An Overview of Changes in Monetary Theories

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The main purpose of this paper is to make a comparison of the monetary theories developed so far. This paper has been split up into five parts. The first three parts deal with controversies regarding monetary theories whereas the fourth part deals with the monetary theories for low-income countries. In this part, discussions are also made however briefly on the active interest rate policy initiated by the Nepal Rastra Bank. Because of the active role of Nepal Rastra Bank in the sphere of monetary policy, the upward adjustment in the rates of interest in 1971, 1975 and a slightly downward readjustment in 1977 made by it, have encouraged savers to take advantage of the policy. Whether the cause for the response of savers to the change in rates of interest in higher real rates (real rate of interest equals nominal interest rate minus the rate of price inflation) as supposed by neo-liberals or the increase in real balance (assuming the existence of money illusion which is quite opposite to the assumption of Don Patinkin analysis) is of course difficult to predict mainly due to the existence of a large part of the economy nonmonetised and the unconsciousness of the people in relation to the price-change effect on real quantity of money. Whatever may be the reasons, the higher rates of interest has succeeded in increasing the liquidity of Nepalese commercial banks and hence in the mobilisation of financial resources. The resources collected in such a way must be channelled to the rural and

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small sectors of the economy (a need to diversify the lending and investment policies) and that requires the planned financial growth in the country with basic information of continuous changing needs of those sectors. In this connection I have remarked that it is a highly difficult task for Nepal. This became the uphill task not because that we are incapable of preparing a financial plan in paper but because that we have some doubt about the supply of other ancillary services for making investment productive in rural and small sectors, and the preparation of the record of the flow of funds from those sectors. Yet, the plan can be introduced selectively. In this regard my analysis has become very concise and it is because of the policy issue that needs separate and special treatment.

In the concluding section of this paper I have but made a conceptual end and one will not get much reference to the policy implications out of it. This is partly because my basic purpose has been that of presenting analytically some major controversies in monetary theories and also because I have not dealt with the empirical data and information for analysis in this paper.

1. Introduction:

The world of authors and thinkers in so vast that many scholars have applied different approaches in defining the concept and in studying the relationships between different variables. The assumptions leading to the interpretation of concepts and relations give rise to the issues and that generate a dilemma to a practical man who wants to fit the ideas on the working of the socio-economic system directed to attain the better performance of the world for human happiness. By that system I mean that sort of mechanism which defines the concept and the relations among various things or the group of things. Then it is a matter not nonsurprising to every one that to deal precisely with the question of how to sketch the world order and how to understand the mechanism involved is to difficult, for the explanation becomes to complex. To my mind this complexity has developed and intellectual curiosity and that curiosity in turn has encouraged my thinking about the world and its performance in this specific area of monetary system.

Monetary theory can be defined as the tool to describe the concept of money, and its relation with other economic variables such as output, employment, etc. The expression of the concept of money and the relation of money with other variables certainly leads to the
attainment of better living—the ultimate goal of any society, if possible. If so, let me begin with these things, although the matter that relates to it is not as easy as someone may think.

2. The Concept of Money:

2.1. Traditional Concept

Although we can have a clear theoretical concept of money, it is very difficult to say what things should be included in money. The inclusion of the set of assets in money has some practical significance in that it directs us what assets should be controlled to regulate money supply. The issue in question as to how money should be defined and what should be included in money has widened the debate and this debate has been running in recent years. In the years gone by, two approaches were in evidence for defining money as to what it is. According to these approaches writers have tried to define money in purely legal terms or in functional terms. Those who followed the legal and functional definitions of money regarded money as the medium of exchange and the thing used as the medium of exchange also served as the store of value. Then money becomes something that is widely accepted for the settlement of debts whatever the thing it may be.¹ Money then is an asset and it is one way of holding wealth to the ultimate wealth owing units in the economy. But the difficulty lies in the fact that what assets correspond to the concept of money. Usually and traditionally only those assets are included in money which are used as the medium of exchange. Currency and demand deposits are the component parts of money supply and each component is fully convertible into each other component. The interchangeability of different kinds of money gives the choice to the public to hold monetary assets in the most convenient form. In this fitting all other assets in the form of time and saving deposits, savings and loan shares, treasury bills etc. are liquid and hence only come close to being money—near maturity and are known as near money.

