CHAPTER I
INTRODUCTION

Inflation is a dynamic disequilibrium process. It means a steady increase in the general price level. Over time due to demand pull and cost push influence. The traditional explanation of inflation runs in terms of changes in the volume of money circulation and changes in the stock of gold. This quantity theory explanation of inflation has been replaced by keynesian income-expenditure approach.

According to this approach an increase in quantity of money will not induce rise in the general price level if the effective demand generated by the increased money supply leads to an increase in the level of output and employment by putting the hitherto unemployed resources into use. If the effective demand continues to rise after full employment has been realised, the general price level will rise and that is inflation. Inflation is a post-full employment phenomenon.

Demand pull influence on inflation is thus clear. Inflation reflects excess demand situation such a demand pull inflation may occur during a long investment boom, very often it is the outcome of increased government expenditure during period of war and/or planned development. In course of a development plan public investment goes into projects with long gestation period and low rates of return aggregate demand (income) is generated but not instantaneously matched
by an increase in aggregate supply (output). The result is excess demand inflation.

Another modern concept is cost push inflation. As the cost of production goes up, the prices of products goes up. If we think of inter industry relation we find that the output of one sector serves as the input of another sector when output prices go up, input prices go up either simultaneously or with a lag. As input prices go up, the output prices go up further. The cost influenced inflation hits the economy. Normally such an inflation stems from labour union pressure on wage rates. As prices go up the cost of living increases, wage earners demand higher and higher wages. As wages rates is revised upward, cost of production increases and hence general price level increases too. This is wage price spiral. Prices go up by lifts, wages go up by staircase one chasing another.

A related concept is the mark-up inflation suppose all business firms have the practice of pricing the goods and services which they sell on the basis of standard mark up over their direct costs of material and labour. In such a situation the firms follow cost plus pricing i.e. either an in costs or an increase in the mark-up as a percentage of costs or both which may lead to rise in the price level. Such a mark-up inflation may get further induced because
of dynamic price expectations of consumers and because of speculative hoarding activity of traders.

Prof. Machlup describes two basic model sequences of consumer price inflation as follows:

(A) **Demand pull inflation**: Automatic expansions of demand (Government spending, consumer spending) are followed by responsive (competitive) price and wage increases.

(B) **Cost push inflation**: Aggressive increase of wage rates and/or material prices are followed by induced and/or supportive (compensatory) demand expansions. Cost push models are relatively simple as long as they contain only a single impulse either wage or price increase with all sequential changes in the nature of adjustments.

(C) **Pure wage push inflation**: Aggressive increases of wages rates are followed by induced and/or supportive demand expansions and responsive increase of material prices and other wage rates.

(D) **Pure price push inflation**: Aggressive increases of material prices are followed by induced and/or...
supportive demand expansion and by responsive increase of material prices and other wage rates.

Prof. Machlup has mentioned three kinds of demand expansion - autonomous, induced and supportive, and three kinds of cost increases - responsive, defensive and aggressive.

Suppose demand expansions are engineered by monetary or fiscal policy designed to reduce unemployment arising or threatening to arise from cost increases. For example the central bank may reduce reserve requirements or create reserve in order to allow banks to extend loans, or the fiscal authorities may increase government's expenditure in an attempt to expand effective demand and employment. Induced expansions of demand are direct consequences of a cost increase, in that those who receive the increased cost prices or those who pay them will make large disbursements than they would have made otherwise. Autonomous demand expansions would be the expansions which are not linked to previous or to expected cost increases.

Similarly there are three kinds of cost increases: responsive, defensive and aggressive. If wage rate increase takes place in response to excess demand, it is a case of responsive cost increase. Profit induced and initiated wage increase as well as spontaneous increase may be
called aggressive, because they are designed to achieve a net advance in the real wage rate. A defensive increase merely restores real earnings which the group in question has long been enjoying. An aggressive increase raises real earning above that level.

Mixed (Demand Cost) Inflation:

Inflation usually originates from excess demand, but that excess demand need not be a general one. Under Conditions of reasonable full employment but no excess demand for goods in general, there may be an increase in demand for a particular commodity or class of commodities and it may even be associated with an equivalent reduction in demand for other commodities. The resulting demand pressure on the particular industry producing, the particular commodity or class of commodities will bid up its prices and profit. This will also induce the producers of that particular commodity to expand the level of their output.

The excess profits of producers will provide a strong target for wage demands which the particular producers may not be inclined to resist, particularly since their prices are rising and because they may thus maintain a good industrial relation. This rise in wage in one industry may induce the worker of other industries to demand higher wages. In this manner, generalised inflation is induced
without any general excess demand but as the result excess demand in a sector of the economy. Here 'cost' force do not give rise to inflation, but generalise it from the original locus.

**Inflationary Process:**

We may now analyse the inflationary process. The inflationary process is initiated by a change in demand or supply conditions which has the consequences of price rise or a rise in money incomes. This rise in price creates two types of reactions. The first reaction is passive in character. This passive reaction implies that people adjust their expenditure plans in response to changes in money income they receive or to changes in the prices of things they are to purchase. Another reaction to this rise in prices is known as defensive reaction. It implies that people who are worse off in real terms as a result of the price changes may have some defensive reactions so as to check the worsening in their situation.

If the rise in price is due to change in demand conditions, the following reactions are to be found. In the first place, the additional demand is met by running down the level of stocks of finished output. The firms then react to thus unplanned reduction in stocks by raising the price of each unit of final output. This equates the
total money expenditure to the total value of output. In these circumstances, households also adjust their expenditure plans. The households find that although money income has increased, prices have also increased and therefore, real incomes have remained unchanged. Households will then leave their plans for consumption and saying unchanged in real terms by planning to spend more in money terms. This again creates a reaction among the firms and they react by raising the price of each unit of output to that extent where the total money expenditure will again be equal to the value of total output.

Thus we find that rise in price in each stage leads to an increase in household income and so leads to an increase in money expenditure which in turn induces further price rise. The inflationary process continues as long as total planned demand for goods and services exceeds total supply at full employment.

