CHAPTER I

INTRODUCTION TO AN ANALYSIS OF THE BEHAVIOUR OF PRICES IN INDIA DURING 1950-51 TO 1968-69
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I. Introduction

The money mechanism is to the body economy what the circulatory system is to human body. The working of the Monetary Authority is comparable to that of human heart. Just as all human organs function through the flows of blood, the various economic units (households, firms, Government, farms, etc.) function through the flows of money. But just as, high or low blood pressure deteriorates the health of the body, the excessive money supply or its deficiency causes inflations or depressions, in the body economic.

The first problem that we encounter, in analysing the behaviour of prices is that of the definition of the concepts — "money" and "its behaviour".

Experts do not agree in defining "money". Analytical convenience or purpose often determines the definition of money. The fundamental function of money is to serve as a medium of exchange. Even its function as a store of value is derived from its being a medium of exchange. Money commands the capacity to purchase goods and services now or in future. That is why it occupies supreme importance in money economy. It is for money that all activities are undertaken, nay its power to purchase goods
and services induces all economic units to work for getting it.

In any country, the unlimited legal tender is the money; but above it a whole superstructure of monetary instruments is raised which are of varying degree of liquidity and which can be used as medium of exchange. Cheques, bank drafts, bills of exchange, Government securities, Shares, debentures, all can command purchasing power, if they can be converted into legal tender money or if they command the confidence of the persons to whom payments are to be made. This is why writers do not agree as to which of these instruments should be covered by the definition of money.

Since bank deposits in current account can be encashed without limit, these deposits are included in the definition of money; while other deposits and instruments of credit are called bank money or near money. ¹ Some writers² have included savings deposits and time deposits in the concept of the supply of money ³; while the Raddiffe committee has gone to the extent of saying that money is the "immediately transferrable purchasing power" ⁴. But the Reserve Bank of India defines money supply so as to include notes in circulation, rupee coin and notes, and the demand deposits ⁵ of the banks money supply ⁶.

2. Warburton, Warnette and Hausen: studies in quantity theory of money P. 188
3. Wald Behrman and Tobin excluded time deposits from the concept of money - studies in the quantity theory of money P. 197.
5. "These include all deposits withdrawable without notice such as current accounts, portions of savings deposits withdrawable without notice, unclaimed deposits and overdue fixed deposits" - Reserve Bank Bulletin - July 1961 P. 1047.
Money can be regarded as consisting of four dimensions.

i) Quantity of money proper

ii) the velocity of circulation of money

iii) the cost of money as given by the various rates of interest, and

iv) the availability of money at various interest rates.

But all these dimensions express themselves only through the quantity of money. Hence, we, in this analysis, will follow the R.B. definition of money supply or quantity of money as consisting of

i) Currency notes and coins with the public, excluding the balances of Central and State Governments held at treasuries and cash on hand of scheduled and reporting Non-scheduled banks and State Co-operative banks. 

ii) the demand deposits (excluding inter-bank demand deposits) of Scheduled and reporting Non-scheduled banks and State Co-operative banks

(iii) the "other deposits"* (excluding the balances in Account No. 1 of the International monetary fund) held with the Reserve Bank of India. 2

But we should not lose sight of the other three dimensions of money which assume greater importance in abnormal times like booms, inflation or war-time. The money flow can be compared with the flow of water. The impact of money in the economy as a medium of exchange is felt

2. Ibid. P. 1046.

* "Other deposits with the Reserve Bank" include items like deposits of quasi-Govt. institutions, provident, pension and guarantee funds of the Reserve Bank employees, deposits of the R.B.I. employees' Cooperative Society, the balances of foreign central banks & deposits of I.M.F. in Account No.2. Ibid. P.1049.
through its flow which covers its four dimensions. The quantity of money can be compared with the volume of water flow that is pumped through pipelines. While the velocity of circulation of money can be compared with the rate of the water flow per unit time, say a second or a minute. The velocity of money is usually calculated per year and is normally defined as,

\[
\text{National income at current prices} \quad \frac{\text{The Money Supply}}{
\]