The monetary function performed by near money is that they are the store of value and they are also one form of accumulating wealth. From the above discussion it is clear that most relevant characteristic that a monetary asset must possess is that of liquidity. But the inherent problem with us is—every asset has some degree of liquidity and, therefore, various types

1. R. S. Sayers, Modern Banking, English Language Book Society, Oxford, 1960, pp. 1
of assets are close substitute for each other. Radcliffe committee concluded, "in a highly developed financial system, there are many highly liquid assets which are close substitutes for money". Although money is the most liquid of all types of assets, we can not say in this real world that money is absolutely liquid, for no asset possesses perfect liquidity but all assets possess some liquidity. Then the obvious question with us is how much liquidity is needed to qualify an asset as money? This further leads to a problem as to how to control money supply for regulating economic activities.

2.2. Modern concept

For the solution of the problems we need to define money empirically and one of the two empirical approaches to define money relates to the estimation of cross elasticity of demand between various types of assets and this measures the substitutability between various types of assets. Higher the cross elasticity between assets closer the substitutes they are. The shape of an indifference curve is straight line in case of perfect substitute but it has right angle shape in the opposite case.

But a second and different approach is suggested by the modern Monetarists in connection to define money. Since, money for those authors is an independent factor and is most important determinant of national income, these assets should be included in money if their inclusion gives us close statistical relationship between changes in money supply and national income.

Milton Friedman and David Meiselman used two criteria in selecting sets of financial assets to be included in the money supply.


(a) The highest correlation of the sum of these assets with income, and

(b) Higher correlation of the sum with income than of any of the components separately.

These empirical issues have given the basis for classifying money in various categories such as M₁, M₂, M₃, M₄ and M₅. Whether to follow broader or narrower definition of money depends upon the stage of economic development, ability to have empirical research and so forth. So far the case with Nepal is concerned, we have defined money narrowly including currency plus demand deposits in money supply (i.e. M₁).

3. Money in the Economic Systems:

3.1. Classical and Keynesian system

There has been a wide controversy relating to the role of money in the economy. Different Schools of Economics have concluded differently as to what relation does money have with real variables. In classical setting since money was assumed to be only the medium of exchange, there is no direct relationship between money, output and employment. The classical quantity theory concluded that an increase in money supply will lead to the increase in the level of prices. Hence in classical system general level of price is passive and it is based on the assumption that velocity and output remain constant in the short run. In the Neoclassical framework, too, Gurley and shaw concluded that the growth of money supply had neutral effects on the real economy.

In the Keynesian system money definitely matters but only a little. Any change in money supply changes aggregate demand via change in the rate of interest, and investment.

5. Ibid pp. 197,


thereby would be affected given the marginal efficiency schedule of capital. The mechanism that the disturbance in monetary sector is transmitted to the real sector in the Keynesian setting is the rate of interest through the adjustment in the portfolio equilibrium. The eminent experts of Bank of England say:

"If the monetary authorities increase money stock the adjustment back to a position of portfolio equilibrium would, according to Keynesian Theory, take place mainly, if not necessarily entirely, by way of purchases of money substitutes i.e. alternative liquid financial assets, rather than directly through purchases of goods and physical assets. This would raise the price and lower the yield on such financial assets, and would cause in turn further purchases of somewhat less liquid assets further along the liquidity spectrum."

3.2. Fiscalists and Monetarists' Systems

During modern times various investigations have suggested that there is a direct relationship between money and real variables, what way money affects the behaviour of other variables in neo-quantity theorists' world is excellently remarked by Milton Friedman:

"The monetary changes have been accompanied by economic changes in the same direction, monetary contractions (or more precisely reduction in the rate of change in the stock of money) being accompanied by contractions in money income, prices, and output; and monetary expansions, by the opposite."

These conclusions of above two schools have a significant policy implications. If fiscal policy gets emphasis on Keynesian system, and this monetary policy becomes very crucial for modern quantity theorists or neo-quantity theorists. Besides these differences in the transmission mechanism and the questions regarding how much money matters, there is again a diffe-


rence relating to the stability of relationships between investment and income in the Keynesian system and between money and income in monetarists system. Since income velocity is relatively stable as compared to investment multiplier, modern quantity theorists argue that changes in income can be better and accurately predicted from changes in money supply than from changes in investments. However, the issue in question is purely the empirical one. Regarding the substitutability between various types of financial assets monetarists view seems much more broader. They have concluded, as against Keynesians, that money is not only the substitute for any small class of assets but more generally for all assets alike, real or financial.13

This was again a different policy implications and the main of which is whether any change in money stock has a strong or a weak relation with the rate of interest. Monetarists’ conclusion that there is positive and weak relation between money supply and the rate of interest has led to the rejection of liquidity preference theory of Keynes.14 They has further a policy implication that monetary policy is always effective and there is no need to consider Keynesian range in the LM curve. Wherever we have unemployment, under-employment and excessive demand we can bring adjustment through the control of money supply.

