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MONEY IN ECONOMIC THEORY

by Sam Aluko

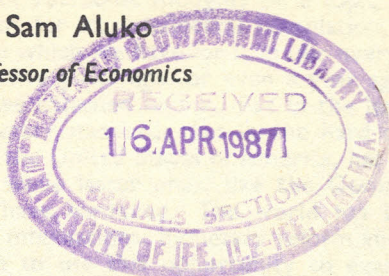


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MONEY IN ECONOMIC THEORY

by

Sam Aluko
Professor of Economics



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LET me start by apologising for giving this lecture five years too late. An inaugural lecture is expected to be given at the time an academic becomes a professor, and at the end of which he is installed on a special "Chair" to which he has been promoted. The institution of inaugural lectures started here only last session, but the provision of a special chair has not, and need not become part of life University tradition. So, while like others, it is my pleasure to give this inaugural lecture, like them also, I shall at the end of it be content with returning to my "Chair" which is not much different from, nor much softer than it was when I was appointed as a lecturer, thirteen years ago.

However, the delay in the delivering of this lecture has also enabled me to share with you some thoughts on a topic in which we are all interested not for its intellectual stimulation, than at least for the urge or love which we have for it in our everyday life. Had I given this lecture five years ago, or even a year ago, a less mundane topic might have appealed to me. But in the last twelve months, the world monetary standard, that is, the hard currency, the "almighty" dollar of the United States of America, has fumbled, stumbled and softened, while lesser ones, like the German Mark and the Japanese Yen, have hardened. The world has begun to debate the necessity for international monetary reform and I think it is appropriate for me to use this opportunity to examine the place of money in man's economic evolution.

What is Money?

Everyone, except an economist, knows exactly what money means. It is the coin or the currency which serves our exchange needs. The definition of money as the current coin is too narrow for the economist, because it would exclude almost all the primitive or traditional monies which still serve our purchase needs for goods and services or for the acquisition of a wife, for instance. The definition of currency as that which is current as a medium of exchange includes objects other than what we normally regard as money, like trinkets, beads, cattle or even clothes. Currency implies exchange through a medium, while money may be an intrinsic commodity or a mere token, say, a student's meal-ticket in the hall. Some of our students carry on transactions through the medium of their meal tickets.

Even if some of us know what money is, few of us know how it works. We know what it means when we use it for our simple or complex personal operations. But its general laws are baffling even to the wisest banker or the most profound economist. It is so because even the wisest banker has no means of preventing its escape from his strongest coffers nor is the most profound economist able to ascribe a permanent behaviour pattern to money. The economist would probably agree that for an object to pass for money it must have the unique characteristics of portability, durability, divisibility and distinction. Even these characteristics do not get

us very far, for, while money to be worth having may have these characteristics, there are quite a large number of objects that have them, but which we would not accept in payment of our monthly wages or salaries, such as ornaments, jewellery, weapons, beads and some modern electronic gadgets which are portable, durable, divisible and confer distinction. Also much of the money that we run after does not have all the characteristics. Currency notes for instance, are still rejected in large parts of Nigeria because the holders fear that they may burn or disappear and they are not easily divisible, although they are portable and confer distinction.

Perhaps, for our purpose, we should restrict the term money to such commodities which serve the three-fold functions of: a recognised and acceptable medium of exchange; a standard of value or a unit of account; and, a symbol or store of wealth.¹ Both the traditional and the modern theories and controversies about money deal with how effectively money can or should perform one or all of these three-fold functions. Furthermore, the objects that have performed these three-fold functions have themselves evolved with the development in economic thought and practice. A brief reference to these evolutions might illuminate our subject.

Money as a Medium of Exchange

Adam Smith, the father of classical economics, rightly said that the propensity to truck, barter and exchange one thing for another is one of the basic ingredients of human nature.² From earliest times, exchange took place by the simple bartering of one thing for another without the intervention of money. The silent trade of the medieval period, and which still exists in some less developed economies, even took place without the customers seeing or knowing each other.³ The bartering had the disadvantage of requiring a double coincidence of wants. That is, you not only have to want what I have, but I also must want what you have. As long as trade was primarily by barter each household had to produce mainly for its own needs and only occasionally exchanged its surplus products for those of others.

As barter transactions grew, men formed the habit of assessing prices in terms of a standard article which gradually enjoyed preferential treatment and wide acceptance as a medium of exchange. The first such widely acceptable medium was cattle, in the Homeric times. The English word "pecuniary" is thus derived from the latin word "pecunia" which derived from "pecus", meaning cattle. Cattle were widely used in Russia, Africa, Latin America and large parts of Western Europe, in spite of their obvious disadvantages. Other media of exchange were cloth, grains, oil, wine, wool, leather, shells, iron, salt, beads, local or imported gin, tobacco and ornaments with ceremonial or religious significance and cowries which appeared to be the most widely used and the most convenient of them.