This ratio gives us the number of times that a currency unit is exchanged to generate monetary national income. But it does not give us the idea of total payments made in the economy throughout the year for all and sundry transactions. Hence to measure the total quantum of monetary payments made in exchange for commodities, services, and assets. Economists have used the term transactions velocity of money to distinguish it from the above concept which is regarded as the income velocity of money. Transactions velocity of money is:

\[
\text{The total volume of monetary payments made in a year} \quad \frac{\text{The money supply}}{
\]

* In this analysis, by assets, we shall mean all the pieces of paper that are monetary instruments like Government securities, shares, debentures units, (of unit trust) which cost nothing to produce but which are representing indebtedness or IOU's of same economic unit or other, for the original seller and store of value for the purchaser. For analytical convenience, we shall call the total of all commodities, services and assets as "goods" with due apology to the meaning of these words.
This concept shows as the rate per year at which money is exchanged for all the economic transactions.

By cost of money we mean the various rates of interest in money market. They can be compared to the size and opening of the tap-cocks. If the cocks are fully opened water flows with the rate at which it is pumped, but if they are more or less closed the flow of water is hindered and reduced. Similarly the lower the rate of interest the money flow will be unimpeded and hence greater & vice versa.

The availability of money is comparable to the check points in the water-distribution system in a city. Due to central bank restrictions or other reasons, the availability of money may be greater or less at different times. Even if the interest rates are lower the monetary policy may restrict the availability of money and can thereby affect the monetary impact on the economy, just as a the water flow controller can reduce or increase water flow in certain areas by manipulatory check points.

In abnormal times all these dimensions, become very important as the impact of money becomes too much or too less due to economic units trying to safeguard or to take advantage of the situation and monetary or Government authority trying to check them from doing so, from egalitarian considerations.

By behaviour of money, we mean the process by which and the manner in which the money affects the valuations of different commodities, services and assets in an economy. This process can be studied in terms of the "stock" concept of money or in its flow concept. Stock of money

1 J.W. Angels
is money at a particular point of time as in a picture in a photograph. "stock" concept has no time dimension while the flow of money is money during a period of time as is the image of things in a cinematograph. i.e. it has time dimension. Normally both stock and flow analyses yield. The same results as a photograph of a standing man would not be much different from that of the walking man in a cinema; but in abnormal times, vast differences are observed in the analysis of money in these two-aspects as will be illustrated later on. In this analysis, however we shall study money in its "flow" aspect. This necessarily follows from our need to consider money in its four dimensions, in which we have to emphasise the transactions or expenditures of money involving all monetary payments which constitute "flow" aspect of money. Money, by its very nature and utilization, is continuously on the move. Hence, quantity of money at a point of time say on 10th January 1969 i.e. in stock concept has limited significance in its analysis.

The manner in which money affects the economic variables in any country, as such, is the numerous changes in the volume (quantity), speed (velocity), and composition (various dimensions noted above) of money brought about by the actions of the Government banks, monetary authority or the public. The manner in which money affects the economy is also known by the changes brought about in prices, incomes, costs etc. in the economy.

2. Gardner Ackley. Macro-Economic Theory P.6

3. "Money is a stock; expenditures or transactions in money a flow, income is a flow, wealth is a stock saving is a flow; savings is a stock"
The flow of money arises both as sales proceeds of producers and sellers and as incomes of the buyers. In a given period of time, all the factors of production earn their incomes which they mostly spend on consumption and the rest they save in terms of some assets or some claims to the future. Thus the money flows from all the spenders or buyers in the economy and as such is regarded as total expenditure flow of money or aggregate demand for "goods" (i.e. commodities, services and assets). On the other hand the total of "goods", flow from the producers or sellers may be regarded as "goods flow" or aggregate supply of "goods". If these two flows are equal in volume, velocity and composition, the price structure, which is the resultant of the interaction of these two sets of flows, will be more or less stable; but any disequilibrium between the two flows will cause the price structure to move up or down.

From this point of view, the behaviour of money, interacting through the forces of demand and supply affects the price structure of the economy at any period of time. The trends and extent of the changes, in price structure are denoted by the levels of wholesale prices. Hence wholesale price index helps us in understanding the behaviour of money.

In what follows, therefore, we shall study the behaviour of money during the periods, as distinguished by the trends in wholesale prices.