As regard to the effect of fiscal policy monetarists believe that until and unless the finance of government expenditure is made by money creation, the taxation and borrowing from public will have no significant effect. This involves only the transfer of resource from private hand to public hand without any notable change in real demand.15

3.3 Neo-quantity Theorists’ and ‘Neo-Keynesian’ Systems

Modern Keynesians or Neo-Keynesians still hold the traditional Keynesian line accepting the three fold scheme that:16

13. G. N. Sharma, op. cit, p. 41
15. D. G. Luckett, op. cit, p 469.
a) There are the **portfolio adjustments** that occur in the monetary sector.

b) There is the **transmission mechanism** linking the monetary and real sectors and,

c) There is an adjustment mechanism of the real sector i.e. investment multiplier.

James Tobin, the leading Neo-Keynesian writer, has developed the Theory of Portfolio selection and he walks along the Keynesian line yet. Regarding his conclusion about the fiscal action one writer says:

The portfolio approach as developed by Tobin attributes at fiscal actions both a direct influence on economic activity and an indirect influence. Both influences take into consideration the financing government expenditures. Financing of expenditures by issuance of demand debt of monetary authorities (monetary base) results in the full Keynesian multiplier effect.17

The basic difference between traditional and modern Keynesian theories is the analysis of liquidity preference theory. Keynesian explanation of liquidity preference is based on future expectation of interest rate changes but Tobin's is founded on uncertainty. Mr. Bain remarks:

Because investors are uncertain about future interest rates, bonds are seen as risky assets which may give rise to capital gain or loss, whereas cash balances have a fixed monetary value. Considering the investors portfolio bonds and money as a whole, an increase in the proportion of bonds carries both more income and more risk. 18

The Neo-Keynesian view differs significantly from that of monetarists with respect to the role played by the stock of money in the process by which monetary policy affects the economy. There involves several elements in the transmission mechanism such as: portfolio

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17. L. C. Andersen and J. L. Jordan: “Monetary and fiscal Actions” A Test on Their Relative Importance in Economic Stabilization in Gibson & Kaufman (eds), Monetary Economics: Readings on Current Issues, 1671, pp. 118

adjustment, wealth effect, and credit availability effect through which the monetary policy affects the economy.

The impact of the change in money supply (including monetarists explanation) in total is then realized by way of three effects: income effect, substitution effect, and wealth effect. The substitution effects are sometimes also known as portfolio balance or liquidity effects.

3.4. The systems of classicists' and Neo-quantity theorists'

As I have expressed earlier that money in the classical setting has nothing to do except to increase the price level proportionately with the increase in money supply, this conclusion was based on the assumptions that there is always a tendency towards full employment and money is an sterile asset and velocity remains stable in the short run. But neo-quantity theorists explain the role of money on the Keynesian assumption that there is the possibility of below full employment equilibrium. Modern quantity theorists no longer consider velocity as constant, although it is relatively stable. The injection of money in the economy will have several economic consequences including the realization of high employment. The role of money is no longer neutral in its effects. But contrary to this, Don Patinkin in his book "Money, Interest and Prices" has concluded—"a doubling of every ones' money stock will double prices but leave the real equilibrium unchanged." While reaching this conclusion, he assumes that the demand for cash balances is a demand for real balances, the automatic working of the economy is still valid, money is a sterile asset, the real income of the person is constant etc.20

The validity of his conclusion is challenged if his assumptions are unrealistic. He himself confesses that this result is obtained only when saving is not held in the form of interest yielding assets. Although his real balance effect provides the necessary link between the real and monetary sectors. G. C. Archibald and R.G. Lipsey have concluded:

"Patinkin defines the real balance effect as '.....the influence on demand of a change in real balances, other things being held constant. Since in full equilibrium, consumption is equal


to income, a change in real balances can only change real consumption during a process of adjustment. Thus a real balance is a transitory phenomenon, which is operative only in disequilibrium situations. Its role is to provide possible dynamic explanation of how the economy moves from one position of static equilibrium to another. Thus if we are interested in those well known propositions of the quantity theory which are propositions in comparative statics, the real balance effect is irrelevant.

4. Further Issues in Monetary Theories:

Till now I have discussed on the various propositions regarding money in various economic systems under different assumptions developed so far. Now, let me turn to other issues.

4.1. Demand for Money

Friedman made his remark “quantity theory in the first instance is a theory of the Demand for money”. The supply of money in nominal units is regarded as fixed or autonomously determined; and by defining various conditions he concludes that nominal stock of money will be the amount of money demanded. Therefore let us proceed ahead by considering the demand for money in terms of quantity equations.

