintended results of human activities aimed at attaining individual goals. According to Menger's notion of organic explanation – natural organisms are analogous to certain social phenomena both in terms of their function and their origin – the former explanation is termed as pragmatic phenomena and the latter is termed as organic phenomena. The origin of money is, therefore, explained in Menger's analysis as an organic phenomenon that emerged from unintended results of historical development.

One needs, e.g. only to think of the phenomenon of money, as institution which to so great a measure serves the welfare of society, and yet in most nations, by far, is by no means the result of an agreement directed at its establishment as a social institution, or of positive legislation, but is the unintended product of historical development. One needs only to think of law, of language, of the origin of markets, the origin of communities and of states etc (Menger 1883, p. 130).

The argument here is money as a generally acceptable medium of exchange has emerged from the dispersed actions of humans without a common will to establish it. The medium of exchange has been varying in terms of time and places. Different types of commodities served as medium of exchange in different nations and cultures. In line with increased market traffic, exchanges of commodities became troublesome. For example, in a barter system if the individual A needs the commodity possessed by the individual B, B needs the commodity possessed by the individual C, and C needs the commodity possessed by A, the demand and supply do not coincide in this barter system. Therefore, the need for a good as a medium of exchange emerges that has high saleability and all the actors in the barter system remain willing to hold that highly saleable goods to buy their needed goods in exchange for that. Thus Menger (1892) argues that the origin of money can be understood in

terms of its high saleableness. Individuals would be willing to hold the goods of high saleability to exchange for their needed goods since there is high demand for more saleable goods in the market.

The theory of money necessarily presupposes a theory of saleableness of goods. If we grasp this, we shall be able to understand how the almost unlimited saleableness of money is only a special case – presenting only a difference of degree – of a generic phenomenon of economic life – namely, the difference in the saleableness of commodities in general (Menger 1892, p. 243).

Another important reason of the high demand for more saleable goods in the market is that individuals try to minimize their transaction cost by using more saleable goods in their exchange. Individuals, therefore, prefer the more saleable goods or more needed goods to others, but they do not have the intention to bring about these goods as generally acceptable mediums of exchange. Rather, in the process of the convenient transaction, some goods become filtered as the nominees for being a generally acceptable medium of exchange. Market environment, however, also encourages the individuals to use more saleable goods in their exchange. If individuals use more saleable goods in their exchange, the market traffic increases which, in turn, necessitates the use of more saleable goods in exchange. Thus the good that is regarded as a generally acceptable medium of exchange becomes more and more saleable in the market. This process results in the emergence of a medium of exchange as an unintended consequence of the actions of self-interested individuals.

### 3. Classical Functions of Money

After the making of a contract between two individuals on the transaction of sale or purchase, there remain a debt in real terms from the seller on the one hand and a debt in money terms from the buyer on the other. When a debt is expressed in terms of money, money is paid for the discharge of the debt. Money, therefore, comes into a transaction in two ways: first, it causes the formation of a contract between individuals and second, it is used for paying. Taking these roles of money into account, Hicks (1989) categorizes four functions of money. First, money is used as a standard of value. It measures the value of goods produced in the economy. Second, money plays role as a means of payment. After the making of contract of transaction between buyer and seller, buyer pays money to the seller for the discharge of the debt that he owes to the seller by the contract of the transaction. Third, money can be a store of value as it can be hoarded. However, this property of money is considered to be no distinguishing since any durable commodity can also be a store of value. It cannot also be defended by the Keynesian argument of money's possession of perfect liquidity as liquidity, in turn, cannot be defined except in terms of exchangeability for money (Hicks 1989, p. 42). Fourth, money is used as a 'standard of deferred payment'. Once money is used as a standard of value of the commodities, it can be used as a standard of deferred payment since payments are usually more or less deferred.

The above analysis shows that money basically has two distinguishing functions: standard of value and means of payment. The rest functions basically follow from these two. However, now the question comes whether money's functions of standard of value and means of payment are independent of each other or one implies the other. The answer lies in the latter argument that money cannot be used as a means of payment of a debt unless money as standard of value has already been implied in the debt. Therefore, money as a means of payment implies money as a standard of value. However, a debt expressed in money in terms of standard of value can still be discharged otherwise than in money. It could be offset against another debt. For instance, the debt from A to B can be cancelled by the debt from B to A. If these two debts arise from similar transactions, the result is a barter transaction where exchanges of goods take place with no money changing hands. Thus, even if a debt is expressed in money terms, money as a means of payment can still be missing (Hicks 1989).