**Inflationary Gap:**

Here is a Keynesian concept of attempting to measure the degree of inflation. The inflationary gap is defined as the excess of anticipated expenditure over available output at base prices (Kurihara). The gap is thus the difference between what the population shall try to consume out of their income and the amount available for consumption at pre-inflation price.
**Consequences:**

Inflation affects all levels of economic activity—consumption, production and distribution. Slowly rising price level culmination in profit inflation may stimulate investment and production. If inflation is a post full employment phenomenon and if full employment is characterised by output in elasticity price instead of stimulating production, only end up in galloping (hyper) inflation. It then affects the terms of trade between agriculture and non agriculture. Rising prices reduce the real purchasing capacity of the economy and then it narrows down the market for non essential goods and services. This is how demand recession resulting from inflation hits business activity. Inflation increase the price of goods exported, exports which have elastic demand suffer and balance of trade and payments gets adversely affected. It is through trade, inflation and recessionary effects get internationally transmitted. Ultimately inflation adversely affects the fixed income groups like wage earners, it generates income redistribution effect in favoured of entrepreneurs, rentiers, and profiteers. It encourages anti social elements and the activities of the black marketeers, hoarders and speculators when the authorities try to combat inflation through a system of controls regulation and rationing we get suppressed inflation. As and when the pent-up demand becomes very high and controls become ineffective, suppressed inflation may turn into unmanageable actual inflation. Inflation
actual or potential is an economic disaster and a social evil.

**Historical Developments:**

The current concern about the implication of using traditional accounting methods in a period of inflation is not unique. Accountants from time to time, in many countries, raised questions such as that asked in United States by Middle ditch in 1918 "Should accountants reflect the changing value of money" such questions have generally coincided with material rates of inflation. The more severe period of inflation have generally been associated with wars. During the period immediately following the First World War there were exceptionally high rates of inflation in Germany and to a lesser extent in France and some other countries like India. Some interesting proposals were advanced by accountants of world during that period.

**German Experience:**

The fall in the value of the German mark reached very great proportions by end of 1923. The gold equivalent to 1 paper mark in 1914 would buy 1,000,494,971,000 marks in December 1923. Such variation in the value of monetary unit gave rise to a number of accounting problems. For instance a businessman in Germany at that time could not measure growth in his sales volume by comparing the paper
value of, say sales in December 1923 with those in January of that year. Such variation violates the basic mathematical principle that dissimilar items cannot be compared.

The general reaction of German businessman to this massive decline in the value of money was to use the current price of replacing resources as a basis for decision making. This was the accepted method of maintaining the physical capital of the firm. For instance a commodity which had cost 10 million marks to acquire but would cost 50 million marks to replace at the date of sales would be offered for sale at 50 million marks plus a profit margin. In circumstances where it was difficult to ascertain replacement costs, it was suggested that the business man should construct an index of prices for the goods normally purchased by his business. If the index had doubled since the date a particular item was purchased, that item should be offered for sale at twice its original cost plus a profit margin.

Certain German academics suggested that replacement costs or adjustments based on an individual business price index should be incorporated into financial reporting. For instance Mr X commenced business with £1000 on 1st Jan. 1984 and immediately bought goods with the whole amount. These goods were subsequently sold on 31st December for £1500, no other expenses were incurred. The replacement
cost at the date of sale was also £ 1500. If replacement cost is used for financial reporting the £ 500 difference between original cost and the replacement cost at the date of sale will not be regarded as a part of reported profit which would be calculated by deducting the replacement cost of goods sold from the sale proceeds. In this example, there is neither profit nor loss, but if the sale proceeds exceeded £ 1500 a profit would be recorded if less a loss.

Although replacement costs were in common use for the day to day running of German business during this period of inflation. The annual financial statements were commonly prepared by other methods. The method most often used as a supplement to historical cost reporting was balance sheet stabilisation in terms of gold mark. The supplementary balance sheet reflected changes in general purchasing power through adjustments similar to those based on a general price level index. The gold mark was assumed to represent a change in the purchasing power of the paper currency. Each entry on the historical cost balance sheet was re-stated in terms of gold marks.

One reason for the widespread use of this method of balance sheet stabilisation was its simplicity. The necessary adjustments were analogous to the adjustments used in accounting for foreign exchange transactions. A further reason was
legal requirement that all business were to prepare an annual balance sheet expressed in terms of paper currency. Such a balance sheet could not be prepared easily from an accounting system based on replacement costs, or which included integrated adjustments for movements in an individual business price index. An additional factor favouring stabilisation in terms of gold marks was the failure of the taxation authorities to recognise (for the major part of the period of inflation) the fall in the value of money. This meant that accounts based on historical cost conventions were required for the assessment of taxation. Accordingly the stabilised balance sheet were reported as supplements to the traditional historical cost financial statement with the introduction of Renten mark, towards the end of 1923, and the restoration of gold mark early in 1924, the German economy eventually returned to a more stable monetary unit. This was accompanied by a return to the strict adherence to historical cost as the basis of accounting and an abandonment of practices adopted in the period of inflation.

Reactions in France:

The post 1919 inflation in France was far less dramatic than German experience, but nevertheless provided the necessary stimulus for a number of French accountants to consider the difficulties created by an unstable monetary unit. During the period 1919-27 prices in France approximately
doubled, although not all prices responded in a similar manner.

In France, as in Germany, the method adopted for financial reporting was the simplest of all the proposals. It was the equivalent in France to the gold-mark, stabilisation used in Germany. The bookkeeping records were maintained in terms of paper currency and the resulting balances were corrected to give a balance sheet in terms of gold francs. The pre-1914 franc was referred to as the gold franc, as prior to that date, the currency was linked to the gold standard. Accordingly, entries on the gold franc balance sheet were expressed in terms of 1914 purchasing power.

This reaction of professional accountants in France (i.e., choice of simplest method for financial reporting) provides a close parallel between France and Germany. Another reaction, similar in the two countries, was the use of replacement costs in selling prices. It may be concluded that the reactions to inflation were similar in Germany and France. However, it is possible that German experience, which accrued earlier, moulded attitudes in France.

The United States: Although the United States did not experience inflation in 1920s on the scale of Germany or even France, the memory of the increase in general
level of prices during the war years stimulated some British and American accountants to consider the implications of monetary instability. However the attention in U.K. was restricted to the implications for taxation policy and depreciation provisions. The effects of inflation on tax payment was particularly important in U.K. because of dual rates of tax in operation at that time; namely 25% of profits upto the pre-war standard and 85% of profits above that standard.