Fisherian equation of exchange treated the demand for money in terms of the velocity approach. But this approach is related to all transactions rather than the expenditure for final output. In fact, the equation of exchange is an identity. According to which,

Total expenditures = Total receipt.

In the Fisherian transaction approach it was assumed that people have no inclination to hold money for the reason that money serves only as the medium of exchange i.e. people need money for making payments. But neo-classical authors were less extreme in the sense that


money might be held by the people in idle form. But the assumption that although people hold a fraction of their transaction and build their cash balance, the motive to hold is same and it is for transaction purpose. The Cambridge equation is also an identity and this equation must also be true under all conditions of time, place, and circumstance. The basic difference between the two approaches is that they differ in asking questions. If Fisherian version asks why do people spend money, the Cambridge equation asks why do people hold money. But the latter approach too assumes that money is held for making payments. This view was denied by Keynes later on by saying that the motive to hold money is also for taking benefit from the expected change in the rate of interest.

The equation of exchange is less satisfactory in that this includes the transactions as the purchase and sale of used things which involve only the transfer of ownership from one to another person and this transfer does not make a society wealthier. Hence the inclusion of production of new goods and services has to be considered. These considerations led to restate the Cambridge equation in terms of GNP23 i.e. Po, where 0 is output. This is known as the income version of the Cambridge equation. In this income version, the demand for money is different. It is the fraction (K) of annual income, rather than the fraction of transactions, which the people want to hold in the form of cash balance. By deflating the nominal money supply (M) by the general level of prices (P) we come to the final state of the demand for money i.e. demand for real cash balance (purchasing power of monetary stock). The demand for real cash balance (M/P) is highly significant in the modern monetary analysis. Doubling of P with M constant, halves the purchasing power. The index (M/P) tells us that demand for money is the demand for real balance and even if the monetary authority can control nominal amount of money it cannot control real value or purchasing power of money. Why? The reason is that the factors determining real balance are out of the control of the monetary authority. Concerning what factors determine real balance one eminent author remarks:

"Because money balances serve as a reserve of ready purchasing power for contingencies, the nominal amount of money that individuals want to hold at any moment depends primarily on the value of money or the absolute price level. Their desired real cash balances depend in turn on numerous variables. The main variables that effect on individual's desired real

cash balances are his wealth in real terms, his current real income, and the expected returns from each form in which wealth can be held including money."

From this statement, therefore, it can be generalized that to control real balance is beyond the capacity of a monetary authority. Unless it can control the set of elements affecting real balance there is no possibility of controlling real purchasing power of money.

Regarding the demand for nominal balance, (if we turn again to the Cambridge equation) the amount of money that people want to hold in the form of cash balance depends upon the level of income and wealth, the cost of holding money and the utility of holding money.

The change in the desired holding of the stock of money varies directly with the change in income and inversely with the cost of holding money. The opportunity cost such as expected rate of interest and the expectation regarding the inflationary rise in the level of prices. Then the demand for money (K in the Cambridge equation M=KPY) is to be regarded not as a numerical constant but as a function of still other variables, for example it can be constant only when the rate of interest and other things remain constant.

One thing still remains to say here regarding the relationship between income and demand for money. Since we have Y=PO, that is nominal income (Y) is equal to price (P) times real income, demand for money is directly or proportionately related with the price level. But for real income the relationship is quite different. According to Milton Friedman demand for money increases directly and more than proportionately with change in real income. But why? He gives the reason that money balances are a luxury good like education and recreation. Hence demand for money increases rapidly than real income.

27. D. G. Lueckett, op. cit; p. 372
On the other hand the modern portfolio theory (also known as modern Keynesian theory) holds that since money is a part of a person's investment portfolio, he will hold money even though money has zero expected rate of return. The reason is that by holding money the person can vary the risk-return characteristics of his entire portfolio to obtain the best possible combination. If there is an increase in the rate on bond that results in the reshuffle of a person's portfolio such that the person chooses to hold more bonds and less money. This again concludes that there is inverse relationship between the rate of interest and the demand for money and such is the case with traditional Keynesian demand for money.

But the portfolio theory differs from traditional Keynesian theory in that it assumes much asset world rather than the traditional two assets world. In other words, this theory implies that diversified portfolios are held by individuals even if the conclusion reached by both theories is same. In this respect this theory seems to be superior to the old theory of Keynes in that it explains why investors hold diversified portfolios; and money is one among many assets. Therefore the demand for money is influenced by the expected yield on various types of assets which are assumed as the possible substitutes for money.