### 4. Classical Theories of Money

Adam Smith (1776) offered an early discussion of origin of money through examining the division of labor which he defines as the root cause of labor productivity. In line with an elaborate division of labor, producers have to exchange a part of their product for that of the others. However, this process of direct commodity exchange become 'clogged and embarrassed in its operation' due to incompatibility of wants among the producers. Thus 'prudent' person becomes aware of keeping a certain quantity of a commodity which he thinks everyone would be likely to exchange their commodities for. Precious metals are best suited for this purpose since they are imperishable and indivisible. Thus Smith theoretically derived money as a commodity that can purchase the other commodities and overcome the problems of barter. The nominal price of goods thus becomes the measure of their exchangeability. Smith, therefore, puts forward the classical theory of exchange value by distinguishing between 'value in use' and 'value in exchange' and concludes that labor is the real measure of exchangeable value of all commodities – the real price of a commodity is the 'toil and trouble' of acquiring it. Smith, however, tries to reach an invariant measure of value in exchange, but that was not feasible since the real price of money commodity is directly affected by changes in the conditions of its production. Therefore, the metal used for money cannot be this invariant measure, rather the most that the metallic money can do is to

establish nominal prices, which vary inversely with the value of the metal and the metal content of the coin (Itoh and Lapavitsas 1999).

However, in the development of the barter illusion, say's law of markets occupies a central position. Say (1971) argues that supply creates its own demand as products are exchanged for products and the economy works as if it were a barter system with money strictly neutral in respect to output and unemployment. If there are unemployed workers in the economy, all is needed to employ them to produce additional products because these products will create sufficient demand to clear the market. Thus according to Say there will be no involuntary unemployment in the barter-like economy. Therefore, on the question of nature and uses of money, Say argues that as supply creates its own demand, money merely acts as the agent of the transfer of value. The use of money thus only provides a more efficient form of exchange than the direct barter, but is not essentially different from barter.

Money is not desired as an object of food, of household use, or of personal covering, but for the purpose of re-sale, as it were, and re-exchange for some object of utility, after having been originally received in exchange for one such already. Money is, therefore, not an object of consumption; it passes through the hands without sensible diminution or injury; and may perform its office equally well, whether its material be gold or silver, leather or paper (Say 1971, p. 221).

Say does not differentiate between money exchanges in a self-employed economy and money exchanges in an economy of large capitalist producers. Money, he argues, is only used in the system of exchange where producers sell their products in exchange for money to buy the goods they need for living. It is further argued that income that is not spent for consumption is still spent because saving is another form of spending. Therefore, the circular flow of sales and purchases remain uninterrupted by delays in purchases following sales; changes in the velocity of money irrespective of whether money outlays are for consumption or for saving or investment since for the most part, saving and investment are done by the same individual (Say 1971).

## 5. The Quantity Theory of Money

The quantity theory of money discerned from the classical theory of money and credit emphasizes the harmonious equilibration between the total quantity of commodity output and the total quantity of commodity money, provided that there is no state or other interference in the operations of domestic and international capitalist markets. For instance, the creation of credit money by banks could upset the presumed harmony in the rate of exchange of the aggregate quantity of commodity for the aggregate quantity of money. In this regard, money is viewed as a secondary aspect of capitalist exchange – a veil on real economic activities (Itoh and Lapavitsas 1999, p. 4). However, to fully discern the classical arguments on the quantity theory of money, one has to understand Hume's analysis and Stuart's critique of it.