In the United States Middledich was encouraged to ask his question - "should accountants reflect the changing value of the dollar" - by the instability of the dollar in the period 1897-1917. He thought it unreasonable to combine dollars of different dates and proposed adjusting all year end balances to reflect some stable measurement unit. For instance if a fixed asset was purchased. Some time ago (at a date when the value of the dollar was twice its current value) the historical cost would be restricted in terms of current value of dollar (i.e. the original cost multiplied by the factor 2). At the time Middledich was writing, economists were developing index numbers capable of approximately measuring changes in the value of money, and he suggested that such index numbers could be used to restate account balances. It may be noted that this adjustment was proposed in 1918 without the benefit of German and French experiences.
Middleditch concluded his article by asking a question: would it not be scientific, sound accounting practice, in those instances in which it makes any essential difference, to make the books of account reflect changes in the value of monetary unit.

Paton, one of the most eminent accounting theorists in the United States during the first half of the 20th century, suggested that the problem encompassed much more than the changes in the general price level. He was not convinced that index numbers provided an accurate measure of changes in the value of money, but he nevertheless thought that some adjustment should be made. He suggested writing up fixed assets to their replacement cost and calculating depreciation on the revised value. His main concern was with the well being of the business as an economic unit. One of his comments in this context has as much relevance today as when it was made over 60 years ago.

In 1936, Sweeney published a book which demonstrated a method of stabilising either historical costs or replacement costs by adjustments for general price level movements.

By the end of the 1930s, most U.S. accountants were aware that monetary instability can affect financial statements.
After the Second World War:

The monetary inflation which followed the second world war was accompanied by a resurgence of interest in inflation accounting. Once again Germany and to a lesser extent France experienced periods of rapidly rising prices. The United States and United Kingdom also had inflation particularly in the late 1940s and early 1950s. One characteristics of post war period which distinguishes it from earlier periods was involvement of professional bodies and in some instances, governments in the accounting implications of inflation.

In U.S.A. consideration was given to general price level adjustments and research was encouraged by professional bodies like (AAA). Although it is not a principal professional body in United States. In 1957 the American Accounting Association, advocated the publication of supplementary information indicating the effects of specific price movements on the resources of business.

In 1952 the Association of certified and corporate Accountants published accounting for inflation and Institute of cost and works Accountants published the accountancy of changing price levels, neither of these books were official expressions of the views of either body, but the reports of research committee. Both books recommended the use
of current values. The Institute of Chartered Accountants of England and Wales, however, was less tolerant and rejected any moves away from historical cost.

**Legislation in Germany and France:**

During and After IIInd World War Germany and France experienced rapid inflation of their currencies. As part of the post war reconstruction of their economies, measures were introduced to permit the revaluation of assets.

The German revolution took place on 21st June 1948 the day after the introduction of Deutsche Mark. All companies were required to prepare a "Deutsche Mark opening balance sheet", on that date, in order to provide a base point for future financial statements. Assets could not be valued in excess of current replacement cost at the date of the opening balance sheet. For tax purposes depreciation in subsequent periods was to be calculated on the revalued amounts. However, the Deutsche Mark opening balance sheet also formed the basis of assessment for the War Damage Equalisation Levy. Thus it was not in every company's best interest to revalue to the maximum permitted extent.

In France, until the introduction of the New Francs in 1958, Fixed assets were revalued using co-efficients
from an official government publication. The revaluation adjustments were not mandatory, but depreciation on revalued fixed assets was an allowable deduction for tax, purposes.

RECENT DEVELOPMENTS

In U.S.A.: As mentioned earlier, the issues involved in inflation accounting have engaged serious attention in the United States, the U.K. and Australia as also in other countries for quite sometime. However in terms of practice, not much seems to have yet been done at least in case of India.

In a well documented article published in the Accountants' Magazine in 1964 Professor Stephen A Zeff\(^1\) has provided "a guided four" covering the last quarter century of price level developments in the United States.

The American Institute of Certified Public Accountants in December 1947 issued Accounting Research Bulletin No.33 which recommended retention of conventional historical cost. The mixed response in the U.S. to the need for adjustments of historical, accounts to inflation accounts has been manifest

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not only in the professional circles but also in business and industry in the United States.

The American Accounting Association in its report on accounting and reporting standards for corporate financial statements 1957 revision recommended utilization of supplementary statements for the showing of price level effects which also showed a somewhat in different attitude towards whether general or specific price indices should be used, it recommended use of either or both, apparently not wishing to indulge in the merits of either.

G.N.P. Implicit Price Deflator:

In his contribution on adjustments for changing prices, Professor Robert T. Sprouse has underlined that in order to provide an element of realism, it may be in order to apply the GNP implicit price deflator for the periods of accounting chosen. For translating dollars of varying purchasing power reported in financial statements prepared on a historical basis into a single measurement unit, he suggests a formula with respect to the cost of certain types of assets for transforming their values into current dollars. In his view the cost of an asset acquired for $20,000 during year 5 could be treated at the end of year 15 in current dollars as follows -

\[
\text{Index at the end of year 15} \times 20,000
\]
\[
\text{Index at date of acquisition}
\]

= Cost of asset in terms of end of year 15 dollars.

The Case of U.K.:  

Professional accounting bodies in the U.K. and the accountants in business and industry also showed a similar concern about the problem of having to accommodate changes in the price level in the structure of accounts. The trends of thought noticed in the U.K. have been on similar lines as in the U.S.A. However, the experience of second world war was more severe in the case of U.K. than of the USA. The Pound sterling was under heavy pressure and it lost much of its prestige as the international currency, yielding to the dollar. The problem of price level adjustment was dealt with by the Institute of Cost and Works Accountants London¹ and Association of Certified and Corporate Accountants London², showing the ways in which such adjustments should

be effected. Since the early attempts\textsuperscript{3} in this behalf of
good deal of developments have taken place upto the more
recent discussions centring on ED\textsubscript{8}.

The proposed statement of standard accounting practices,
"Accounting for changes in the General Purchasing Power
of Money", i.e. ED\textsubscript{8} has evoked reactions in different circles
both in the U.K. and outside. In essence, the exposure
draft ED\textsubscript{8} is claimed to have retained the advantages of
the historical cost convention; original costs of non monetary
assets are to be updated by converting them into Pound of
current purchasing power using an index of the changes
in the general purchasing power of money. The draft mentions
the advantages of historical cost in the following words;
"the recorded historical cost is derived from factual monetary
transactions, and its use helps to limit the number of matters
within the accounts which are subject to exercise of judgement."