Coins evolved very slowly as precious metals came to enjoy pre-eminence among the various media of exchange. The various shapes of the metals gradually became standardised and obtained the stamp of some public authority as a guarantee of quality. The first use of such recorded and authorized metal medium was in Crete in the 13th century B.C., and the earliest European coins of the modern type came from Lydia in Asia Minor between the 8th and the 6th century B.C.

These coins were originally issued by merchants and only as from the 6th century B.C. taken over by governments; each bore the emblems of its government, such as the lion's head of Lydia, the winged horse of Corinth or the owl of Athens. Silver coins were first struck in Asia Minor in 750 B.C. while the first gold coin was struck by the king of Lydia in 560 B.C.⁴ and the earliest bronze in Sicily and Athens in 400 B.C.

Alexander the Great brought a uniform system of coinage to all the territories that he conquered. By releasing the gold and silver which had been hoarded by the rulers whom he conquered, he increased the circulation of these metals which led to the first recorded violent rise in prices as a result of the sudden increase in the supply of money, an early example of monetary inflation. After his death, his successors placed the image of his head on one side of the coin instead of the city emblem. The use of the head of a dead ruler continued until the Seleucid dynasty in Syria substituted the head of its reigning monarch. In Europe, Julius Caesar was the first reigning monarch to be portrayed on the coin, which happened in the last year of his reign.⁵

With the image of a reigning monarch struck on the coin, it was not unusual that after the death of the ruler, many of his subjects thought that such coins should die with him. Thus, after the death of Queen Victoria, many colonial peoples, including Nigerians, tried to refuse the alloy coin on which the image of her head was struck as dead money.⁶

The present English penny dates from A.D. 693. It derived from the word "Pending" which referred to the coins struck by Penda who ruled the Kingdom of Mercia from 640 A.D. Two hundred and forty of such pennies were struck from a pound of silver. The word "shilling" also derived its name from the Saxon word "scilling", meaning broken pieces of silver. It first meant four pennies before it was standardised (850 A.D.) to mean twelve pennies, so that twenty of them made a pound. Because of instability in the value and content of metal money, counterfeiting was rampant and good money was often melted and made into an inferior one, so that when gold and silver coins circulated side by side, as from 1343 A.D., when the first gold florin was struck by Edward III of Britain, what later became known as Gresham's law operated, whereby the "bad" coins (silver) drove the "good" ones (gold) from out of circulation, because the good ones were melted into ornaments and kept as treasure, leaving the less valuable medium

of exchange in circulation.⁷ Thus in mid 15th Century A.D. four hundred and eighty pennies instead of two hundred and forty, were being coined from a pound of silver, so that the monetary pound no longer coincided with the pound weight of silver.

For more than two thousand years coins of gold, silver or bronze were the main means of payment, and the values of the coins were very closely related to that of the metal which they contained, but beginning from 1450 A.D. the use of representative money as a medium of payment began to appear in the form of bank deposits and bank transfers. Banking originated in the Italian cities of Barcelona, (1385 A.D.), Genoa (1408), and Venice (1587) and spread to Amsterdam, Holland in 1609. But the use of modern banknotes and paper money originated in England, beginning in the 17th century. The banknote originated with the London goldsmiths, who first accepted money deposits in 1633. With each deposit, the goldsmiths gave a receipt of a promise to pay the deposited sum to the owner and this gradually became transferable from hand to hand after 1670. When the Bank of England was founded in 1694, the issue of notes with a "promise to pay", written on each, was one of its most important functions. From then on, notes and coins circulated side by side as media of exchange, although notes were not as freely accepted as coins until the First World War, when their general acceptance was made possible, because each note could be taken to the Bank of England and exchanged for gold until the gold standard was finally suspended in 1939. Until then, except for a short period of suspension, the volume of notes issued in England was dependent on the volume of gold in the Bank of England. Whenever gold was withdrawn from the Bank, a corresponding amount of notes had to be cancelled. Since international payments were made in gold, whenever a country imported more than it exported it had to export gold to pay the debt, so that the balance of payments with foreign countries became very significant for the internal volume of bank notes that could be issued.

It was to ensure a sufficient and continuous inflow of gold and other metallic bullion from abroad as a means of strengthening the English economy that the English mercantilists of the eighteenth and nineteenth century became famous.

With the development of the modern banking system, first in England and later in Europe and America, the use of the cheque became widespread, but more in continental Europe and in America than in England. For instance, until 1963, the English Truck Acts prohibited the payment of wages and salaries in cheques, and even though the restriction has been removed, the payment of wages by cheques has proceeded very sluggishly. But apart from wages and small transactions, the majority of modern payments in the developed economies are now made by cheques through banks.