It is noteworthy here that Hume's analysis of the quantity theory of money is not original but can be referred to the work of Cantillon and Montesquieu. However, Hume (1752) argues that money only has 'fictitious value' and is a 'representation of labor and commodities' in the sphere of exchange. The 'fictitious value' of money is the rate of exchange of the aggregate quantity of commodity for the aggregate quantity of money. Hume's theory of money holds an international aspect that money flows between the countries in the manner of water between vessels and seeks the same level in all countries (Hume 1752, pp. 64-65). For example, if the domestic quantity of money is increased by gold discoveries in a foreign country, money's rate of exchange with the quantity of commodity becomes disturbed in the domestic market – the value of money naturally falls. Consequently, there causes balance of payment deficits in the domestic country since – the international level of money having remained the same – the monetary metal flows out of the country. This disturbance ends when money again attain its correct level internationally. Thus in the long run, money is a veil on the real activity and remains economically neutral – having no impact on country's output.

Hume's quantity theory of money comes under the attack of argument of anti-quantity theory of money postulated by John Stuart Mill. Stuart (1767) argues that the circulation of money is the successive passage of commodity and money from one hand to another representing the exchanges among different classes of society. If the proper exchange of equivalents among classes does not take place, consumption becomes limited and the poor or the 'the industriousness' suffer. Therefore, the statesman has to know the propensity of rich people's consumption and the disposition of the poor people to industriousness and the proportion of circulating money as regards both propensity and disposition. In this respect, metallic money is considered to be problematic since people are inclined to hoard it when they have no desire to consume. As a result, the hoarded money becomes lost in the circulation and gives rise to an insufficiency of domestic money, which inhibits the growth of industry in the economy.

The circulation of every country... must ever be in proportion to the industry of the inhabitants, producing the commodities which come to market... if the coin of a country, therefore, fall below the proportion of the produce of industry offered to sale, industry itself will come to a stop; or inventions, such as symbolic money, will be fallen upon to provide an equivalent for it.

But if the specie be found above proportion of the industry, it will have no effect in raising prices, nor will it enter into circulation: it will be hoarded up in treasures, where it must wait not only the call of desire in the proprietors to consume, but of the industrious to satisfy this call (Stuart 1767, p. 95).

Therefore, no conclusion can be drawn, according to Stuart, about the prices from the assumption of arbitrary changes in the quantity of money. An increase in the quantity of money might not result in an expansion of consumer demand, but a decrease would certainly result in a decline in industrial growth and a rise in unemployment. However, it is argued that Stuart's analysis is an uncompromising rejection of Hume's quantity theory of money based on such assumptions of the hoarding of metallic money, the endogenous creation of credit money, and the non-neutrality of money (Itoh and Lapavistas 1999).

## **6. Keynes' Theory of Money and His Attack on Classical Model**

Keynes develops his theory of money on the basis of two preconditions: rejection of loanable funds theory and the rejection of the quantity theory of money (Johnson, Ley and Cate 2001). According to the loanable funds theory, consumption, saving, and investment are all the function of the interest rate. The interest rate is determined in the loanable funds market where financial assets are bought and sold. Thus the supply of and demand for loanable funds, in other words the saving and investment become in equilibrium at full employment in the perfect competition. As such, deficiencies in aggregate demand because of excessive saving or deficient investment can never cause involuntary unemployment in the equilibrium. On the contrary to the proposition of loanable funds theory, Keynes (1930) argues that consumption is a function of income and saving is a function of income and interest rate. Therefore, the factors that determine the decisions of households' consumption and saving are different from the factors that determine business investment decisions. As a result, savings may not possibly be transformed into equivalent amount of investment. Thus increases in savings may cause decrease in aggregate demand, which, in turn, results in involuntary unemployment. However, now here comes the question how interest rate is determined in Keynesian analysis. In answering the question, Keynes' theory of money explains the determination of interest rate through rejecting the classical dichotomy.

However, before developing the theory of money, Keynes rejected the classical quantity theory of money on the basis of three grounds (Johnson, Ley & Cate 2001). First, he argues that the two assumptions i.e. the ratio of cash to deposits is constant and the ratio of reserves to deposit is constant, on which the stable velocity of money rests do not hold. Therefore, the proportionality conclusion of the quantity theory of money does also not hold. Second, Keynes rejected the assumption of quantity theory of money that people demand money only for the transaction purposes. Instead he argues people demand money for such purposes as to meet personal expenditure, to meet business obligation, to meet personal investment needs. Finally, he rejects the assumption of quantity theory of money that output could be treated as constant. While the classical model explains that economy is always in equilibrium at full employment and the output can therefore be taken as constant at full employment level, Keynes shows that, as discussed earlier, less than full employment equilibrium is not possible but also probable. Therefore, once it is established that less than full employment equilibrium is possible in the economy, the assumption of constant output becomes unacceptable.