The draft has claimed that it will be necessary
for companies to continue to present historical cost accounts
because many legal and contractual obligations are implicitly
based on the use of figures prepared in such a manner.
The recommendations implicit in the exposure draft regarding
the general purchasing power method has been called to

\textsuperscript{3} B.J. Davis, Inflation, its treatment in Accounts
question by Prof. Chambers\(^1\), on the ground that the method proposed does not have result of balance sheet representing the financial position of companies, fully and completely, in terms of contemporary purchasing power. In the opinion of Professor Chambers, mere general price level adjustment of historical costs is wrong in principle and misleading in consequences. Inflation is identified in ED8 by a rise in the general level of prices and a concommitant fall in the general purchasing power of Money. Prof. Chambers holds that there can be no rise in the general level of prices unless prices of some goods rise and there will be no rise in the general level of prices if the rise in prices of some goods is off-set by the fall in the prices of some other goods. Prices of all goods do not rise together, in the same period some may rise at different rates some may fall and some may remain constant.\(^2\)

Indeed the ED8 has been able to initiate a world wide discussion on the pros and cons of general price level accounting and strength and weaknesses of the system have been discussed freely with reference to the problems to be encountered and the cautions to be followed while the academic reaction to ED8 has been aptly presented by

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2. J. pearcy, Problem to be Faced in Inflation Accounting Management Accounting, March 74, pp. 65-69.
Prof. Chambers, the industry case particularly with reference to the problem to be faced in inflation accounting has been well stated by J. Pearcy of the Imperial Chemical Industries London.

The Australian Case:

The Australian Professional Institutions, industry and academic institutions recorded response patterns similar to those in the U.K. and the U.S.A. Attention was focussed on the features of inflation, adoption of the relevant index numbers for price adjustments and application of general price level accounting in industry situation. In his book Accounting for price level changes: Theory and Procedure, Prof. R.S. Gynther has taken note of the main trends of thought expressed in the debate on inflation accounting in the USA, UK and Australia and has dealt with practical problems on brass tacks as to how to accomodate price-level change in corporate accounts. He has expressed the view that the general response of Australian professional accountants towards reforming company accounts to make them more responsive to price level changes has been rather lukewarm, if not totally indifferent. Discussing the pros and cons of accounting for price level changes. The author has gone into different elements comprising the accounts to underline the changes that should be made for reorienting accounting figures. He presents an adoption of a model
formulated by Prof. R.J. Chambers for demonstrating the
necessity of calculating losses on monetary assets and profits
on current liabilities during times of changing price level.¹

THE INDIAN CASE

Unfortunately in our country serious thinking on
having to adjust conventional account to price level changes
has been rather few and far between. Original work on
the subject did not attract much professional attention during
the last three decades. In fact, it is more in the context
of national income accounting that the accommodation of changing
price level into the formal structure of national accounts
has been discussed in a serious vain.

Some of the accounting concepts of depreciation
profit on losses have attracted a good deal of attention
of National specialists and there have been papers on different
aspects of the question in various conferences on national
income.

In fact, inflation accounting would make it possible
for the planners to integrate the sectoral plans with reference
to the investments made, surpluses created and production
of different varieties of goods all of which are part of

¹. Towards a General Theory of Accounting (the Australian
Society of Accounts annual lecture, the University
plan estimates. Large scale investment programmes undertaken during the era under planning have in some way or the other been responsible for initiating cost push and demand push inflation. Inflation accounting could make it possible for the enterprise to report the effects that such inflation have created on company performance. In addition inflation accounting would make assessment of financial operations of both public and private sector organizations more realistic, particularly in respect of profit or profitability as a criterion of such measurement.

The financial statements prepared by cost management and financial accountants have generally, enjoyed a high rate of confidence and credibility by their internal as well as external users. It is quite likely that in view of the significant reduction in purchasing power of currency unit, the accounts of enterprises and government operations compiled and audited on the basis of the historical cost system, may no longer reflect a true and fair view of the affairs of the company organisation or enterprise. The indications of productivity, profitability and financial health based on these historical costs may not reflect a realistic state of their affairs.

In those countries where the increase in the whole sale price and consumer price indices are not significant
(say of the order of less than 5% p.a.). The situation may not be very disturbing. In other countries where the annual rate of inflation exceeds 5%, it is likely that the cost based prices as well as computations of productivity, profitability and financial health, as reflected by the historical cost system, may not represent a fair view of the affairs of enterprise or organisation. In these cases, the divergence between the physical facts and the accounting figures which are treated as financial models of these physical facts, becomes quite significant.

Such wide divergences between the physical facts and their accounting model pose the problem of a serious risk to the credibility of accounting profession. In such a situation it is quite likely that the external users like shareholders, the prospective investors, the economic, fiscal and investment analyst as well as government agencies and the internal users including the members of management who pose considerable confidence on the published or compiled accounts may therefore lose faith on the reliability of these account. In effect where these divergences are significant, the financial statements can not be used as reliable documents for measurement of performance. It was probably this type of situation which led Bacon to declare "It is the distemper of learning when man study words and not matters."
The situation applies not merely to enterprise accounting but also equally effective to the accounting of government operations, small scale industries, household and cottage industries and agricultural operations. What is more significant is this In matters of social accounting as well as various types of National accounts, such divergences between physical facts and their accounting models create serious distortions.

The extent of involvement of the accountants in developing appropriate solution for facing this problem is yet another factor which deserves serious consideration. This will include accountants who compile and interpret, as bases for decision making the cost and management accounting data and financial statements of various types as also the accountants who audit these financial and cost statements. It would also include those accountants who in their capacity as advisers in the matter of income tax financial and management consultancy and in their managerial or administrative capacity utilise these data based on historical cost system, for interpretation of financial situation as basis for decision making. The members of accounting profession are so directly involved at various stages that a detached Outlook or dependence on others for providing basic data may not appear to be justified. Delay in the direct involvement of accountants in this process may pose serious damages to the credibility of accounting profession, in not too distant a future.
Inflationary Trends in India:

To appreciate the dimensions of recent inflationary trends in India it would be worth while looking into the movement of whole sale price indices since the commencement of planning period. During this period, people of India have faced severe inflation and trend still continues.

Money supply and prices in India:

Since the beginning of the second world war, prices have continuously risen in India. Only for a short period of 5 years from 1951 to 1956, people of India got some respite from the inflationary price rise. The rate of price rise, of course, has not been the same throughout the period where as the prices in certain period was just marginal in other periods its rate become alarmingly high.

