CHAPTER VIII

MONEY GOODS - FLOW EQUILIBRIUM: QUANTITY

THEORY RESTATE
WITH SPECIAL REFERENCE TO IANDIA
CHAPTER VIII

MONEY GOODS FLOW EQUILIBRIUM QUANTITY

THEORY RESTATED

I. Introduction

In the preceding chapters, 2 to 5, we have examined demand and supply forces emanating from various sectors and affecting the price structure. One confusion is axiomatically true that as all goods, services, and assets are exchanged against money and in terms of money, total money payments must be equal to the total value of these three sets of items. As such, Quantity Theory of Money must hold good. Yet during the last 35 years, it has been subjected to vehement criticism, by Keynes and post Keynesian economists. But most of what they had stated was only the Quantity Theory, stated in terms of money flow, i.e., expenditure rather than in terms of the stock of money. Fisher did not go into the details of money payments, neglected assets sector and credit and borrowing aspects. Hence although his \( V \) was transactions velocity, it referred only to goods transactions to the neglect of assets and credit transactions.

In the last section of Chapters 2 to 5, we have said a few words about total expenditure in the economy and its effects on the price level. Here we have to link all these data and add to these, the impact of Govt. sector as given in chapter VI and the impact of commodity controls, as discussed in chapters VII and on that basis, show how far the Fisherian quantity theory with the additions of items omitted by Fisher holds good for Indian economy during the planning period 1950-51 to 1968-69.

Exact figures about total national expenditure in India are not available. Sometimes national income in money terms is regarded as equivalent to national expenditure. But expenditure, in any economy, may be several times greater than the national income in money terms. National expenditure can be defined as the sum total of all payments being made at all stages of production in the productive processes in any given year.

The national expenditure, thus defined, can be divided into three types:

1. (1) Transfer expenditure: This involves only the transfer of purchasing power from one hand to another, or from one institution or unit to another. This does not generate any demand for goods, though it places purchasing power from the non-spending hands into the spending hands.

2. (2) Investment expenditure: In such expenditure, the demand for goods increases in the first instance, by the producers or investors but after a time, the purchased goods are converted into finished goods or saleable goods (if they are simply stocked by wholesalers and retailers for resale). Hence after a time, such expenditure, in turn, pushes into the economy flow of goods greater in value than that it had withdrawn earlier, by purchases.

Even purchase of shares and securities, at the time of initial issue, may be regarded as investment expenditure as the recipients are to use the money thus received, for further production. Thus investment expenditure in the long run cancels the original demand and may even increase the flow of goods by an amount greater than that it had withdrawn from the economy.

---

economy. Of course this does not bring down the price level because goods are produced after payments to factors of production employed. Hence increase in investments also facto increase in money or other increase in its velocity.

(3) Consumption expenditure: factors of production. These payments or expenditure increase the price level of the demand for goods, and the purchases are for final consumption.

According to this classification, all the payments made by R.B.I., to co-operatives, scheduled banks and to other NBFIS are transfer expenditures. These do not affect price structure, When scheduled banks, NBFIS etc. lend money for investment purposes, it becomes investment expenditure and will affect the price structure, When Government or individuals are spending money for purchasing consumer goods, these are consumption expenditure, and these also raise up the price structure.

The spenders in the economy can be divided into four categories:
(1) Govt. (2) Producer and sellers spending private investment expenditure (3) Foreigners (4) Households spending private consumption expenditure. Hence to find out the total expenditure in Indian economy, we have to know how much is spent by each of these four categories of spenders. The table given in chapter II to V, gives the total spending by these four spending sectors or demand sectors during 1950-51 to 1968-69.

It is seen from cols(7) and (13) of Tables 27 of chapters II to V, that the total expenditure in the economy has been greater than the national income at current prices. The gap between the aggregate demand and aggregate supply has been partially filled in by foreign aid as given in col.(12), and by imports as given in col (11).
period, total spending has been greater than the total value of the products produced at home or imported from abroad.

It is also seen that during 1951-52 to 1955-56 the gap between total spending and aggregate supply has been a few hundreds, so that the price level has remained stable. During 1956-57 to 1959-60 the gap between aggregate demand and aggregate supply has been about Rs. 1000 crores on average, so that prices have shown rising trend. During 1960-61 to 1963-64 the gap between these two variables has been, on average, Rs. 2000 crores, so that the price velocity (rate of increase in prices) has been greater than that in period II. During 1964-65 to 1968-69 the gap between aggregate demand and aggregate supply has been about Rs. 3000 crores so that price acceleration has been higher than in any of the earlier periods. Thus total spending vis-a-vis the total supply of goods and services from home or foreign countries affect the wholesale prices to a substantial extent.

III. Assets Market equilibrium:

In any economy, the process of production starts through the mechanism of capital market, wherein the savings of the nation are taken by special financial institutions, banks, shroffs etc. and are advanced to those interested in undertaking productive activity or business enterprises. As denoted in chapter I, by asset, we mean (P-6, footnote) all the monetary instruments that entitle the owner to receive a fixed or variable return along with capital at same
future date. They are IOUs of the Government or of some economic units. In the Table (2) to (10) give the various types of assets supply in our country during 1950-51 to 1968-69. They are central government securities, State Government securities, small savings, acquired by the state, savings deposits in the banks, time deposits, in the banks, stocks and shares of Government companies, stocks and shares of Non-Government (or private) companies and gold and jewellery. Although gold is not a monetary asset, but real asset. But a substantial amount of private or household savings are transformed into gold or used in purchasing smuggled gold or gold available in the market from other sources. It is very difficult to get the figures about the gold that is purchased in India in the course of a year. Yet for simplicity, we have taken gold refined in Bombay as the amount of saving in gold, as this also includes contraband or smuggled gold. Column (9) of Table 14 of Chapters II to V give the total of the assets supply from these sources.