With the rejection of loanable funds theory and the quantity theory of money, Keynes provides the basis for the elimination of classical dichotomy which argues that interest rate is uniquely determined by the real variables. However, Keynes' theory of money and the interest rate determination link the real and monetary sectors of the economy and thus overcome the classical dichotomy. Keynes argues that there are three components in the demand for money: the transactions demand for money, the precautionary demand for money, and the speculative demand for money. The key aspect of Keynes' theory of money lies in the speculative demand for money and the resulting liquidity preference – the demand for real balances that people want to have in order to avoid capital loss from holding bonds. The speculative demand for money links the determination of interest rate to the demand for money and thus results in the interest rate being determined in the money market instead of loanable funds market. Therefore, according to Keynes' theory of money, interest rate being determined by the demand and supply of money affects investment, aggregate demand, output, and employment and thus overcomes the classical dichotomy of being uniquely determined by the real variables.

## **7. Neoclassical Theories of Money**

Neoclassical economics explains the barter illusion as regards a body of doctrine concerned with the allocation of given resources among alternative uses with a view to yielding maximum satisfaction. It primarily focuses on the equilibrium of real sacrifice and real satisfaction, putting money in a subsidiary role and apart from the basic principles of economics. The neoclassical theories of money continue to hold the neutrality characteristic of money. The point of departure of neoclassical theory of money is a theory of the exchange of goods for goods among consumers who maximize their satisfaction through adjusting their marginal utility to prices in a competitive market (Dillard 1988).

As one of the founders of neoclassical marginalism, Stanley Jevons remains conventional and conservative on the question of money. He develops a theory of exchange on the basis of outcome of barter between two individuals where they are said to be in equilibrium if their marginal utilities correspond to market prices (Dillard 1988). However, Walras (1954) develops the theory of exchange as regards a theory of production and a theory of capital formation. He applies his theory of value to money and argues that the value of money is based on the concept of 'desired cash balance' and the equilibrium determined by supply of and demand for money. However, Walras rules out the uncertainties by assuming that consumers and producers have fairly exact ideas about their receipts and expenditures of cash and the amounts and timing of these transactions are also known to them. He further argues that money is demanded for transaction purposes but not for speculative purposes. Holding the notion of neutrality of money and analyzing the economy as if it were a barter system, Alfred Marshall (1930) argues that money can be used to measure the strength of motives to sacrifice and to satisfy in economic activities. On the one hand, there is a certain sum of money that prompts an individual to undergo certain sacrifices i.e. labor in production, on the other hand, there is a certain sum of money that an individual gives up to enjoy certain satisfactions i.e. utilities in consumption. Therefore, money is a common element that links Marshall's two levels of analysis: the subjective level and the objective level. On the one hand, money measures an individual's sacrifices of production and satisfactions of consumption at the subjective level. On the other hand, it measures an individual's expenses of production and expenditures for consumption at objective level. Thus money, according to Marshall, does not measure the motives and decisions of individuals, but merely serves as the measuring rod of the forces of motives and decisions. In addition, Marshall's theory of money and credit, however, not only deals with the price levels but also with the cyclical and general unemployment, which Marshall considers as a temporary departure from equilibrium resulting from disturbances in the credit markets (Whitaker 1987).

## 8. The Monetarist School

Monetarism, rightly associated with the name of Milton Friedman, represents the resurgence of the classical quantity theory of money under the guise of the conditions of postwar capitalism. Friedman has been proclaiming the main message of monetarism since 1950s as regards his formulation of the quantity theory of money as a theory of money demand (Itoh and Lapavitsas 1999). Friedman (1956) argues that the demand for real money balances is a function of such variables as real income, wealth, and several rates of return on different assets. However, the demand for real money balances is considered to be empirically stable, while the supply of nominal money balances is assumed to be autonomous since the central bank controls the supply of nominal money. As the supply of nominal money balances is controlled by authorities, and the demand for the real money balances remain stable, changes in nominal income become proportionate to the changes in the nominal supply of money. Therefore, as Friedman (1970) argues, inflation is always and everywhere a monetary phenomenon and it arises from the more rapid growth of money supply than that of the output.