Price Movements During the Planning Period:

When we examine the price movements during the planning period we find three clear trends. First, during the first plan period that is from 1951 to 1956 the general price level had fallen. Thereafter from 1955-56 to 1965-66 the price level rose steadily at an annual rate of 6%. This certainly caused hardships to certain sections of the society but it did not cause much chaos and confusion. Finally from 1966-67 onwards (excepting during 1975-76 and 1977-78) prices rose at an alarming rate of about 9% p.a. and a serious
economic crisis developed in the country. We shall examine the tables as follows to test the truth of above statements.

Table-1
Index nos. of whole sale prices (Base year 1981-82=100)

<table>
<thead>
<tr>
<th>Last Week of Year/Month</th>
<th>Primary Articles</th>
<th>Fuel Power etc.</th>
<th>Mfed. Products</th>
<th>All commodities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>32.30</td>
<td>10.66</td>
<td>57.04</td>
<td>100.00</td>
</tr>
<tr>
<td>1982-83</td>
<td>110</td>
<td>110</td>
<td>105</td>
<td>107.2</td>
</tr>
<tr>
<td>1983-84</td>
<td>119</td>
<td>116</td>
<td>112</td>
<td>114.9</td>
</tr>
<tr>
<td>1984-85</td>
<td>123</td>
<td>123</td>
<td>121</td>
<td>121.8</td>
</tr>
<tr>
<td>1985-86</td>
<td>129</td>
<td>137</td>
<td>126</td>
<td>127.7</td>
</tr>
<tr>
<td>1986-87</td>
<td>136</td>
<td>140</td>
<td>132</td>
<td>134.2</td>
</tr>
<tr>
<td>1987-88</td>
<td>157</td>
<td>148</td>
<td>144</td>
<td>148.5</td>
</tr>
<tr>
<td>1988-89</td>
<td>157</td>
<td>155</td>
<td>157</td>
<td>156.9</td>
</tr>
<tr>
<td>1989-90</td>
<td>167</td>
<td>165</td>
<td>175</td>
<td>171.1</td>
</tr>
<tr>
<td>1990-91</td>
<td>196</td>
<td>189</td>
<td>190</td>
<td>191.8</td>
</tr>
<tr>
<td>Dec.91</td>
<td>226</td>
<td>200</td>
<td>205</td>
<td>211.3</td>
</tr>
</tbody>
</table>

Sources: Govt. of India Eco. Survey 1991-92 Table 5.1 PP-S-64-5
### Table-2

Changes in Prices, Money supply and National Income of India

<table>
<thead>
<tr>
<th>Year</th>
<th>Wholesale Price</th>
<th>Money Supply (M_1)</th>
<th>NNP Factor Cost at 1980-81 Price % change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-52</td>
<td>5.5</td>
<td>.6</td>
<td>2.4</td>
</tr>
<tr>
<td>1952-53</td>
<td>-5.2</td>
<td>-6.5</td>
<td>2.8</td>
</tr>
<tr>
<td>1953-54</td>
<td>1.1</td>
<td>.7</td>
<td>6.3</td>
</tr>
<tr>
<td>1954-55</td>
<td>-3.7</td>
<td>4.8</td>
<td>4.0</td>
</tr>
<tr>
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Sources: 1. RBI Reports on currency & finance.
2. RBI - Reserve Bank of India Bulletins.
3. Govt. of India - Economic Survey various issues.
The First Plan Period:

Marginal Fall in the Price Level:

In the whole of the planning period starting from 1950-51 till now it was only during the first plan period that general price level recorded a fall. The wholesale price index number (base year 1951-52=100) which had stood at 89 in 1950-51 declined to 74 in 1955-56. In other words the general price level in 5 years had fallen by 17%. For the first time the inflationary price rise which had begun during the second world war was not only arrested but an opposit trend had set in. With the beginning of the second five year plan. This trend was, however, reversed and since then except for short periods, the general price level has been recorded a significant fall. One of the causes of downward trend in price level during 1st Plan period was less deficit financing.

Period of Moderate Rise in the Price Level (1956-57 to 1965-66):

This period may be characterised as period of moderate rise in the price level. Leaving aside a few extraordinary years. The price level in this period rose at an annual rate of about 6 percent. if this much price rise takes place in a short period, it may have little repercussions on the economy, but if prices continue to rise at this rate over a long period, its cumulative effects may be serious.
Not only will this kind of price rise involve some transfer of purchasing power from the relatively poor to the relatively rich, it may also cause distortions in the pattern of production. In India, where the process of development has yet to become self sustained and automatic, this amount of price rise turned out to be a serious obstacle to economic growth. The wholesale price index number (base year 1961-62=100 which stood 74 in 1955-56, rose to 132 in 1965-66. In this manner over a period of 10 years the general price level rose by 78.4% percent. The national income also increased in this period by 35.8 percent. The supply with the public from Rs. 2,184 crores to Rs. 4,529 crores. In this period was a major factor that caused the inflationary price rise.

The Last Phase: Sharp Rise in General Price Level:

From 1966-67 onwards the general price level rose at a higher than that in the earlier period. This price rise caused a lot of hardships to the people. Since the mid sixties the economy headed towards a disaster. In 1971-72, the price-rise suddenly assumed alarming proportions and as serious crisis developed in the economy.

The period from 1971-72 to 1987-88 may be characterised as a period of great inflationary pressure since the general price level rose at an annual rate of little over 9 percent. In the first three years of this period, prices registered
a spectacular rise. Thereafter the situation improved temporarily when the price level remained more or less stable for a period of four years. This welcome development was particularly due to the satisfactory performance of agricultural sector. The inflationary pressure on the economy was, however, not eased even in this period, it was merely dormant. Its open manifestation began in 1979-80 when the price level started rising once again. Since then over a period of eight years wholesale price index rose by 187 points. For analysing these price movements let us consider the above tables showing WPI nos. (base year 1980-81=100).

A careful perusal of index no. of wholesale prices given in table clearly reveals, that from 1971-72 to 1974-75 the country passed through a phase of hyper-inflation. The very fact that index no. of wholesale price rose from 108.2 in 1971-72 to 173.9 in 1974-75 indicates the gravity of the situation.