The demand for assets (for savings) comes from three sources viz. (1) Government (ii) Corporate sector (iii) Households. The savings from three sources are given in columns (1), (14) and (16) respectively and their total in column (27), of Table 15, in Table 15.

As per the Reserve Bank calculations, household savings are of two types 1 (i) Financial savings including (a) currency (b) net bank deposits (e) insurance polices (d) Provident funds (e) Net claims on the Government sector (f) corporate and co-operative shares and securities and (ii) Savings in the form of physical assets, like

houses, land and other property or consumer durables. But the savings in this form is not utilised for further production and it adds to the demand for goods and services in the commodity market. Hence for our analysis, we have not taken savings in physical assets as genuine savings.

Thus the total supply of assets, as given in col. (2) and total demand for assets as given in col. (3) of Tables 28 of Chapter II to V interest to affect the interest rates on one hand and price level on the other.

It should also be noted that just as there is no real thing as price level there is no real thing as interest rate. But there is a structure of interest rates in different parts of capital market, differing in risk, maturity, security, credit-worthiness of borrower etc. But those who supply the assets, receive in turn the purchasing power which is to be used for some investment or other. This investment demand will be diffused over a wide variety of capital goods, intermediate products and other factors of production. If the assets supply is just equal to total demand for assets or genuine financial savings, there will be no pressure on the demand for goods and services. As we have seen in Section II, the aggregate demand for goods and services was greater than aggregate supply by itself. Added to this will be the investment demand made possible through excess assets supplied in the form of credit. When assets supply is just equal to gross financial savings, the investors get what the consumers (including Government, corporations and households) have forgone. But when the assets supply is greater than gross
financial savings, pressure on goods and services will increase and prices of such products will be pushed up, thus raising the wholesale price index also.

It is clear from col. (2) and col. (3) of Table 28 of Chapters II to V, in all the years the total assets supply has been about 50% to 90% greater than the total financial savings.

But these two columns do not explain why the wholesale price index and interest rates have not moved in proportion to the excess of assets supply over assets demand (or savings).

The figures given in the above-mentioned tables, however show that, if the assets supply is made greater than the assets demand (or genuine financial savings), the price structure is likely to move up. This shows the complexity of the factors affecting price level. And the excess of assets supply is one of the causes for the rising price structure.

Again, it is seen from Tables 28 that S.B.I. hundi rates and Bazar bills rate by shroffs two rates which we have taken to represent free rates in the organised money market have not responded to changes in the excess demand for period. This shows that the interest rates in the organised market are kept at lower levels, due to excessive increase in credit supply by the banking system and NBFIS.
We have seen in sections II and III that the available figures do not give us the total expenditure in the economy. This is because a large portion of the monetary transactions are in the unorganised and rural sectors. We do not have figures about the spendings at the various stages of production in rural areas, as also in business dealings in the urban areas, made outside of the banking sector. Hence it is very difficult to know exactly the total flow of goods, services and assets at various stages of production in our economy and the counter-flow of money to purchase them. Yet we can have some rough estimate of total spendings in the economy from that part of money supply which passes through the banking sector. The tables 29 of chapters II to V, in col. (4) gives the total money supply from 1950-51 to 1968-69. We have also seen that about 70% of this money supply has remained outside of the banking sector. But with the 30% on average, remaining with the banks, the annual cheque clearings are, on average, 13-14 times this amount. This is given by the cheques velocity of circulation of bank money of \( Vt \) of \( Mb \).

\[
\text{Cheques velocity} = \frac{\text{Annual cheque clearings}}{\text{Demand deposits}}
\]

We have also seen that the debits to current account are almost double of the annual cheques clearings and if we divide the debits to current account by the deposit money the rate of turnover of current deposits, on average, is found to vary between 33.9 and 45.9. This shows the extent to which money going to the banks is used to meet or provide for millions of transactions in the economy.
It is also seen from the columns (10) and (12) of tables 29 of chapter II to V that price level has moved almost in proportion to changes in these two variables. Inspite of several controls by R.B.I., the clearances and debits to current account have been increasing, and increasing very fast.

This shows that with the advent of planing era, although the percentage of money flow going to the banks has remained almost the same, the cheque velocity has increased from 11.08 in 1950-51 to 14.61 in 1968-69. This increase in bank payments, has, no doubt, affected the price structure in our economy.

The overall rate of turnover of the deposit money has increased from 33.9 in 1950-51 to 45.0 in 1968-69. This also shows that not only the money supply has increased three times during the total period (Rs. 1966.11 crs. in 1950-51 to Rs. 5350.07 crs. in 1968-69), while the cheques cleared have increased in value from Rs.12472.30 crs. in 1950-51 to Rs. 28252.80 crs. in 1968-69. This must have created a powerful impact on the price structure in India.

In Col. (6) of tables 29, we have given National income at current prices and the total spendings in our economy are given in these figures are co. (16) of Table 29, a total of $M1 \times V + M2 \times Vt$, i.e. currency with the public income velocity of circulation deposits money transactions velocity i.e. cheques velocity of circulation. This gives us a rough idea of the total expenditure in the economy that is to be exchanged against the supply of goods and services, valued at 1968-69 prices and given in col. (12).
It is seen that the total spendings in the economy 2 to 4 times greater than the national income.

V Impact of Government Sector on price structure.