Today, coins, banknotes and promissory notes of all types (mainly cheques) constitute the main media of exchange. Although coins started earliest and still remain the most sought after, particularly

in the less developed economies, the banknotes now occupy a special and dominant position in two respects. First, they are the only means of payment which are legal tender for any amount, while coins are legal tender for only small sums and cheques cannot be made legal tender for the simple reason that a person who is offered a cheque has no means of ascertaining whether the issuer has a credit balance in his bank. So, cheques can pass only between people who trust one another. A large number of commercial houses in Nigeria refuse to accept cheques in settlement of purchases, inspite of the federal government's decree on the issuance of cheques.⁸

The confidence that must exist between the drawers and takers of cheques must also exist between the community and the media of exchange. If people lose confidence in their money, they become reluctant to accept it or they spend that which they hold quickly, thus giving further impetus to the loss of confidence and a consequent rise in prices. Money then ceases to perform its function as a means of payment and the public may fall back on the use of some of the commodities which we mentioned earlier or revert to barter.⁹ A new currency may have to be chosen and become accepted as the medium. Therefore, the essential ingredient of a medium of payment is general acceptability which is a function of public confidence.

With the growth in the use of money as a medium of exchange came more rapid development of the world economy. Also there was a close relationship between the growth of money and the decline of slavery. In the absence of money, some form of serfdom or slavery is almost inevitable. The operation of any economy requires that some people should organise and control the work of others. In a monetary economy, this can be done by hiring the services of free men, but in a non-monetary economy control over the work of others implies restrictions on the personal liberty of the workers. So, the evolution of money as a medium of exchange is closely tied with the evolution of human freedom.

Money as a Standard of Value

The adoption of a standard of value is as old as the adoption of a medium of payment and has evolved with it. The Homeric Greeks (407 B.C.) reckoned value in terms of oxen. During the early Greek wrestling contests, the winner received twelve oxen while the loser was consoled with a woman, thoroughly trained in domestic work and valued at four oxen. It was said, not without glamour, that most wrestlers were happy to lose and win the less valuable prize of a well-trained wife.¹⁰ In Hellenic Egypt, (350 B.C.) a weight of copper served as a standard of value, long before money was generally adopted as a means of payment. Pigs, rice, coconuts, dog's teeth, cowries which served as means of payments at various times also served as standards of value at the same times. But the two need not be, and had not always been, the same. For instance,

Norman England adopted the pound as its unit of account though for more than two centuries afterwards, the silver penny was the only coin in general circulation.¹¹ Even today, in England as well as in Nigeria, the services of lawyers, doctors, authors, and accountants, to mention only a few, are usually valued in guineas even though the guinea as a unit of currency ceased to circulate around 1700 and never circulated in Nigeria.

The rise of accountancy as a respectable profession was a result of the need to keep account of commercial and inter-personal transactions, beginning in Italy around 1282. The oldest known specimen of double entry is the public account of Genoa in 1340 A.D. As public budgets had to be prepared to assure taxpayers, first in the Roman Empire and later throughout Europe, money as a unit of account or standard of value grew in importance. Even today, in our personal purchases, since we have limited income for the satisfaction of our ever-widening range of wants, in order to maximise the utility derivable from our expenditure we often compare the price of one commodity with its alternative or substitute. Hence, money as a standard of value is essential to rational behaviour both to the consumer and to the businessman.

If money is to serve as a reliable standard of value, it is necessary that its own value should not fluctuate violently, just as any instrument for measuring distance must retain a stable property.

As Hingston rightly said, as a foot rule that is sometimes nine inches long and at other times fifteen inches would be useless as a measure of length, so is a unit of money which itself fluctuates widely in value will be useless as a measure of value. If monetary values fluctuate widely and erratically, budget provisions would be unreliable and value of assets and what money will buy would be inestimable with any degree of accuracy.

Although the need to ensure a stable value of money is of practical value and of immense personal advantage, it is hard for the public to understand the meaning of the value of money, particularly when the value of goods and services and of possessions and wealth is reckoned in monetary terms. If we assume that we spend all our money on the purchase of a single commodity, say, a car, the value of money varies inversely with the price of the commodity. That is, if the car doubled in price our erstwhile pound would be worth only ten shillings since we would need double the original amount of money to buy the same car. If the price fell to half its original level, our erstwhile one pound correspondingly would double in value. But we buy a large number of goods and services, some of whose prices rise while others fall. There is problem in adequately estimating the value of money, even if we employ the technique of the index numbers which, to be meaningful, must be sensibly constructed, based on a logical choice of a period of non-violent changes in the value of money itself, extending over a period of time that is neither too long nor too short, and covering the main items which loom largest in the expenditure patterns of the community. If the

value of money fluctuates frequently and widely (via the price system), money may not only cease to be a medium of exchange, and a standard of value, but may also jeopardise its role as a store of value.

Money as a Store of Wealth

This is because we are particularly sensitive to what happens to our treasures. It is true that where your treasure is, your heart will also be. In a modern economy, there are various ways of holding wealth. It may be held in coins, banknotes, bank deposits, saving accounts in various financial institutions and in cooperative societies, as saving certificates, government bonds or securities, as company shares, business investments or in the acquisition of land or houses. Although many of these are not money, they are close substitutes for money or can within a reasonably short period, be converted into money.