There may be so many reasons for the above stated price level changes. Yet the point is still the inflation is subject matter of warm public debate and concern, howsoever old this phenomenon may be. Thus discussion on inflation is still valid and continue to be valid in so many years to come.
Annual rate of inflation (WPI)
(Base: 1981-82=100)
Annual rate of inflation (WPI and CPI) essential commodities
## Annual Rate of Inflation in WPI and CPI

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Provisional
NA Not available
### Annual Rate of Inflation in Essential Commodities

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Problem of Index Numbers:

What an index is, Ratios are measures of the size of one quantity relative to the size of another. A ratio may be expressed either as a fraction e.g. $\frac{5}{4}$ or as the quotient derived by dividing the numbers of fraction by denominator e.g. $\frac{5}{4} = 1.25$. A ratio multiplied by 100 becomes a percentage i.e. $1.25 \times 100 = 125\%$. In other words 5 is 125 percent of 4 when each term in a series of quantities is compared to a given term and the ratios are converted to percentages, the percentages are called relatives or index numbers and the series of percentages is called an index. Therefore, an index can be defined as a succession of measurements expressed as percentages of the size of each term in a series of quantities relative to a given term. The individual measurements that make up the series are index numbers.

What is price index:

There are many currently compiled indexes that measure changes in prices of particular commodities or group of commodities, for particular industries or group of industries, for various segments of the economy and for the economy as a whole. The classes of indexes that measure changes in prices are called price indexes. This group of indexes is of particular interest for accounting application.
Any system of revaluation involves development of appropriate media for conversion of historical costs into current values. The following bases may be adopted:

1. **The Consumer Price Index**: CPI measures changes in prices of goods and services purchased by city wage earner and clerical worker families to maintain their level of living. The "level of living" is represented by a market basket of approximately 300 goods and services selected as a result of a study of their buying habits. This index does not attempt to measure price changes for any group of consumers other than city wage earner and clerical worker families. To the extent that others have similar purchasing habits, this index may indicate the price changes that affect them. However, caution should be used when applying this index as a measure of price changes that it does not attempt to cover.

2. **The Wholesale Price Index**: The WPI is not, as implied by its title, an index of prices either paid to or received by wholesalers, distributors or jobbers. It does not refer to any definable set of producers or purchasers in the economy. Wholesale, as used in the title of this index,
refers to sales in large lots at primary market levels i.e. the first important commercial transaction for each commodity.

The judgemental sampling is used to select the most important commodities in each field for inclusion in WPI. Knowledge of each industry and its important products is derived through consultations with leading trade associations and manufacturers in each field and from census data.

Commodity specifications were selected on advice from industry and other sources and are precisely defined as to both commodity characteristics and the terms of sale from specified types of sellers to specified types of purchasers.

In general, prices used represent net realisation per unit which is defined as actual sales less normal discounts in approximately similar quantities to similar class of buyers. Prices quoted on organised exchanges or markets are also used. List or nominal prices quoted in trade journals or by manufacturers are used when they satisfy the above criteria and reflect the industry's customary pricing practices. The consistent use of these prices normally will not distort the index. Since the index attempts to measure relative price movements and relationships among prices, not the absolute level of prices.
The composite construction cost index: Composite construction cost index is the most comprehensive index available in the construction field. The universe of this index is the total cost of works put in place on all structures and facilities under construction during a given period. Estimates of this total cost are based on contract awards, building permits, progress reports on construction projects and financial reports. The estimates are then adjusted for seasonal variation.

Since this is primarily an input index, few of the component indexes make allowable for productivity changes. Therefore, attempts to use this index to measure price movements of the output of the construction industry are hampered by an upward bias to the extent that productivity has increased over time.

4. GNP (Gross National Product) Implicit Price Deflator:

The most comprehensive price index available is an outgrowth of national income and product accounting which is one of the chief tools for formulation of Government economic policy. This index the GNP implicit price deflator, is implicit in the relationship between the current and constant rupee estimates of GNP.
The universe for this index, encompasses all exchange transactions in the economy that affect the general level of prices. It is the only index presently compiled that reflects an average of all goods and services; exchanged in all segments of the economy. It is an index of the prices of final products, consumer purchases, and business investment.

The data used in estimating and deflating GNP are collected by various governmental and private agencies for other purposes as a by product of administrative routine. As a result these data must be further processed to adjust them to use for this purpose. Reliance must be placed on judgement and the development of bench-marks derived from alternative measurements. As a result, quantitative indicators of degree of statistical precision are not available.

The formula used for GNP deflation is a Paasche type formula; however, various formulas are used in the computation of the sub-indexes. It is the only one of the output price indexes reviewed in that is based on current weights that change every year.

The importance of the GNP estimates in the formulation of economic policy gives continuing impetus to their improvement. As the estimates become more accurate, the index inherent in the relationship of the estimates before and after deflation
improves accordingly. The overall estimates are probably more reliable than the various segments because the best check now available for the estimation of GNP is the reconciliation of the aggregate with the total derived in estimating national income, which has attained a higher degree of reliability. The major portion (by far) of National income is compensation of employees Estimates of total wages and salaries are reliable because they are based on data from reliable source.

The GNP Implicit Price Deflator is the only index currently compiled which measures the overall or general level of prices. It is a "good" index but the method of sampling and the absence of control over data collection preclude giving a numerical value to its statistical precision.

The Best Currently Available Index or

Index for Recasting Financial Records

Index of the general level of Prices:

Money is the common denominator in which financial data presented in accounting reports are measured. The purchasing power of the rupee however, varies from time to times and as a result, asset, liabilities revenues and expenses are expressed in "rupees", which represent different purchasing power.

If financial statements in rupees that have the
same purchasing power as "rupees in general" are desired, an index of the general level of prices is needed, because rupee is a commodity whose (Purchasing power) value varies in inverse proportion. With general level of prices of the commodities for which it can be exchanged, when the general level of prices rise, the value of the rupee falls because more rupees are needed to buy the same quantity of commodities. Conversely, when the general level of prices falls, the value of rupees rises because fewer rupees are needed to purchase that quantity of commodities.

The only index compiled that is a measure of general level of prices in India, is the GNP implicit price deflator.

Changes in the prices of specific commodities and changes limited to segments of economy:

Changes in the prices of specific commodities can be reflected in financial reports by the use of appropriate price series for the individual accounts that appear in those reports. These prices can be converted into indexes. The sub-indexes of WPI may supply many of the needed indexes.