The impact of the Government sector on prices is analysed in chapter IV. It is found that the indirect taxes have increased from Rs. 375 crores in 1950-51 to Rs. 708 crores in 1967-68. This has pushed up the costs of production and also have induced the producers and sellers to throw the whole incidence of taxation on to the consumers due to increasing demand made possible by increased spendings in the public and private sectors.

The investment expenditure by the centre and the states have increased from Rs. 401.29 crores in 1951-52 to Rs. 3107.01 crores in 1968-69 i.e. by about 8 times and yet the contribution made by the Government sector to the net national product is only 12% of the NNP in India. The consumption expenditure of the centre and the states has increased from Rs. 728.91 crores in 1951-52 to Rs. 4640.49 crores in 1968-69 i.e. by about seven times. This has created additional demand pressure on the supply of goods and services available in our economy.

The internal public debt has increased from Rs. 2905.11 crores in 1951-52 to Rs. 16356.20 crores in 1967-68 i.e. by 5 times. But about 40 to 50% of this debt is held by Government or banking sectors or by financial institutions while genuine holdings of the debt by households are only 4% of the total securities issued by the State (i.e. centre & states).

The deficit financing has been on the increase since 1955-56. barring exceptions in 1960-61 and this has caused powerful impact on the supply of money.
But from the loan operations and the ownership of the public debt, we find that the deficit financing in the true sense of the term has been several times greater than that given in budget estimates.

As noted in chapter VI, the increase in the investments by the R.B.I. in Government securities also leads to increase in purchasing power in the economy although this may not be to cover budgetary deficits of the Centre and the State. Similarly, a substantial portion of the investments by the scheduled and co-operative banks in Government securities may also be in the form of credit expansion and as such, this can be regarded as a factor increasing purchasing power through increase in the velocity of circulation of money supply.

Similarly, when banks create credit to advance loans to private sector, it also leads increase in purchasing power through increased velocity of circulation of money.

Thus overall deficit financing may consist of: (i) budgetary deficit, (ii) the bank credit to private sector (iii) R.B.I.'s subscription to Government loans (iv) the bank's subscription to Govt. loans. The total of these four items give the true deficit financing by the economy as a whole and we find that in this way the purchasing power pushed in the economy through the Government Sector has increased from Rs. 459.37 crs. in 1951-52 to Rs. 2436.81 crs. in 1968-69 i.e. by six times. It is very rarely that this is regarded as deficits; because figures do not appear as deficits in the budget papers or in the deficit financing figures in the R.B.I.
### Table 3.1: Total Deficit Spending in India (In crores of rupees)

<table>
<thead>
<tr>
<th>Years</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Budgetary deficits</td>
<td>Bank credit to private sector</td>
<td>R.B.S. subscription to Govt. loans</td>
<td>Banks subscription to Govt. loans</td>
<td>Overall deficit financing</td>
<td>Whole sale general price index</td>
<td></td>
</tr>
<tr>
<td>1950-51</td>
<td>-55.3</td>
<td>+12.1</td>
<td>117.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1951-52</td>
<td>-65.9</td>
<td>+65.1</td>
<td>164.40</td>
<td>296.05</td>
<td>459.37</td>
<td>118.0</td>
<td></td>
</tr>
<tr>
<td>1952-53</td>
<td>+41.9</td>
<td>-76.5</td>
<td>126.37</td>
<td>303.31</td>
<td>395.08</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>1953-54</td>
<td>-32.6</td>
<td>-1.0</td>
<td>107.77</td>
<td>378.88</td>
<td>393.05</td>
<td>104.6</td>
<td></td>
</tr>
<tr>
<td>1954-55</td>
<td>+107.0</td>
<td>+23.0</td>
<td>95.70</td>
<td>344.15</td>
<td>569.85</td>
<td>97.4</td>
<td></td>
</tr>
<tr>
<td>1955-56</td>
<td>+194.80</td>
<td>+95.40</td>
<td>208.80</td>
<td>359.90</td>
<td>858.90</td>
<td>92.5</td>
<td></td>
</tr>
<tr>
<td>1956-57</td>
<td>310.00</td>
<td>+99.70</td>
<td>256.74</td>
<td>347.18</td>
<td>1013.62</td>
<td>105.3</td>
<td></td>
</tr>
<tr>
<td>1957-58</td>
<td>503.00</td>
<td>-152.10</td>
<td>338.07</td>
<td>440.45</td>
<td>1129.42</td>
<td>108.4</td>
<td></td>
</tr>
<tr>
<td>1958-59</td>
<td>333.00</td>
<td>-138.2</td>
<td>389.91</td>
<td>613.37</td>
<td>1198.08</td>
<td>112.9</td>
<td></td>
</tr>
<tr>
<td>1959-60</td>
<td>264.00</td>
<td>-70.0</td>
<td>411.46</td>
<td>714.73</td>
<td>1320.19</td>
<td>117.1</td>
<td></td>
</tr>
<tr>
<td>1960-62</td>
<td>-5.7</td>
<td>+252.9</td>
<td>405.47</td>
<td>558.58</td>
<td>1209.45</td>
<td>124.9</td>
<td></td>
</tr>
<tr>
<td>1961-62</td>
<td>+222.70</td>
<td>+36.70</td>
<td>422.01</td>
<td>601.39</td>
<td>1282.80</td>
<td>125.1</td>
<td></td>
</tr>
<tr>
<td>1962-63</td>
<td>+210.90</td>
<td>+171.70</td>
<td>478.96</td>
<td>593.25</td>
<td>1454.81</td>
<td>127.9</td>
<td></td>
</tr>
<tr>
<td>1963-64</td>
<td>+261.60</td>
<td>+217.10</td>
<td>495.21</td>
<td>639.69</td>
<td>1613.60</td>
<td>135.3</td>
<td></td>
</tr>
<tr>
<td>1964-65</td>
<td>+226.75</td>
<td>+117.10</td>
<td>523.17</td>
<td>718.18</td>
<td>1585.20</td>
<td>152.7</td>
<td></td>
</tr>
<tr>
<td>1965-66</td>
<td>+478.90</td>
<td>+99.90</td>
<td>588.03</td>
<td>810.69</td>
<td>1977.52</td>
<td>165.1</td>
<td></td>
</tr>
<tr>
<td>1966-67</td>
<td>+238.40</td>
<td>+204.90</td>
<td>626.20</td>
<td>923.04</td>
<td>1992.54</td>
<td>191.3</td>
<td></td>
</tr>
<tr>
<td>1967-68+</td>
<td>+231.20</td>
<td>+192.40</td>
<td>553.71</td>
<td>1000.88</td>
<td>1978.19</td>
<td>212.4</td>
<td></td>
</tr>
<tr>
<td>1968-69</td>
<td>+466.70</td>
<td>+88.20</td>
<td>786.83</td>
<td>1097.08</td>
<td>2436.81</td>
<td>210.2</td>
<td></td>
</tr>
</tbody>
</table>