4 Although, we have to use the term price level in monetary analysis, there is no such thing as price level which gives us the true picture of numerous commodities whose price might risen or fallen. Hence wholesale price level only shows the trend up or down and its extent. This is why we use the term "price structure".
II. Division of the Period Under Study

The period of nineteen years of planning in India provides us with vast amount of data for studying the behaviour of money. Table No. 1.1 shows the trends in the money supply, wholesale prices, the amount and the rate of increase in the wholesale prices.

A glance over the wholesale price changes during the nineteen years, reveals that in the course of four or five years, there is a jerk up or down in one year and the prices are pushed up or down by a substantial margin, while after that year, there are three or four years continuing the price change in the direction of the jerk with diminishing force. There are four such years of price jerks viz. 1952-53, 1956-57, 1960-61 and 1964-65.

In 1952-53, the wholesale prices decreased by 16.1 points from 105.5 in 1951-52 to 89.4 in 1952-53 i.e. by about 15%. This downward thrust continued for next three years with diminished force, except 1953-54 when price trend was upward to recover the former position by 4.7%. But in the next two years, prices fell by 5% to 6%.
Table No. 1.1

Annual Trends in Money Supply and Wholesale Prices

<table>
<thead>
<tr>
<th>Years</th>
<th>Money supply (Rs. in crores)</th>
<th>Wholesale price index (1950-51=100)</th>
<th>Increase in prices or decrease - rate of change in prices (Rs. in crores)</th>
<th>Percentage rate of change per period</th>
<th>Average annual Rate of change per period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1949-50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950-51</td>
<td>2015-99</td>
<td>100.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1951-52</td>
<td>1803-79</td>
<td>105.5</td>
<td>+ 5.5</td>
<td>+ 5.5</td>
<td></td>
</tr>
<tr>
<td>1952-53</td>
<td>1764-71</td>
<td>89.4</td>
<td>- 16.1</td>
<td>- 15.09</td>
<td></td>
</tr>
<tr>
<td>1953-54</td>
<td>1793-97</td>
<td>93.6</td>
<td>+ 4.2</td>
<td>+ 4.7</td>
<td>- 3.56</td>
</tr>
<tr>
<td>1954-55</td>
<td>1920-63</td>
<td>87.2</td>
<td>- 5.4</td>
<td>- 6.8</td>
<td></td>
</tr>
<tr>
<td>1955-56</td>
<td>2216-95</td>
<td>82.7</td>
<td>- 4.5</td>
<td>- 5.2</td>
<td></td>
</tr>
<tr>
<td>1965-57</td>
<td>2345-30</td>
<td>94.2</td>
<td>+11.5</td>
<td>+ 14.0</td>
<td></td>
</tr>
<tr>
<td>1957-58</td>
<td>2417-00</td>
<td>97.0</td>
<td>+ 3.2</td>
<td>+ 3.4</td>
<td>+ 6.3</td>
</tr>
<tr>
<td>1958-59</td>
<td>2530-27</td>
<td>101.6</td>
<td>+ 4.6</td>
<td>+ 4.8</td>
<td></td>
</tr>
<tr>
<td>1959-60</td>
<td>2725-04</td>
<td>104.7</td>
<td>+ 3.1</td>
<td>+ 3.0</td>
<td></td>
</tr>
<tr>
<td>1960-61</td>
<td>2868-61</td>
<td>111.7</td>
<td>+ 7.0</td>
<td>+ 6.6</td>
<td></td>
</tr>
<tr>
<td>1961-62</td>
<td>3045-82</td>
<td>111.9</td>
<td>+ 0.2</td>
<td>+ 0.2</td>
<td>+ 3.7</td>
</tr>
<tr>
<td>1962-63</td>
<td>3309-97</td>
<td>114.4</td>
<td>+ 2.5</td>
<td>+ 2.2</td>
<td></td>
</tr>
<tr>
<td>1963-64</td>
<td>3752-12</td>
<td>121.0</td>
<td>+ 6.6</td>
<td>+ 5.8</td>
<td></td>
</tr>
<tr>
<td>1964-65</td>
<td>4080-18</td>
<td>136.6</td>
<td>+ 15.6</td>
<td>+ 13.0</td>
<td></td>
</tr>
<tr>
<td>1965-66</td>
<td>4529-80</td>
<td>147.8</td>
<td>+ 11.2</td>
<td>+ 8.2</td>
<td>+ 12.3</td>
</tr>
<tr>
<td>1966-67</td>
<td>4953-82</td>
<td>171.02</td>
<td>+ 23.2</td>
<td>+ 15.79</td>
<td></td>
</tr>
<tr>
<td>1967-68</td>
<td>5350-07</td>
<td>188.68</td>
<td>+17.66</td>
<td>+ 10.0</td>
<td></td>
</tr>
<tr>
<td>1968-69</td>
<td>5779-25</td>
<td>186.9</td>
<td>-1.78</td>
<td>- 0.9</td>
<td></td>
</tr>
<tr>
<td>1969-70</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>