To validate the argument of monetarism that the changes in nominal income have to be proportionate to the changes in nominal money supply, Friedman and Schwartz (1963 & 1982) conducted an extensive study of the history of monetary phenomena in the United States and the Britain. The results of the study were found to substantiate the monetarist proposition. However, the work of Friedman and Schwartz has been subjected to withering criticism due to its superficial view of financial institutions and history (Tobin 1970). In line with his monetarist argument, Friedman (1968) challenges the proposition of Phillips curve by denying the existence of a stable trade-off between inflation and unemployment. He argues that in the long run, no trade-off takes place between unemployment and inflation in the economy, instead the unemployment settles at natural rate, while an expansionary fiscal policy might be effective to reduce unemployment below the natural rate only in the short-run. Thus the monetarist school argues that the only permanent result of expansionary fiscal policy is higher rate of inflation and therefore a steady rate of growth of money supply needs to be adopted, leaving everything else to the operations of capitalist market.

## 9. The Post-Keynesian Theory of Money

The post-Keynesian theory of money emerges in contradiction to the orthodox Keynesians, who ignores most aspect of a monetary economy as well as in contradiction to monetarists, who advocate the exogenous aspects of stock of money (Lavoie, 1984). The post-Keynesians argues that the major part of the money stock arises essentially for endogenous reasons – the response of banking system to an increased demand for money – rather than for exogenous reasons – by the deliberate supply of money by the central bank.

Post-Keynesians, in sharp contrast to monetarists, regard the stock of money as being essentially endogenous, responding and accommodating to changes in the level of money wages (Moore 1979, p. 125).

However, it is argued that the post Keynesians differ with the monetarists on four stages. First, post-Keynesians show that the existence of a credit multiplier due to the exogenous controls adopted by the monetary authorities

does not necessarily imply a causality running from monetary base or central bank money to the money stock. Instead, the causality runs from higher credit needs, to higher bank deposits, to higher required reserves. Second, the post-Keynesian contend that the central banks prefer to accommodate the needs of the commercial banks. Third, even if the central banks want to control the stock of money, they can do so only through changing the level of interest rates. Finally, the post-Keynesians claim that central banks' control on money stock through changing the level of interest rates causes disruptions in financial markets. Therefore, a monetary policy based on the supply of money tends to be ineffective or destabilizing.

## 10. Conclusion

This paper makes a brief account of various theoretical perspectives on money. The classical economic explanation of the origin of money by Adam Smith explicates that the division of labor prompts the individuals to be dependent upon each other to meet their needs by exchanging of one's goods for another's. Since the division of labor intensifies the exchanges of commodities between the individuals become complex. Thus the need for a generally acceptable medium of exchange emerges. However, the neoclassical economist Carl Menger contends that money as a medium of exchange emerged as an unintended consequence of human actions – that is money did not emerge by any common will or general agreement of the people. The classical theories of money put forward by J. B. Say postulates that the supply of a product creates its own demand where products are exchanged for the products and economy acts as if it were a barter system with money being strictly neutral with respect to output and unemployment. Besides, the quantity theory of money implies that there remains a harmonious equilibration between the total quantity of commodity output and the total quantity of commodity money. Any state or other interference in this harmonious equilibration, therefore, cause disturbance in the exchange rate. The Keynes' theory of money argues that the determination of interest rate can be done by the monetary variables as there is speculative demand for money among the people and thus overcomes classical dichotomy. The neoclassical theories of money emphasize the equilibrium of real satisfaction and real sacrifice, putting money in a subsidiary role and neutral as regards output and unemployment. Meanwhile, the monetarist school claims that since the demand for real money balances remain stable, changes in nominal income become proportionate to the changes in the supply. Finally, the post-Keynesian theory of money, as opposed to monetarist school, argues that the major part of money stock arises for endogenous reasons i.e. banks' response to increased demand for money, while monetarism argues it arises exogenously – supply of money by the central banks.

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