Source: R.C.F.
publications; because these amounts pass under the eulogistic name of Government loans. But as this also increases the velocity of circulation of money and pushes more purchasing power into the economy, it has inflationary effects on the goods and services markets.

Thus Government sector has been a powerful sector in impinging upon the markets, through injecting purchasing power both by additional notes printed, as also by increasing the velocity of the existing money supply.

VI. Impact of Controls on price structure.

In chapter VII, we have analysed in detail the various controls imposed on five commodity groups and have found that more controls without substantial efforts to increase production and without adequate resources to muster the factors of production required for this, have caused prices to rise and supply to contract, making it a paradise for rich and a tyranny for the middle and poor classes.

VII. The evaluation of the quantity theory of money.

On the basis of the above analysis we now proceed to find out the amber of truth and ashes of falsity in the Quantity Theory of Money as given by Fisher and Cambridge economists.
The relationship between the two variables, quantity of money and the price level is explained by Prof. Irving Fisher in his well-known quantity equation. He assumes that the velocity of circulation of money and the volume of trade are constant, so that the quantity of money and the price level can be functionally related. But price level is the average of innumerable prices and price of each good is affected by many forces other than the quantity of money in circulation. The above discussion about the changes in money and prices has shown that supply of money and prices had tendency in the same direction except during the first plan; the changes have not been proportionate. Hence, we give below some of the limitations of Quantity Theory of Money, to find whether it can still remain a useful tool of monetary analysis or whether it will require drastic improvements.

Index numbers are the averages; it is likely that no price may conform to the average figures. It is likely that prices of some goods may be falling while that of others may be rising, yet the averages will show constant prices, thereby hiding relative changes in prices.

The general price level often conceals the sudden and drastic changes in the prices of individual commodities and services. The heavy increase in the prices of commodities X and Y accompanied by the fall, by small amounts, in the prices of A, B, C, D etc. may show the general price level
to be constant, if the rise in the prices of X and Y is counterbalanced by fall in the prices of other commodities. The rise in the prices of X and Y if they are basic commodities will give rise to increase in many other prices. But the average being constant such tendency for prices to rise in future will not be exposed.

Often the data about prices, collected by investigators about prevailing prices may not give the true picture due to faulty price quotations given to investigators. The reliability of the index numbers will depend on the honesty, zeal and speed or time limit during which the price data are collected from various regions.

Weighting of index numbers, however carefully, done, cannot but involve some value judgements of those who frame the indices. It is also likely that the framers of the indices change the weights and manipulate them to prove or disprove the trends in prices that they wish others to accept.

To the extent that index numbers contain the data of controlled prices, the indices will show understatement of actual price rise.
Usually the general price level is the average of wholesale prices. The consumers' price index are available for different cities; but most of them are constructed on the basis of the controlled prices of the necessary commodities used by the consumers; hence do not find much difference between the wholesale price index and consumers' price index. Moreover, the index numbers do not give any idea of the free market prices or black market prices, as they are called, even though many consumers have often to resort to such purchases to supplement their rationed supplies of grains, sugar, oil etc. when the rationed quantity is less than required by them or when its quality is poor.

As Prof. Mises shows, the quality of all commodities produced in a country goes on changing continually. Hence it is misleading to construct index numbers, without taking into account the improvements or deterioration in the quality of the products.

Many of the prices are related, and the rise in the price of one leads to the rise in the prices of other commodities. Hence the averages of the prices of related commodities will confuse the cause and effect in price-changes. There is no solution to this problem as shown by Prof. Mises. 2

With the passage of time, old commodities disappear and new commodities come up. Their relative importance to consumers also changes. Hence the index numbers of prices over a period of years are not strictly comparable.

Even the selection of the method of calculating averages may be different and that of the base year is also arbitrary. To show less increase in prices, the base years are often changed.

When the price level changes, other variables also change. Moreover the prices of all goods and services do not change proportionately. Hence index numbers cannot correctly measure the purchasing power in terms of all goods equally.

2. "To employ the prices of producer goods is not helpful because it would not avoid counting of various stages of the production of one and the same good several times and thus falsifying. The result... A restriction to a group of selected goods would be quite arbitrary and therefore vicious..." -Mises, Human Action p. 221.

1. "Other things cannot remain equal if the purchasing power of money changes". ibid. p. 222.
Price indices are also affected by changes in the flow of goods and services, either due to droughts, failure of crops, restrictions on or reduction in imports, etc. Then $T_A$ will not remain constant, as assumed by Fisher.