4.2. Stability of the Demand Function for Money

Now let us turn to the question how far monetary policy is reliable in influencing economic activities. The answer to the question depends upon whether money has a significant predictable impact. If the case is opposite, then, monetary control will do only a little. Problems concerning the significance of money in influencing economic activities relate basically to the specification and stability of the demand function for money. If the demand for money or velocity of money is stable then the impact of money can be realized easily. But there is wide disagreement between monetarists and fiscalists about this particular issue. If fiscalists, conclusion says that the instability of the demand for money is caused by highly elastic liquidity preference schedule (almost horizontal part of the LM curve at its lower left half) the monetarists conclusion is just opposite to this. Actually to decide who are in the right track needs empirical investigation. Various methods are being used in estimating the stability of the demand for money by various authors and the methods of study are known as ANDO-MODIGLIANI method.

BRUNNER—MELTZER method etc; and these studies have almost proven the quantity theory more appropriate. This conclusion is opposite to the Keynesian conclusion that money does not matter. Definitely money matters. But how much time it takes to effect economic activities involves again the time-lag question. There is again a disagreement about the length of time of inside, intermediate and outside lags of monetary and fiscal policies. Reliability of monetary and fiscal policies totally depend on the time lag involved in their effects about which researchers have reached at no uniform conclusion. For monetary policy is uncertain in its effect, this has certainly posed a problem. Milton Friedman therefore writes:

"We seldom in fact know which way the economic wind is blowing until several months after the event, yet to be effective, we need to know which way the wind is going to be blowing when the measures we take now will be effective, itself a variable date that may be a half year or a year two years from now. Leaning against next year’s wind is hardly an easy task in the present state of meteorology.29"

Because of this uncertainty, Friedman wants to expand money supply at a fixed rate in line with long run growth of the economy.

5. Monetary theory for less developed countries (LDCs);

There are two opposite views developed by authors on the conditions necessary for stable economic growth in LDCs. One view is presented by Raul Prebisch and his associates and the other and most recent view is expressed by R.I. McKinnon and E.S. Shaw. The former is known as structuralist approach and the latter is known as Neo-liberal approach. Both of the views realize that the root of the problem in LDCs is the structural deficiencies. But they actually differ in their approaches to overcome these deficiencies. Structuralists' emphasize that in order to break the vicious circle of financial instability and structural deficiencies appropriate social and economic policies and programmes such as agrarian reform programme, programmes to cope with shocks emanating from structural sources, policies and programmes to insulate domestic economy from external shocks etc. will have to be initiated. Therefore, monetary and financial managements have to do little in LDCs for these authors. Contrary to the views of these

authors, the Neo—liberals recommend for financial liberalization and monetary restraint as the best way to overcome the structural deficiencies of LDCs.

As the financial development is an essential ingredient of economic growth they say that governments should abandon policy of their intervention in the financial sphere so that the conditions would be created for the emergence and growth of financial institutions. This will generate an environment leading to high real rates of interest (if not high at least positive) which promotes growth. This view is especially held by Mckinnon. For him higher real interest lead to raise the total volume of savings and increase the degree of financialization, acting as a "conduit" for investment.30

But, in our context, Nepal Rastra Bank is immitating active interest rate policies followed by some other countries with a view to furnish resources for development. Yet as often it is said, due to the lack of financial planning including the estimation of intersectoral flow of funds the savings so mobilized have not been better utilized. In this connection Dr. Reejal reacts:

"Had the Nepal Rastra Bank while anticipating a sharp rise in deposit flows to banks made use of the conceptual framework of the flow of funds Matrix, it would have been forced to think beforehand as to how the funds are going to be used.31"

Although his reaction is very crucial for the country like ours to prevent the inefficient utilization of resources or to utilise excessive savings properly, the estimation of sources and uses of funds is not an easy task. Because for the preparation of flow of funds Matrix, we need to see where the Funds raise and where do they go.

6. Conclusion:

Although with the passage of time there arose various theoretical controversies regarding money, the role of money in the economy and other propositions, these all are attri-

buted to the assumptions made under various circumstances. Besides that growth of intellectual discipline is also responsible for the emergence and growth of issues. This is typical especially after 1950. Keeping aside the characteristics and problems of less developed countries, the basic difference can be cited between monetarists and Keynesians which is responsible for the growth of monetary theories. Even then the theoretical issues in question these days are not taken very seriously. One eminent writer concludes:

"There are in reality no serious analytical disagreement between leading monetarists and leading non-monetarists."

He further says:

"Milton Friedman was once quoted as saying 'we are all Keynesian now', and I am quite prepared to reciprocate that 'we are all monetarist' if by monetarism is meant assigning to the stock of money a major role in determining output and prices."

Albeit, the disagreements about those issues cannot be ignored readily.


33. Ibid