Recommendations for Improvement

1. I recommend that Institute of Chartered Accountants of India, New Delhi and Institute of Cost and Works
Accountants of India, Calcutta and other economic research organisations and universities, to study this phase of problem and to recommend an appropriate index and cut-off date.

2. Both the premier professional Institute adopt and publish the findings of the outside research organisation as to the relevant index numbers and cut-off date time to time. The business community should then be urged to use these published index numbers (and cut off date, if any) in preparing price-level adjusted financial statements.

3. One of the major limitations on the construction of adequate indexes in India is the shortage of funds, made available for this purpose. If the business community wants better data then, it will have to encourage the allocation of sufficient funds for their compilation.

4. In order to obtain, improved indexes for restating financial statements, funds should be allocated to the study of and research into the problems of sampling methods of gathering basic data and of the timing of revision of weights as well as to a programme of publication of changes and improvements.
5. An attempt must be made to improve economic statistics so that it may benefit both their users and all who are affected by the policies dependent in part on their use.

**Conceptual Framework:**

The current cannibalistic tendencies of auto building and auto feeding inflationary spiral have thrown a set of new challenges to the people of India, in general and on the practitioners of the accounting profession in particular. Integrated picture of operating efficiency and status of financial health of enterprises and organisations, on historical cost basis may not represent realistic and relevant models of physical conditions. The science of accounting faces new danger of credibility.

Superposition of technology of inflation accounting on those of financial cost and management accounting should lead not merely to extension of scope but should also help to develop a better managerial conceptual framework of operating efficiencies and financial health of enterprises and organisations. It should lead to evolution of more effective, appropriate management information system (MIS) for a deeper appreciation of the effects of inflationary trends on the socio-economic development of the 'People'. This would involve evolution of appropriate accounting technology.
for development of organic conceptual thought processes oriented towards physical attainment of maximum economic development together with optimisation of social happiness of the 'people' under the existing constraints on resources and factors of production in the national economy.

Objectives of the study:

1. Creation of awareness of the need for reorientation of tools, techniques and technology of accounting for fighting inflationary trends. This will include methods for identification of factors suited to the necessary adjustments in the books of accounts.

2. Evolution of suitable modifications of financial statements so as to make them more realistic models of productivity, profitability and financial health of the enterprise.

3. Development of appropriate information technology and management information system to highlight the problems of enterprise in the light of inflationary trends so that financial documents forming the basis of managerial decisions reflect a realistic model of the physical situations.

Most of the discussions on inflation accounting appears
to focus attention on the principles, theories and practices in enterprise accounting. There appears to be an urgent need for rationalisation of attitudes of the accounting profession towards the "service of people". It is high time the accounting profession took pains to develop suitable MIS which can be employed as tools for maximisation of productivity of available factors of production by the small sector, household and cottage industries and agriculture. They account for almost 80% of India's gross domestic product. Such MIS would help the people to appreciate the effect of inflationary trends in the matter of the unit prices of input and improve the decision making process of the owner managers in these sectors of the national economy. Appropriate early development and prompt utilisation of these reports will provide a much needed service by the profession to the people towards their attainment of better standards of living and higher status of happiness.
THE DANGER OF HYPER-INFLATION

Mr. B.B. Bhattacharya
Professor of Economics,
Institute of Economic Growth, Delhi.

BURNING TOPIC

The inflation rate, or the annual rate of change of the general price index, is one of the key macro indicators of the performance of an economy. The other key macro-economic indicators are the GDP growth rate, unemployment rate and balance of payments (or the foreign exchange reserve). In an ideal growth scenario the GDP growth rate should be maximised with very low inflation and unemployment rates. Very few economies are however able to achieve this. In general there is a trade-off between GDP growth rate and inflation rate in developing countries, and inflation rate and unemployment rate in developed countries. The worst scenario is however when inflation and unemployment rate accelerate with a very low (or even negative GDP growth rate.

The average inflation rate in India in the last four decades (1950-90) was about 6 per cent per annum. In international comparison this was quite moderate. For instance, between 1965 and 1989 the average annual inflation rate in Brazil was 110 per cent, Argentina 181, Mexico 37, Chile 86, Turkey 29, South Korea 13, Pakistan 9, Indonesia 25,
Philippines 12, Sri Lanka 10 and Bangladesh 13. In India the comparative figure is 7. But in the recent years the inflation rate in India has started accelerating rapidly. In 1989-90 it was 9 per cent, in 1990-91 12 per cent, and according to the latest statistics the annual inflation rate in 1991-92 is 14 per cent. Other macro indicators have also deteriorated very badly in the 90s. The GDP growth rate in 1991-92 may be less than 3 per cent. Industrial output growth rate may even be negative. Balance of payments situation is precarious. The foreign exchange reserve is sustained mainly through borrowings. There is no official statistics on aggregate unemployment rate in India. But all available indicators suggest that it would be worse in the coming years.

If prices of all goods and services in the economy increase at the same rate, or relative prices remain unchanged, then inflation has no effect on the distribution of income, or it has no welfare implication. In reality however relative prices change with inflation. In general, producers gain at the expense of consumers, variable income earners gain at the expense of fixed income earners, wage earners lose in relation to profit earners, and organised labourers gain at the expense of unorganised labourers. The welfare implications of inflation depend on the nature of relative price change and the degree of indexation of income. If food price rises
faster than general inflation rate then poor people suffer relatively more than rich. On the other hand an increase in the prices of luxury consumer goods with no change in prices of food and basic necessities would have no impact on the welfare of the poor.

One of the disturbing features of the present hike in inflation rate is that food prices have increased much faster than the general inflation rate. In 1990-91 general inflation rate was 12 per cent. As against this food prices have risen by 14 per cent. The current general inflation rate and food price growth rate are 14 and 20 per cent respectively. Since expenditure on food accounts for more than 80 per cent of total consumer expenditure of the poor people the effective inflation rate for poor people is almost 20 per cent. Another disturbing feature of the present inflationary situation is that it has deteriorated despite consecutive good harvests. In the past inflation rate in India crossed 10 per cent only in the year of severe agricultural shortfall. The double-digit inflation rate occurred in 1965-66, 1966-67, 1972-73, 1973-74, 1979-80 and 1987-88 all of which were the years of severe agricultural drought. Similarly when agricultural production was very good the inflation rate fell. This pattern has changed during the 80s. The inflation rate has now accelerated despite four consecutive good harvests, 1988-89, 1989-90, 1990-91 and 1991-92. Since
The probability of fifth consecutive good monsoon is very low the chances for a hyper-inflation in 1992-93 are very high.