In times of rising prices, the price level is affected by the activities of merchants and rich consumers who want to hoard scarce goods before their prices rise further.

Prices change also due to the indirect taxes imposed on commodities, especially when the demand for such commodities is intense, and the taxes can be shifted easily on to the consumers without reducing the demand for the commodity.

It is often said that the taxation on commodities withdraws some purchasing power from the economy; and hence the price level will fall.

The Quantity Theory does not take into account the monetization that may be taking place in underdeveloped economies. With monetization the need for currency will increase and this phenomenon can be explained as the transformation of barter transactions into money transactions; hence $T$ will increase due to monetization.

The export and imports also affect the price level; when a country exports goods worth Rs. 100 crs. this much money is placed in circulation, while its goods equivalent
is reduced from the economy. If this money is not withdrawn by the monetary authority in payment for imports from the importers, the economy may have surplus of money. But if imports are greater than exports and the farmer are financed by foreign aid, there will be less purchasing power in the economy and more goods. This will press down the price level. Of course, here also, we have to consider the nature of imports, the owner of imports, and his source of finance and the way in which imported goods are utilized in the economy. To state exactly the effects of foreign trade on price level.

The currency in circulation increased from Rs. 11,39 crores in August 1945 to Rs. 12,47 crores in March 1951, and the money supply with the public decreased from Rs. 2179 crores in 1945-46 to Rs. 1966 crores in March 1951. The wholesale price index increased by about 200 points from 244.9 in 1945-46 to 438.6 in March 1951 i.e. the money supply decreased by about 5%, while the price level increased by 100%. This amply proves that the relationship between the money supply and price level is quite loose.

It can logically be said that it is not the quantity of money or the money supply but the total expenditure that affects the prices. The demand for a commodity is expressed in terms of the money paid for it. But since money unit can be paid out several times during a given period, say a year, it is likely that the same quantity of money may
generate more demand or less demand, depending on the capacity and willingness of the buyers, to spend. This involves the question of velocity of circulation of money which is assumed to be constant by many experts. If velocity is constant, changes in the quantity of money cannot fully explain the changes in the price level.

Price level is affected not only by the quantity of money, but also by the way in which this quantity of money is spent. If the money is spent on consumer goods, it takes out a part of the flow of consumers goods from the economy while at the same time adding money in the hands of the sellers for responding by them. But if the money is spent on investment i.e. for further production, it will take out a part of the goods, some of which are not meant for consumption, while at the same time adding to the flow of goods in near or distant future.

If we take into account these limitations of the quantity of money, we are led to modify the theory.

It may, however, be argued that in spite of the limitations of the theory, it is applicable in backward economies, since the conditions of bottleneck levels of employment of resources exist in such economies. Hence according to Keynesian theory money supply and price level change proportionately, when more resources are not available for increasing output, so that the additional purchasing power
injected in the economy will result in raising prices only and not output. But we have seen that in India the two variables have never changed proportionately, except for a short period during 1956-57 to 1958-59.

It may also be said that quantity Theory of Money remains infallible, if we remove the assumptions of the constancy of the velocity of money and the volume of trade, so that when the quantity of money increases, output of goods and services increases at a faster rate, the price level may go down. Thus the changes in the quantity of money, or in its velocity or in output, all affect the price level.

But in spite of these attempts to reform the Quantity Theory of Money, it does not suit the requirements of the policy decisions to be undertaken by the monetary or fiscal authorities. Whatever the trends, shown by prices and the money supply, it will be a leap in the dark, if the monetary or fiscal decisions are taken, without taking into account the trends in the production of basic, intermediate and finished goods, in imports, exports, tax-levels, savings, investments etc.

But this does not mean that the Quantity Theory of Money should be rejected. Such a view will open the floodgates of fiscal extravagance, impressing upon the people that the quantity of money is not the cause of price rise and
Government can go on adding to the stock of currency in circulation with complacency.

What is required is to go behind the M.V. P. and T. and to sharpen their edges, so that the real factors behind these crude, unreliable and unmeasurable variables can be revealed and more light can be thrown on the effects of monetary and fiscal weapons.

With this aim, there have been three schools of thought, the first, we call, the orthodox quantity theory school, the income-expenditure theorist and those evolving the theory of finance. We shall discuss these three schools very briefly.

(1) The Orthodox Quantity Theory:

The Federal Reserve System, our Reserve Bank and the Chicago School believe in the orthodox quantity theory of money. They define money as currency plus current deposits and assume the velocity of money to be almost constant; consequently, they think that the price level can be controlled by controlling the currency and credit in the economy. The hold of this school in modern backward economies is so great that, when the Governments want to check rise in prices, their first weapon will be currency and credit control.
(2) The Income-Expenditure Theory:

This theory is supported by Keynes and his followers. Their views have been derived from Wicksell and Hawtrey who have thought the price changes to be resulting from the total income or the total spending and its effects on interest rates, investments etc.

(3) Financial Theory or the Liquidity Theory of Money:

This theory is initiated by the Radcliffe Committee though it did not evolve. Prof. G. Schmolders has shown that the price level is affected by the whole liquidity of the economy. For this we should include currency notes and all other forms of money in the term "Money supply". This theory is elaborated by Prof. Gurley and Shaw in their "Money in the Theory of Finance" wherein they show how the Financial Institutions have led to much increase in purchasing power due to expansion of their liabilities.

Thus monetary theory in its relation to price level is in a stage of new evolution. This has been necessitated by many complex changes in the means, methods and terms of payments for the goods and services purchased.