It is obvious that while anyone who holds his wealth in money can convert it into any other asset by a single transaction, wealth held in any other means requires at least two transactions, first to be converted into money and then to be used to purchase goods and services which are desired. So, in terms of holding wealth, money is perfectly liquid while other types of holding wealth suffer from varying degrees of illiquidity.¹² It is a paradox that real wealth, like land, buildings, commercial and industrial plants and equipment, are highly illiquid; their values are not stable but are usually constantly rising which is one of the reasons why, in spite of their relative illiquidity, many assets are kept in these forms.

The more unstable the value of money, in the sense that it is almost always falling, the less wealth is kept in money form. This is one of the reasons why some of the richest members of the community with fixed real assets are in monetary debt to their banks, because, as the value of money falls repayment becomes easier, particularly out of money realised from the sales of fixed assets whose (face-value) money worth has risen.

Therefore, money can completely cease as a store of wealth if its value fluctuates violently through inflation. Since money is so vital to the continued efficient performance and expansion of the economy, any modern government is concerned with maintaining a relatively stable value of money, so that sufficient wealth may be stored in the form of money, otherwise money will cease to be a unit of account and a medium of exchange.

Monetary Theory

The foregoing discussion demonstrates, even if only partially, the importance of money in the everyday economic activities of any society. In fact, it can be said, with a great degree of truth, that much of the progress in theoretical economics has come from discussions of the practical problems associated with money. Prior

to the 16th century A.D. the major practical monetary problems were the activity of money lenders, and the major economic theory of that period centred around usury, which was condemned by both economists and Christians: the economists on the ground that since most loans during the period were for non-productive purposes, it was exploitative to charge interest; the Christians regard it as sinful. But gradually, the economists parted company with the Christians. Faced with the problem that many of the borrowing and lending activities were economically advantageous to both lender and borrower, though they might in some ways be dangerous to the soul, the 16th and 17th century economists evolved the theory of the just price, as well as the just rate of interest which was consonant with the laws of supply and demand. The theory of the just price dominated discussion on the behaviour of money, wage rates, international trade and even the behaviour of rulers to their subjects in their daily economic activities. Now we know that the theory of the just price relates more to the theory of value than to monetary theory, but it was the monetary problems that existed between the 13th and the 17th centuries that sharpened the theory of values as well as the theory of money.

During the 16th and 17th centuries, controversy was centred around the economic necessity of fixing a legal maximum rate of interest chargeable on loans. An English Act of 1625 fixed the interest rate at ten percent. Previous rates had varied between twenty-five percent and fifty-five percent. It was reduced to eight percent in 1624, six percent in 1652, and five percent in 1713. The rate of interest was regarded as a function of the abundance or scarcity of money and as the price of loanable funds, so that when money was plentiful interest rates were low and vice-versa.

The mercantilist economists of the 17th and 18th centuries argued that a large stock of money was beneficial to a country both for peace and for war and based their theory of international trade on the desirability of achieving a balance of trade and payment surplus. But at the same time, they were faced with the problem that favourable trade and payments balance brought in more money, but also led to rises in prices, which checked exports and encouraged imports until the favourable balance disappeared. The relationship between the quantity of money, the price level and the balance of payments was thus established, given a free international economic intercourse.

The Quantity Theory of money which explained the fall in the value of money mainly in terms of increase in its quantity was the brainchild of the 16th and 17th century mercantilists.¹³ But later writers saw the relevance not only of the quantity of money, but also of the volume of business transaction and the velocity of circulation. That is, one pound which changes hand ten times performs the function of ten pounds that change hand once.

This statement has been put in the simple equation, $MV=PT$, where: M, quantity of money available for spending; V, velocity

of circulation of M; P, Purchase price of goods bought; T, Goods and services being offered for sale.

The equation can be further explained by reference to the total Gross National Product or GNP. Gross National Product consists of the production of both consumption and investment goods by both the people and the government of a country, plus the excess of exports over imports. It refers to the total productive power of the economy.

If each unit of production that makes the GNP is denoted by "t" and its selling price by "p", then the goods and services produced when converted into monetary units equal $P_1t_1 + P_2t_2 + P_3t_3 + P_4t_4 + \dots + P_nt_n = PT = \text{GNP}$. Since goods and services are paid for with money, the total money payments can be considered as the stock of money in existence, multiplied by the number of times that the stock passes from hand to hand in the purchase of the goods and services that add up to the GNP.

Therefore, the sum of the money payments must be equal to the value of the goods and services produced, which is what is meant by the equation, $MV = PT$.

If M, for instance, increases, then one of four other events could also occur. V might fall; P might rise, T might rise or a combination of these changes might occur. If M decreases, then similar changes in the opposite direction might take place, granting that $MV = PT$.