Inflation in India is not a pure monetary phenomenon. Empirical analysis of past data suggest that non-monetary factors have very significant influence on inflation in India. Most important non-monetary factors are relative supply-demand for food, procurement price, public distribution of foodgrains, administered price of key inputs—steel, electricity, fertiliser, coal, petroleum and railway tariff—import price, wage rate and expectation. If money supply growth rate is cut but non-monetary inflationary forces are not controlled then the inflation rate would continue to be high. On the other hand if non-monetary factors are controlled then the economy can absorb a fairly high dose of deficit financing and money supply. The monetary effect of inflation also depends on the use of money. If money supply increases on account of productive credit— in both public and private sector—then the inflationary effect is minimal and also short-run. However if money supply increase on account of unproductive credit—say deficit financing for government revenue expenditure—then the effect is felt more on prices than on output.

The current inflation is caused mainly by three
factors: a big hike in procurement prices of agricultural products, rise in import price on account of rupee depreciation and positive expectation. During the last three years procurement prices have been increased by as much as 50 to 70 per cent. This is well above the rate of change of prices of agricultural inputs -- fertiliser, diesel, agricultural wage rate etc. The relative price of agricultural vis-a-vis non-agricultural products has increased significantly during this period. An increase in agricultural price does not benefit all rural households. It increases relative income of only farmers, and that too only those who have marketable surplus. Majority of rural households -- labourers, artisans and marginal farmers -- suffer from it. Urban households also suffer from agricultural price rise, but the degree of sufferance is less acute because of partial or full indexation of income in relation to inflation.

Rupee is depreciated by about 80 per cent in relation to foreign currencies (18 per cent in the first week of July 1991) during the last four years. The basic objective of exchange rate depreciation is improvement in adverse balance of trade. But the immediate effect of devaluation is felt on domestic prices through a hike in administered and free market prices of manufactured goods in relation to import cost. In the last two months administered prices are further hiked to improve profitability of public enter-
prises. The outcome of this would be felt on the inflation rate.

Expectation has now become a key factor in inflation. Experiences of Latin America suggest that hyper-inflation is caused mainly by expectation rather than by hyper-increase in money supply or any other real factor. Until recently price expectation in India was subdued because both producers and consumers expected prices to fall or at least increase moderately in a good agricultural year. But the recent experience of price rise even in a good agricultural year has now fuelled positive price expectation of both producers and consumers. There is also an increasing realisation that an abnormally high internal public debt can lead to a higher doze of monetisation in the next few years. The market is therefore expecting a higher inflation rate in the coming years and consequently producers and traders are adjusting their supply accordingly.

In the Union Budget for 1991-92 an attempt was made to cut gross fiscal deficit and money supply. The Government has already committed to further reduce both money supply growth rate and fiscal deficit rate in 1992-93. But in the manner in which this is attempted to achieve may not be very conducive for inflation. Fiscal deficit, it appears, is cut mainly through a reduction of public
investment than government non-productive expenditure. When public investment falls it affects the aggregate supply through multiplier mechanism. Similarly credit squeeze has a severe effect on inventory capital and production, particularly in manufacturing sector. Thus the monetary impact on aggregate demand is neutralised by a fall in aggregate supply.

The government may however reduce inflation rate by a drastic cut in public expenditure and money supply. This is known as 'big-bang' theory of control of inflation. A severe cut in public expenditure, especially in salary and wages and public works programme (including anti-poverty programmes) would reduce the purchasing power of wage earners and thereby control inflation. But it would also increase unemployment rate and thereby lead to a social and political discontentment. The cost of deflation may be also very high if output shrinks. Most governments therefore prefer a gradual reduction in inflation rate than a big-bang. In India deflation may be very painful especially if it results in lowering of income of poor households. On the other hand a hyper-inflation would also affect very adversely poor households having unindexed income.

A better alternative is therefore control of non-monetary forces of inflation. As a first step procurement
prices of agricultural products should be constrained to the prices of agricultural inputs. Although this policy is economically rational it is politically difficult. But a welfare government must be more concerned about the welfare poor, most of whom live in the rural areas, than the political power of wealthy rich farmers. Public distribution of foodgrains also should be better targeted to take care of real vulnerable people living in the rural areas. A rise in administered prices of basic inputs increases overall cost structure. In the recent years the government has increased administered prices irrespective of their effect on cost structure. In many cases input prices are increased to cover revenue loss. But the losses in many public enterprises supplying key inputs -- fertiliser, steel, power, coal, railway and road transport -- are high mainly due to excessive wage bill, managerial inefficiency and capacity unutilisation, and not due to underpricing. The actual cost of production is often much more than 'normative cost' (which should have been if the enterprises are run efficiently). Thirdly, wage rate -- in both public and private sectors -- should be linked to productivity of labour and not to trade union power. In public sector productivity of labour has increased much slower than wage rate. Finally the exchange rate depreciation should be linked to domestic price rise.

The government response to inflation depends on
the society's tolerance limit. In Latin American countries where inflation rate is usually very high (100 per cent and above) the economy can easily absorb 10/20 per cent inflation rate without a serious socio-economic problem. But in India the tolerance limit is very low. Generally a single digit inflation rate in India does not get much public attention. But a double-digit inflation rate is beyond the tolerance limit of majority of population. Among all macroeconomic indicators inflation rate gets maximum public attention, especially at the time of election. A popular government has to therefore control the annual inflation rate even at expense of other macroeconomic indicators like GDP growth rate. In the past all major efforts to curb inflation has resulted in slowing down growth rate of output. A similar policy is currently under operation. But so far it has not succeeded in curbing inflation rate. If money supply and public expenditure (especially government development expenditure) are reduced further then it may lead to a serious recession without any improvement in price level. The current hyper-inflation may be therefore controlled only through a strict check on the growth of procurement prices, administered prices of inputs and exchange rate. The new economic policy initiated by the government since July 1991, however, has attempted to control inflation in exactly the opposite way. If this policy is not reversed then there is a very serious danger of hyper-inflation
with a fall in output and rise in unemployment rate. Symptoms of Latin American type hyper-inflation are now visible in India. Ironically much of these are caused by policy distortions rather than exogenous shocks.

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