But this evolution cannot neglect the basic truths uttered by Ricardo, Mill and J.B. Say who say that:

There cannot be a general increase in purchasing power of money by simply printing more currency notes; so far as each note results from productions of a good of equivalent value, there cannot be a general increase in money demand, i.e., inflation, nor can there be a general over production, i.e., depression. J.B. Say would stand true in saying that 'supply creates its own demand;' if the assumptions behind this statement viz., perfect price flexibility, inter-commodity equilibrium in demand and supply and proper coordination amongst prices and costs, hold true.

Thus the assimilation of the old and the new can give us better truths. This is why we, in this study, emphasize that the key variable in affecting prices is not the quantity of money; but the total of expenditures of money in the economy.

It may be said that the relationship between the supply of money and prices and that between total expenditure and prices will not show much difference; since the supply of money is quantity at a moment of time, while the total expenditure is per period of time. Yet the following considerations will reveal that the relationship between $M$ and $P$, and expenditure and prices will not be identical.

---

1. There cannot be a general rise in values of all goods in better. The case is not different in money economy. There cannot be a general rise in the values of all goods and services, if the regard money also as one good. The value of all goods will rise by as much as the value of money falls. You cannot purchase more by printing more notes. You reduce the purchasing power of notes, by as much as you increase the quantity of it.
(a) Price level at any moment of time, is the result of the past expenditures made by producers in the form of the cost of production and expenditures made by consumers in the form of present buying. Hence total spending is more important than the quantity of money because the mood of the people to spend will determine whether the same quantity of money will be hoarded or spent several times in a given time. The idea that velocity of money is constant is the income velocity of money, wherein the denominator of the ratio viz. the quantity of money, in its turn, affects the numerator viz. national income and often it happens that velocity remains constant. But transactions velocity which can reveal the true amount of spending can change from time to time.

(b) Supply of money, even according to Fisher requires to be multiplied by velocity to find out the effects on prices. But total expenditure includes the transactions velocity.

(c) It is also likely that in times of rising prices, the quantity of money may be the cause as well as the effect of rising prices. When prices are rising, the increased cost of holding goods, and increased turnover will induce the merchants and producers to ask for more credit and this will increase the created deposits. Higher money incomes will lead to more deposits by consumers and producers and this will increase lodgement deposits with the banks, enabling them to expand credit. The Govern-
ment also will have to spend more, by giving more D.A's etc. in times of rising prices.

(d) Price level will also be affected by the increase or decrease in the need for money to be held in cash form. In times of rising prices, the need for holding cash is greater but along with this the need for spending it, to take the advantage of hedging against future price increases, is also greater. This will increase the expenditures, though the supply of money may be kept constant.

Thus we may presume that the total expenditure is the direct cause of price level changes. This is because all the variables and expectations of the people must be expressed in terms of spending. Thus if we analyse total spending, we can understand price behaviour better than simply by the quantity of money.

But we should not neglect the other side of the equation viz. P.T. Like many many goods are sold several times hence we should think of goods velocity also. Thus can be broken up into Q and V where Q denotes the total quantity of goods and services produced in the economy and V, the velocity of circulation of goods.

This leads us to think that the prices are affected by total spending or the total money flow on the money side, and the total sales or the total flow of goods and services on the real side.
VIII **Money-Goods** Flow Equilibrium

If the total spendings are better able to explain price changes, we can think of some equilibrium process on the lines suggested earlier in this chapter.

As there are many gaps and sometimes abysmal ones, the equilibrium in the producers' goods, consumers' goods and assets markets cannot be illustrated by exact figures. Yet, we attempt here to discuss theoretically the tri-sectoral equilibrium in these three markets.

These units may have five things to sell viz goods, services, securities, exportable goods or wealth inherited by them, or already held in store by them. The possession of these things or their store or production will give them selling power over money, just as money has purchasing power over commodities, services and securities.

Now, the function of the market mechanism is to adjust the flow of money emanating from the spenders at a certain speed per unit of time, determined by the actions or behaviour of the economic units, to the flow of services and securities emanating from the sellers' end, in three dimensions i.e. in size, rate of flow and time (or in size, rate and speed).

This adjustment is constantly being made by the changes in the prices of commodities, services and securities, by changes in their demand, stores, production, supply, etc. It is likely that in such dynamic situation the position of rest or equilibrium is never
achieved so that the total money flow is balanced perfectly by the total services and securities flow, type by type, in size, rate and time. But, there is always a tendency towards equilibrium and hence its importance in economic analysis.

The total flow of money can, for analytical convenience, be divided into three streams. The flow of money supply going to be exchanged against the producer goods and services and that against securities. These three streams flow to purchase commodities and services to be used for consumption, those to be used for investment i.e. further production, and the flow of securities (bonds, shares, debentures and other monetary claims).

Thus there are three sectors in which money supply will flow, and hence their flow in each sector must be balanced by the counter-flow of goods, services and securities in size, rate and time, so as to achieve or tend to achieve equilibrium position.

It may please be noted that many of the commodities and services serve the purpose of both consumption and investment, according as the use to which they are put; In most of the cases, no commodity is marked consumer good or producer good. If a commodity or service is used for further production (say cement, iron, manpower, in building a factory), it is producer good; but the same is a consumer good, if it is used for consumption i.e. for final use by the purchasers. Of course, there are certain goods which are exclusively for further production →
But in each sector, there may be a number of commodities, securities and services, and each of the commodity, service and security may be of various types. This involves the problem of multi-equilibria within each sector, and any excess supply of a commodity or so, or any deficit supply, may cause a change in its price or quantity and set into motion a chain effect on the prices and outputs of the interrelated goods, services and securities. But we assume that all these complex equilibria are brought about by flexibility of prices sectorally, so that the balance between the demand for and supply of each commodity, security or service is brought about by adjustment of prices and outputs instantaneously. Hence while considering the sectoral flows of money, we need not bother about the existence of any disequilibria, existing in the supply of and demand for any commodity, service or security as they would be taken care of through perfect intra-sectoral price-flexibility.