The quantity theory assumes that the quantity of money is the main determinant of the price level and of the value of money, and that change in M is assumed to produce a proportionate change in P, or in other words the elasticity of the price level with respect to the money stock is unity.¹⁴

The simplistic format of the quantity theory, has increasingly become refined and been made more sophisticated in the hands of later analysts since the sixteenth century. By the beginning of the twentieth century it was widely accepted, but, beginning in the 1930's, it became greatly discredited. Recently, however, with the general world-wide inflationary tendencies arising out of increases in wages, prices, and costs and the consequent constant monetary disequilibria, it has again grown popular in academic circles, though in revised forms. However, most of the modern sophisticated versions, derived from Pigou and Keynes, tend to explain the parameters that affect the total level of economic activity rather than the changes in the value of money.¹⁵

However, the equation has enabled us to analyse a large number of parameters in the functioning of a modern economy and deduce from the theory a number of alternative possibilities:

(a) A change in M might lead to changes in V and T, such that little if any effect is produced on P. Decline in M may lead to increases in V, because businessmen and consumers do not necessarily change their plans just because M has declined, but try to conduct the same amount of T as before with smaller stock of M, thus increasing V, so that the decline in M may not affect P at all.

(b) An increase in M may not be offset by a decrease in V , so that total spending, MV , will rise. If there is unemployment of men and of other productive factors, the rise in M may simply bring these resources into employment, so that T will rise, leaving P unaffected by the change in M .

(c) The fluctuations in V and T may be so large as to account for almost all the changes experienced in P so that the effect of changes in M on P may be very insignificant.

(d) Independent changes in P resulting from non-monetary forces may occur. Such changes might induce parallel changes in M or V or inverse changes in T . Government price control, if effective, might bring such changes in P .

(e) An increase in M may lead to lower interest rates, the level being determined by the strength of the community's preference for liquidity. If interest rates are already very low, an increase in M may simply be hoarded, so that changes in M may have no effect on V , P and T .

(f) The effect of increase in M on P may be quite indirect. The decline in the rate of interest arising from increase in M may lead to greater investment spending. The increase in investment will bring about a rise in effective demand, leading to increase in T or increase in P or increase in T as well as in P . If considerable unemployment exists, the rise in effective demand may induce further T without affecting P at all. Similarly, a decrease in M need not lead to a decrease in P .¹⁶

(g) The behaviour of V depends on the character of the banking system, on the industrial organisation, on social habits, on the distribution of income between different classes and on the effective cost of holding idle cash. There are three motives for holding money: precaution, transactions, and speculation. If the cash held to satisfy the transactions and speculation motives is M_1 and the amount held to satisfy the speculative motive is M_2 , both M_1 and $M_2 = M$. If M_1 has liquidity function L and M_2 has liquidity preference of L_2 , since L_1 mainly depends on the level of income Y , and L_2 on the relation between the current rate of interest r and the state of expectation, then $M = M_1 + M_2 = L_1(Y) + L_2(Y)$.¹⁷ It follows therefore that the mere change in M cannot explain the behaviour of V , P or T , without bringing in r , and the total earned income (Y). In fact, the relation of the changes in M to Y , V , P , T and r depends on the way in which changes in M come about. There is no time to pursue these further.¹⁸

For the purpose of the real world, one of the main faults of the Quantity Theory is that it does not distinguish between changes in prices which are a function of changes in output and changes in prices which are a function of changes in the wage rate, and the varying and conflicting propensities of the producers as well as the consumers. But the theory is still the best way of organising the separate determinants of the demand for and supply of money so as to analyse changes in the value of money and assess the effectiveness of various monetary policies.¹⁹

Implications for Policy

What we have said so far tends to illustrate that money in its three-fold role has both static and dynamic functions. Its static function is in ensuring a smooth or rough operation of the economic system without actively influencing its trend.

In its dynamic functions, money exerts a powerful influence on the trends of the price level, on the volume of production, on trade and consumption and on the distribution of wealth. It is capable of stimulating or impeding economic and social progress. It has exerted a decisive influence on the course of history, on the rise and fall of governments and empires and on the progress of civilisation.²⁰ It is with the dynamic functions of money that policy issues arise.

By monetary policy is meant the attitude of the government towards the monetary system in its effort to reduce to the minimum the disadvantages and increase the advantages resulting from the existence and operation of the system. It is part of the broader sphere of economic policy. The execution of a monetary policy is necessarily in the hands of government officials or/and the Central Bank, many of whom are not always able to appreciate the broad principles of the monetary policy which they apply, let alone the theoretical principles underlying the behaviour of money.

Until recently, the pre-occupation of monetary policy concerned the maintenance of the money standard, the enforcement of the state right of coinage and the values of the precious metals used as money. The over-riding objective of monetary policy, until 1932, was to maintain the international value of gold in terms of national currencies. Today, the main objectives of monetary policy can be categorised as: the maintenance of a stable exchange rate; the avoidance of inflation, deflation and unemployment at home and the promotion of economic growth. In short, monetary policy seeks to assist in the attainment of stability and growth, nationally and internationally.²¹

In order that the value of money may be reasonably stable over a terminal period, the increase in stock of money must match the increase in output and in population and satisfy the desire of the public to increase the ratio of cash balances to income as their real and money incomes rise. A public authority which is eager to ensure stability must calculate the net percentage rate of increase in the volume of money that is needed to meet the net increase in the volume of output bearing in mind the net reproduction rate.²²

Usually, the annual rate of increase in M that can ensure relative stability must be as near as possible to the annual rate of increase in the net national product. Anything much more will lead to inflation or much less to deflation.