Source: Reports on Currency & Finance.
Similarly in 1956-57, the price fall stopped and there was a sudden increase in the price level by 14%. This upward thurst continued up to 1959-60 with diminished force, so that the prices increased at an annual rate of 3 to 4%.

Then the year 1960-61 was again the price jerk year, when price index increased by 7% and the percentage rise was by 6.6%. This was comparatively less forceful jerk compared to 1951-52 and 1956-57, when price change was about 15%. Yet the upward trend in prices continued with diminished force till 1963-64.

Then in 1964-65, again the prices increased by 15.6 points over the previous year 1963-64 i.e. by 13%. This jerk had its force diminished only for one year i.e. in 1965-66, since 1966-67 again a big jerk upward by 15.7% is seen.

During 1950-51 to 1955-56, the price trend was downward except for one year 1953-54. Hence, we can designate this as a period of falling prices since during this period the prices fell at an annual average rate of 3.56%.

During 1956-57 to 1959-60, we find that the fall in prices, suffered during the first plan period was slowly being overcome. By 1959-60 the prices regained the level of 104.7 comparable to 105.5 in 1951-52. This period, hence, may be regarded as one of recovering prices. During this period, prices increased at the rate of 6.3% but if we exclude the jerk year of 1956-57, price rise was at the average annual rate of 3.4%.
During the period 1960-61, to 1963-64, we find that the average
annual rate of increase in prices was 3.7%. But this average is distorted
by the jerk year of 1960-61 and again in 1963-64. In this period, two years,
1961-62 and 1962-63 may be, truly regarded as period of absolute price
index stability as price rise did not exceed 0.2%. But taking into account
the jerk years. This period may be regarded as one of slowly rising
prices. viz. at the rate of 3.7%.

The years 1964-65 to 1966-67, may be regarded as years of rapidly
rising prices since prices increased at an average annual rate of 12.3%.

In sum, the period under study may be sub divided as follows on the
basis of the trends in wholesale prices.

1. The period of falling prices from 1950-51 to 1955-56.
2. The period of price recovery from 1956-57 to 1959-60.
3. The period of slowly Rising prices from 1960-61 to 1963-64.

The trends in money supply and prices during these periods have been
down by a graph line in Diagram No.1-A below. In the diagram, we find that
the prices traveled downward path during the period 1950-51 to 1955-56.
During 1955-56 to 1959-60, the prices show rising trend to recover the
position of 1950-51 in 1958-59, and rise to 104-7 points by 1959-60 from
1960-61 to 1963-64, the prices increased by 17 points above 1959-60, and
from 1964-65 onwards, we find a steep rise in prices.
Thus, we can identify the periods of falling prices, recovering prices, slowly rising prices, and rapidly rising price in the diagram 1-A.

Diagram 1-A also shows the trends in money supply and prices as given in Table 1-I above. During 1950-51 to 1951-52, while the price index was decreasing, the money supply was increasing, but in 1951-52 to 1952-53, the price level fell by much more than the decrease in money supply. During 1952-53 to 1955-56, while money supply was increasing slowly, the price level was falling. Thus during this period, the quantity of money showed trends opposite to those in the price level.

During 1955-56 to 1959-60, both money supply and price level were increasing almost at equal rates.

During 1959-60 to 1963-64, the increase in price level was less than the increase in money supply. The price level increased at the rate of 6.6%, 0.2%, 2.2%, and 5.8% during the four years, but the money supply increased at the rates of 7%, 6%, 10% and 6% respectively during the years.