Under these assumptions, it is now easy to lay down the conditions of overall money equilibrium as follows:

(Continued)

and others exclusively for consumption, like machines in the former case and eatables in the latter case. But this exclusiveness comes to them only in their final stage of production, in their earlier stage, even many of them can be used either for investment (i.e. further production) or for direct consumption.
(1) The aggregate supply of commodities and services, the average price at which each commodity or service unit is sold, must be equal to the total supply of money diverted to purchase the commodities, for the purpose of consumption.

If \( P_c \) is the AV price of goods and services for consumption

\( D_c \) is the demand for goods and services for consumption

i.e. money flow directed to purchase them for consumption

\( S_c \) is the supply of goods and services for consumption.

and there are \( l \) to \( n \) commodities and services and the \( \text{th} \) commodity is money and near money.

\[
\sum_{c=1}^{n-1} D_c = \sum_{c=1}^{n-1} P_c S_c \tag{1}
\]

(2) The aggregate supply of producer goods and services (or factors of production) x the average price at which each factor unit is sold, must be equal to the total supply of money diverted to the purchase of producer goods and services.

"\( f \)" subscript denotes factors of production and there are \( m \) factors of production, while other notations are the same as given in the condition No. 1.

\[
\sum_{f=1}^{m-1} D_f = \sum_{f=1}^{m-1} P_f S_f \tag{2}
\]
Diagram 8-1.
(3) The supply of securities (bonds, shares, equities, bills, and other monetary claims) \( X \) the \( AV \) price at which each security unit is sold, must be equal to the total supply of money directed to the purchase of securities.

If \( S_s \) denotes the securities and there are \( l \)-1 securities, while other notations are the same as given in condition No. 1.

\[
\sum_{s=1}^{p-1} D_s = \sum_{s=1}^{p} s_s \quad \ldots \ldots \ldots (3)
\]

In simple form, this condition is the same as the supply of savings must be equal to the investment demand for goods and services. But this requires further analysis, of which more will be said in subsequent chapter.

In the above figure, we measure the total supply of goods and services per time unit, say a year, on the right side of \( X \)-axis and the total supply of securities per year on the left side of the \( X \)-axis. On \( OY \), we measure the supply of money per year, of which \( OM \) is the currency in circulation issued by the monetary authority, \( MB \) is the supply of credit by the banks and \( B_{NF} \) is the supply of money or near money by the non-bank financial institutions, government, individuals, and firms.

---

Note 1: This division is only to show the components of \( OY \). \( OY \) may include cash and bank credit also. The whole of \( OY \) is the total purchasing power.
On the downward (southern) side of the Y-axis, we measure induced credit i.e. the supply of credit which has not formed a part of the income process, but is created by the Government from deficit financing by sales of securities to banks, or by banks at the instance of increased demand for loans i.e. in short, the purchasing power that is not earned by any earning unit but created ad hoc to finance increased demand by any spending unit.

The first condition of equilibrium is fulfilled when OG amount of goods and services per year are exchanged for CY amount of money. CY is the flow of money used per year for purchasing goods and services for consumption. The remaining part of the earned income CO is saved i.e. is to be used to purchase securities. The earners will purchase various combinations of securities. Now if this total flow of money diverted to securities i.e. OC is just equal to the total value of the securities issued in the economy by Government and by the companies etc. the equilibrium will be achieved at Sq. i.e. when 3rd condition, the money that is not spent on consumer goods and services, is used for purchasing securities.

It is likely that only a part of this may be used for purchasing securities and the rest may be held in cash form by the earners. This balance will press against the demand for goods, services and securities in the next time unit. But the deficiency in demand for securities will lower their prices and hence raise the rate of interest structure, so that more money will flow to purchase securities or that the flow of money held in cash, if diverted to consumer goods, will lead to rise in the prices of consumer goods and hence induce producers to expand output and offer higher interest rates in the securities market due to the increased demand that is exerted on the
goods and services that they are to produce.

It is seen that \( YGqC \) (i.e. \( \frac{CV}{CO} \)) is the average price level in the commodities and services market and \( \frac{CO}{CV} \) is the average price of the securities, in blue lines in Fig. 8.1.

Now, GX amount of goods and services that are not disposed of for consumption expenditure are available for investment. The purchasing power i.e. money and near-money amounting to OC, that is, under equilibrium spent on purchasing various securities has been the means to divert the demand for goods and services from consumption to that for investment or further production. The money received by the sellers of securities will be used by the borrowers of money for purchasing various commodities and services for investment purposes i.e. for further production of goods and services. Now the equilibrium in the GC market can be achieved if the second condition is fulfilled i.e. if the purchasing power that flows towards producer goods is exactly equal to the value of the remaining part GX amount of the goods and services that are supplied during the year. This is shown by the point Fq where the supply of money OC per year is exchanged for exhausting the GX supply of goods and services for the purpose of investment. If a part of this borrowed amount is not spent or held in cash, some producer goods will remain unsold. Their prices will decline, hence either their demand will increase or they will be diverted to consumption, if the saved money by borrowers is spent on consumption or in the
next period their output will be curtailed. Investment demand will hence decrease and the price of securities will increase (rate of interest will fall and so on). If continued further, it may contract total flow of money and also the flow of goods and services and unemployment of resources may ensue, leading to depression if it is continued longer. Similar results will follow if the amount OC falls short of the value of GX goods and services.