Also a highly fluctuating price level is as disturbing to economic growth as to economic stability. But controversy exists as to the pattern of long-term price behaviour that is optimum for economic

stability, since a roughly stable, a gently rising, or a gently falling price level is consistent with rapid economic growth. If the "gentle" movement is sufficiently gentle, economists regard it as stable. If the equilibrium is disturbed and violent price rise occurs (violent falls in prices rarely occur), it will ultimately lead to the devaluation of the currency, arising from instability in the foreign exchange rate, unless there is a ban or strict control of international economic relations of the type that exists in centrally-planned economies.

Political pressure to take measures to stabilise the price level are always present and yielding to such pressures without adequate competence to control also the other parameters that are involved in the determination of the value of money, frequently does more harm than good and may increase rather than reduce instability or impede rather than promote growth.²³

Nigerian Monetary Policy

The Nigerian economy is a dependent one in the sense that externally it depends heavily on the importation of consumer and capital goods, higher cost of foreign travels over earnings from foreign visitors, legal and illegal exportation of capital and undue preference by even the hierarchy responsible for monetary policy and their elite counterparts outside, for foreign commodities and services. In view of these disturbances, it is not possible for an effective monetary policy to emerge.

Nevertheless, attempts at executing a monetary policy have been made since the country became independent in 1960. Between 1960 and 1969, the main monetary policy of the federal government was the provision of cheap money to finance government expenditures, that is, the maintenance of a low rate of interest of four and one-half percent, while leaving the rate at which individuals and the private sector could borrow from the banks, to the discretion of the banks. In 1970, the Central Bank made the first attempt to fix the minimum interest rate at two percent and the maximum interest rate at seven and one-half percent above the minimum rediscount rate of four and one-half percent.²⁴ Therefore the minimum and the maximum lending rates to individuals and private enterprises were seven percent and twelve percent respectively, while the government could borrow at four and one-half percent. At the same time, the minimum interest rate payable to savers in the commercial banks was set at one and one-half percent below the rediscount rate, that is, three percent, and at a maximum of one and one-half percent above the minimum rediscount rate, that is six percent. The rates still apply, which means that while private borrowers pay interest rates of between six and twelve percent, private savers receive interest rates of between three and six percent.²⁵ The policy can, therefore, be described as one providing cheap money for the public sector and dear money for the private sector, whereas one of the planks of the cheap money policy was said to be to aid investment financing in the private sector.²⁶

Other planks in the monetary policy include the reduction of pressure on the balance of payments, strengthening of the external reserve, increased Central Bank lending to the public and quasi-public sector, that is increasing M through the creation of bank credits and the restriction of consumption in favour of investment expenditure, so as to increase T.²⁷ In the execution of these policy measures the Central Bank of Nigeria (Amendment) Decree 50, of 18 September, 1960, gave the Central Bank power of monetary and credit control in order to increase M, while trying to control V, but in the hope that T would indirectly increase and P would fall.²⁸

Fiscal controls were used to augment monetary controls through increased customs duties in 1964-65, geographical ban on imports, and import licensing, (which by reducing T strengthened increases in P), and in the form of limitation of travel allowances and overseas remittances. In order to increase the volume of production, T, the Central Bank directed, on 30 April, 1970, that each of the commercial banks should grant on the average, a minimum of thirty-five percent of its loans, advances and discounts to indigenous borrowers for productive purposes by 31 December, 1970, and that even the other seventy percent credit should be made predominantly to the productive sectors of the economy, so as to check the upward movement of P, and to stabilise the value of the Nigerian currency.²⁹

The effectiveness of these measures has been variously assessed. Increased government expenditure on the 1967-70 civil war led to increased import of non-productive goods, to the balance of payment crisis and to threats to the stability of the pound. The need for increased revenue led to increased deficit financing through bank loans and a consequent increase in money supply. As a result of these activities the supply of money increased from £152.5 million in December 1964 to £304.2 million in December 1970 and to an estimated £350 million in August 1972, as the table below shows.