During 1963-64 to 1968-69 the price level increased at a rate higher than that of the money supply. The rates of increase in prices during this period were 13%, 8.2%, 15.7% and 10% while that for money supply were 8%, 12%, 8% and 8% respectively.

Diagram 1-B reveals the relationship between the changes in the quantity of money and in the price level. If the two were closely linked, such that a change in one would cause similar change in the other (i.e. if the price level were a function of the first
Diagram 1-B.

SCALE:
On x-axis, 2 cm = 5 Abja Rs.
On y-axis, 2 cm = 20 Index Points

Money Supply

Wholesale Price Index
degree, of the money supply), the graphic-line would be a straight line sloping upwards to the right. But during the years 1950-51 to 1955-56, the graphic-line almost forms a circle, slowing, thereby, no relation between money supply and prices. But during the rest of its course, as seen in Diagram 1-A, it slopes upwards to the right, though its slope is changing, showing these-by the absence of proportionate movements in the two variables.

In the chapters that follow, we shall analyse this "Behaviour of money" in the four dimensions during the four periods explained above, and consequently shall attempt to understand the behaviour of prices during the period of our study.

Now, a few lines about the method of approach in this analysis. As noted above, the behaviour of money is seen from its interactions through the forces of demand and supply. The price structure consisting of prices of numerous substitute, complementary, or related and even unrelated "goods" is the resultant of these two forces which reveal themselves into and can be measured in monetary terms.

All economic units perform their varied functions only through money and for money. Yet it should be noted that though money emerges from only one source viz. Government security purchases, it generates demand through expenditures by various sectors in the economy viz.

(i) The Government Sector, (investments + consumption) expenditures.
(ii) Private investment expenditures.
(iii) Private consumption expenditures.
(iv) Foreign sector expenditures (i.e. expenditure by foreigners on our exports).
While the same economic units, in the course of performing varied economic functions produce some commodities, services or assets, in exchange of which they demand money. This may be regarded as the flow of "goods" or aggregate supply of "goods" which again is given in the economy by the following sectors.

(i) Agricultural sector  
(ii) Industrial Sector  
(iii) Tertiary sector  
(iv) Foreign sector.

In any money-exchange economy, "goods" are received or given for money. Hence we have to analyse how the forces of demand and of supply affect the price structure through these sources.

But in a money economy, money is not only exchanged for commodities and services, but for assets also, as we noted earlier. The money market including the banking sector, facilitates the function of money as a store of value. For the time that money is exchanged for assets, its impact on commodities and services will be reduced. Banks perform the fundamental function of making the economy more liquid than it would otherwise be. They borrow money from savers and lend it to the investors and other spenders. In this process, the same quantity of Government fiat money performs the function of making several payments. As per our definition of money, we have regarded demand deposits as part of the money supply. But time deposits, bonds, shares etc. which are also representatives of money as we noted earlier, also increase the velocity of circulation of money. Besides banks, there are other financial institutions, which are commonly known as Non-Bank Financial Institutions (or in short NBFI) like the
Indian Finance Corporation, State Finance Corporations, Unit Trust, Indigenous bankers rural money lenders, LIC, etc. The function of these institutions is to increase the availability of credit money. They do not issue money but enable the same quantity of money to be used several times and as such, increase the velocity of circulation of money.

Finally, the monetary authority, in one case, Reserve Bank of India, regulates the flow of money by its various instruments. Changes in the Bank Rate affects the organized section of our money market and raises up the structure of interest rates. Thus the cost of credit is increased or lowered by the Reserve Bank through its monetary policy. The selective credit and other qualitative controls affect the availability of credit in certain channels or industries.

Thus after analysing the demand and supply factors in the commodity and service markets, we shall have to look to the demand and supply forces working in money or assets market, and after studying assets markets, we have to analyse how money flow has behaved in its four dimensions noted above. Viz. the quantity of money as given by the monetary authority (Central Government + RBI), velocity of circulation, its availability through various financial institutes, and the cost of credit by RBI 1's qualitative controls.

Thus after studying money in its four dimensions we shall try to study the composition or constituents of money supply, the causes of changes in them, and their relationship with the price structure.
In conclusion we shall try to assess the relative importance of demand and supply forces in the commodity—services and assets markets and the four dimensions of money supply in affecting the price structure. This method will be followed in the next four chapters for the four periods noted above.