But when GX amount of goods and services is not used for consumption, it will be diverted to further production i.e. investment, if and only if, the OC amount of money exchanged for securities and received by various producers is used by them for purchasing producer goods amounting to GX so as to achieve equilibrium at Fq, as noted above.

If however, the money payments for investment is greater than the value of GX, the price level will increase to ration the available producer goods amongst more efficient, out of many producers.

\[ \frac{CY}{CY} \] measures the average propensities to consume. It is likely that the flow of money CY may be greater than (or less than) the value of the goods and services, demand for consumption may lead to rise in (fall in) their prices.

When the banks create credit (i.e. induced purchasing power is increased. This is not earned by any spending unit, but is created ad hoc to finance more investments by producers or more consumption by consumers. What then happens is to divert the aggregate demand from the goods and services required for consumption to those required for investment, if the credit, advanced by banks goes to the
producers. It will increase the demand for goods and services for production. After the time unit, this increased flow of goods and services towards investment will increase the supply of goods and services in the next time unit. In the above figure, if $\gamma$ is the amount of induced credit, by banks, it will press against the existing goods and services $O_X$, raising their prices. The equilibrium in the investment sector will move from $P_0'$ to $P_1'$ depending on the elasticity of output with respect to the rise in the prices of producer goods.

If the output elasticity of price is zero (it may be due to inelasticity of the supply of the factors of production), $G_X$ amount of goods will be exchanged for $C_X'Y_1$ of money and near-money and the average producer goods prices will increase from $\frac{C_XG}{G_X}$ to $\frac{C_X Y_1}{G_X}$. If, however, the output elasticity of price is unity, the increased price for producer goods will raise output by $P_0 X 1$, so that the price level will be $\frac{C_X Y_1}{G X} = \frac{C_X G}{G X}$, i.e., it will be the same as before when output has increased after a time unit. Thus bank credit does three things: (1) it diverts new purchasing power to the producer goods, (2) it increases the income of those factors who are newly employed or who are given higher remunerations, (3) it increases the supply of producer goods after a certain time. Whether these changes will increase total pressure on the goods and services will depend on the rate at which additional output is produced. If it does not increase by $P_0 X 1$ but less or none at all, the prices of goods and services will increase. The goods and services will be diverted from consumption to production. The fall in the supply of goods and services in the consumption sector will
further increase their prices. If the consumers get additional remuneration by increased wages, or so, the total pressure on OX will increase raising prices further, unless offset by increased output of goods and services in the next time unit in response to very high prices.

If however, OC falls short of the value of GX, there will be some goods and services to be used for production remaining unsold. There will be excess supply of producer goods, their prices will fall and a part of them may be diverted to consumption by increased demand for some goods, brought about by a fall in their prices. If however, consumption demand does not increase so much as to exhaust the excess supply, the unsold goods and services will induce producers to decrease production and release some of the factors of production, thus generating unemployment and fall in the real national income, causing depression of continued further, as we noted earlier.

Similarly, if due to some reasons demand for goods and services for consumption increases, the CG equilibrium point will move downward to CG1 instead of YC, will be spent on consumption per year i.e. marginal propensity to consume will increase, the price of goods and services for consumption will hence increase from YC to YC1. The flow of money to securities market will decrease, hence the same amount of securities OX will be sold for OC1 of purchasing power i.e. their prices will fall from OC to OC1, and hence the rate of interest will increase, or if the supply of securities is curtailed due to high interest rate, the prices of securities will be maintained at high level i.e. rate of interest will be maintained at a
lower level. But low interest will not induce more saving or more credit supply from banks; hence the fall in the flow of money in the securities market will also reduce the demand for producer goods and services will be used for consumption and less for further production; so that the rate of economic growth will be less. And the economy will function at high prices, artificially low rate of interest, causing either fall in output or lower rate of increase in it.

Thus rising prices, low interest rates, increasing spending and unemployment will co-exist, contrary to Keynesian teaching that spending reduces unemployment. This shows how interrelated the three sectors are: Any change in the price, output supplied, or demanded in one sector transmits its impact on the other two sectors of the economy. The movement can start from any end e.g. if rate of interest is somehow lowered, the flow of money to securities will be less; i.e. savings will decrease, more money will flow to consumer goods purchases. Hence the supply of goods and services for consumption will increase, probably by diversion from the production goods sector where the demand for them will fall due to less supply of securities being exchanged for cash, by the issuance of securities, and hence decrease in the demand for investment.
IX Conclusion.

Whether the tri-sectoral equilibrium, theoretically analysed above, can be exactly fitted in the data we have amply given throughout this work or not, is a topic for further research. The price structure in our country, as in other countries also, is the resultant of a number of variables and as such, it is not possible to make any predictions about price level due only one variable. The Fishian equation in its MVPT next conceals behind it a number of variables, most of which Fisher ignored; but its very expanse is its limitation. It loses exactness and predictability.

But none can ignore that as all the variables that affect price behaviour directly, indirectly, or from remote angles, express themselves through monetary payments and receipts and hence the money supply can be regarded as the prime source which determines the price trends of the behaviour.

We have also found that money supply affects price level more in the 4th month than the first three months after its injection in the economy. Thus we can loosely hold that money supply creates its impact on price level after 3rd month, though no hard and fast rule can be formulated on the basis of this.

The work also corroborates the theory that savings are the root of economic growth. The low rate of saving, and the increase in savings, being more than counterbalanced by excessive borrowings, have
kept the growth rate lower in our country than would otherwise have been the case.

The increased savings, controlled expansion of credit, and financial discipline by the Government, can play a great role in accelerating the growth of the economy.