Nigeria's Money Supply and its Components [£million]³⁰

<i>End of Month</i>	<i>Currency outside Bank</i>	<i>Demand deposits</i>	<i>Total Money Supply</i>	<i>Demand Deposits as % of money supply</i>
December, 1964	98.9	53.6	152.5	35.1
" 1965	100.5	58.0	158.5	36.6
" 1966	108.6	63.9	172.5	37.0
" 1967	103.7	53.0	156.7	33.8
" 1968	91.6	72.5	164.1	44.2
" 1969	126.4	87.0	213.4	40.8
" 1970	171.2	133.0	304.2	43.7
" 1971	180	142.0	332.0	44.1
August, 1972	188	162	350.0	47.4

The most interesting observation in the composition of the volume of money is that while credit to the economy was £153.2 million in 1964, only £12.9 million of it was credit to the government sector. In 1970, credit to the economy had risen to £570.2 million out of which credit to the government had risen to £331.2 million. As a result of the expansion of credit and the increase in M , unmatched by similarly rapid increase in T or reduction in the other parameters in our earlier equations, prices have been rising steeply. It rose, for instance, by 13.8 per cent in 1970 over 1969 and again by 12.8 per cent in 1971 over 1970.³¹

In the circumstance, attempts at price controls were bound to fail, because P cannot be controlled without controlling M , V , T and even r and without tinkering with the liquidity preferences, L_1 and L_2 in our earlier equation.³²

Conclusion

One can safely infer that money and monetary management and policy are complex issues for which no satisfactory solution has been found since the beginning of civilization. In the centrally-planned economies more success has been achieved at the expense of consumer preferences and production rigidities. In the freer or less efficient economies the attempt to control one parameter has led to the tangential escape of the others. If prices rise, wage earners clamour for increases, which they eventually get and spend to further increase prices, unless productivity, that is, T , is rising faster than M and V , r and L_1 , L_2 , are held at optimum levels, which is not an easy economic phenomenon.

In the Nigerian case, the governments, by over-borrowing, and under-producing goods and services on which money is spent, have given fillip to a wage-price spiral which they have been unable to control. In the event of inefficiency in the public sector, as is obvious in Nigeria, whereas much of the money expansion goes to that sector, one is reluctantly forced to agree with Adam Smith that, "great nations are never impoverished by private, though they sometimes are by public prodigality and misconduct", particularly where, "the whole or about the whole of public revenue is mostly employed in maintaining unproductive hands and projects".³³

This is not to say that our economy should be returned to private hands, but to say that unless the productive power of our public authorities increases, we shall be deluding ourselves into believing that socialisation is superior to private enterprise. Especially in our country, including our universities, where there is little or no commitment to economic growth, but great commitment to conspicuous consumption and insignificant production, thereby increasing wages and the quantity of money in circulation, reducing the volume of production and thus increasing prices and reducing the value of money.

REFERENCES

1. See A. Hingston Quiggan, *A Survey of Primitive Money: The beginning of currency*, (London: Methuen, 1949), chap. 1, p. 4.
2. Adam Smith, *The Wealth of Nations*, ed. E. Cannon, 6th ed., (London: Dent, 1950), vol. 1, p. 15.
3. The earliest form of trade was probably the silent one in which one customer would exhibit his goods in an open space and then take cover. The other would then approach, set out his own offer of other goods in exchange and then retreat. The first customer would then return and inspect the other's offer; if he was satisfied he would take the offer and depart, leaving his own behind. If not, he would remove part of his goods and take cover again to watch the reaction of the other partner. This haggling continued until both sides were satisfied.
4. Victor Morgan, *A History of Money*, (Harmondsworth: Penguin Books 1965), p. 12, C.T. Saltman, *Greek Coins*, (London: Methuen, 1942), chap. 5.
5. See Harold Mattingley, *Roman Coins*, (London: Methuen, 1945), chap. 3, 5, 6.
6. Quiggan, *Primitive Money*, p. 82.
7. G. C. Brooke, *English Coins*, (London: Methuen 1932), chap. 2. R. H. M. Dolley, *Anglo-Saxon Coins*, (London: Methuen 1939), chap. 4.
8. See Decree No. 84 of 31 December 1966, *Laws of the Federal Republic of Nigeria*, Schedule I, Part II (Obtaining Property by False Pretences etc.), clause 419 B(b), p. A366. This Decree, applies only to Lagos. It should be made countrywide.
9. In 1923 the German currency became so valueless that cigarettes became a more acceptable medium of transaction than the Mark. A loaf of bread cost more than a million Marks, but could be bought with five cigarettes.
10. See E. V. Rieu, trans., *The Illiad*, (Harmondsworth: Penguin Books, 1950), pp. 52, 153, 431.
11. Brooke, *English Coins*, chap. 6.
12. Liquidity must possess two main elements: high speed of conversion and low cost of conversion into money. In general, real wealth is highly illiquid, although some real assets quickly convert into money at low cost and little risk as to qualify as almost perfect substitutes for money, e.g. savings certificates or sometimes government bonds.

13. Jean Bodin, a French social philosopher, is generally considered the originator of the quantity theory in his 1568 attempt to explain the rise in prices that disturbed France. Later writers who contributed to and helped to refine the theory were John Locke, 1691-2, David Hume, 1752; Richard Cantillon, 1755, David Ricardo, 1817, Irving Fisher, 1911, A.C. Pigou, 1917, Alfred Marshall, 1923, John Maynard Keynes, 1930 and 1936, Alvin Hansen, 1953, Milton Friedman, 1958 and 1966, and James Tobin, 1962, among others.
14. Since it is assumed that the ratio of the percentage change in M to that P is one.
15. See A. C. Pigou's argument that the temperament of the people in respect of liability to panic and the general state of confidence in the banking system are important to the quantity theory. But how can this be put into a mathematical equation? His equation, $P = \frac{kR}{M} \left\{ c + h(l-c) \right\}$ or $M = \frac{kR}{P} \left\{ c + h(l-c) \right\}$ where c, h, k and R are assumed as constants is too unrealistic to explain the behaviour of prices and the value of money which people spend. See A. C. Pigou, "The Value of Money", *Quarterly J. of Economics*, vol. XXXII (Nov. 1917) : 38-65. The Keynesian version is about employment, interest and money, not about money alone, and is supposed to be an alternative approach to the money theory.
16. See, J. M. Keynes, *The General Theory of Employment, Interest and Money*, (London: Macmillan, 1936), pp. 165-173, 194-209.
17. The demand for cash balances to satisfy the first two motives is assumed to vary directly with income, Y, while the demand to satisfy the speculative motive varies inversely with the rate of interest, r.
18. See Alvin Hansen, *Monetary Theory and Fiscal Policy*, (New York: McGraw-Hill, 1949). Alvin Hansen, *A Guide to Keynes*, (New York: McGraw-Hill, 1953), pp. 196-203. Milton Friedman, *The Quantity Theory of Money*, (Chicago: University of Chicago Press, 1956), p. 17. James Tobin, "Money, Capital, and other Stores of Value", *Amer. Ec. Rev.*, (May 1961). J. R. Hicks, "A Suggestion for Supplying the Theory of Money", in *Readings in Monetary Theory*, (London: Oxford Univ. Press, 1951), chap. 2. Sir Dennis Robertson, "A Survey of Modern Monetary Controversy", in *Essays on Money and Interest*, ed. Robertson, (London: Fontana Books, 1966), chap. 9. pp. 105-124.
19. Pigou, "Value of Money", pp. 77-78.
20. See Paul Einzig, *Monetary Policy, Ends and Means*, (Harmondsworth: Penguin Books, 1954) pp. 21, 23. Einzig describes five technical and static functions of money: as a medium of

exchange, as a means of non-commercial payments (for taxes, gifts, fines, etc.), as a standard of value, as a standard of deferred payments, as a store of value. (*Ibid.*, p. 23). These five functions can be subsumed in the threefold functions discussed earlier in this paper.

21. Growth and stability are more often contradictory than co-existing, unless under an effectively-planned economy.
22. This is best achieved in a planned economy which also requires planned money, planned private and public consumer behaviour and planned trade. Though the functions of money are virtually the same, irrespective of the economic system, the decision-making body or bodies are the central authority and the subsidiary public authorities, whereas in freer economies, a myriad of financial institutions and private individuals disturb the monetary policy through their economic acts of omission or commission. Our emphasis has been on freer economies, because it is there that the problems of money and of economics really exist.
23. Monetary policy alone, however, cannot achieve stability. It requires the assistance of fiscal policy and, more often than not, physical control policy measures, like bans on travel, rationing, purchase prohibition and price control. These are being neglected because of the necessity to limit discussion. They are the main tools of stabilization in planned economies.
24. Rediscount rate is usually the rate which public authorities or banks pay for selling bills of Exchange to Central Banks or Discount Houses.
25. See, Central Bank of Nigeria, *Annual Report and Statement of Accounts for the Year Ending 31 December 1970*, (Lagos: Central Bank of Nigeria 1971), p. 63T.
26. See, Federal Republic of Nigeria, *Second National Development Plan, 1970-74*, (Lagos: Govt. Printer, 1970), p. 14.
27. *Ibid.*, p. 15.
28. Federal Republic of Nigeria, *Second National Development Plan, 1970-74. First Progress Report, 1971*, (Lagos: Govt. Printer, 1972) pp. 32-33. Central Bank of Nigeria, *Annual Report, 1970*, (Lagos: Central Bank of Nigeria 1971), pp. 15, 41-65.
29. Central Bank of Nigeria, *Annual Reports 1964-1970*, (Lagos: 1965, 66, 67, 68, 69, 70, 71). Central Bank of Nigeria, "Monthly Report", (Aug. 1972): 8. While the total money supply has increased by a little more than 130 percent since 1964, the gross national product has increased by only about twenty-eight percent.
30. *Annual Reports 1964-1970*, p. 34. Central Bank, "Monthly Report", (Aug. 1972), p. 9.

31. Central Bank of Nigeria, *Annual Report, 31 December 1970* p. 134. On p. 17 of the First Progress Report, the rise in price was estimated at six percent in 1970-71, and six and one-half percent in 1971-72 over previous years, which demonstrate the unreliability of official statistics.
32. The Federal Military Government promulgated the Price Control Decree in May, 1970.
33. Adam Smith, *The Wealth of Nations*, ed. E. R. A. Seligman (London: Dent, 1957), vol. I. p. 306.