CHAPTER - 2

RESEARCH METHODOLOGY

2.1 Problem of Research:
Inflation is one of the prime economic concepts which have aroused much debate time and again. Right from the classical period attempts have been made to study and inquire into the undercurrents of inflation. Theorists have viewed inflation in different terms. Though huge literature is available; exposing in detail the outcomes of inflation has remained a debatable issue. Currently with sharp fluctuation in price index in general and food price index in particular, the subject has again become a live area of interest.

Technically it is perceived and understood that a situation of continuous price rise is virtual inflation. It expresses constant hike in the price. The history of economics provides detailed accounts of the size and nature of inflationary pressure over the period of time. The conceptual clarity on inflation is also available but it is interesting to know that in most of the cases, a heterogeneous characteristic of inflation has made it a difficult task. It in this respect that inflation is generally examined in context of several established parameters.

This thesis is effort with regard to understanding and analyzing the concept in relation to the established parameters. It is observed that all normal criterions of inflation do not commonly reflect as such. There are a many a cases wherein the typical indicators like supply of money, interest rate, GDP deflator, all this do not go side by side. They do not necessarily reflect the same trend at all times. Currently also we experienced that there was much gap found in between the consumers price index (CPI), Wholesale price index (WPI) etc. However the food price index maintained its higher level irrespective of the other parameters.

The concept needs to be understood and examined in light of the fact that the world in general very recently experienced global meltdown on one hand and yet there were several nations in the world having continuous higher food index. The economic situation across the world and INDIA has drawn attention of the theorist again though scholars have taken of the position respectively in different schools of thought, the most crucial significant fact is that none of the established doctrines prove to be
adequately responsible for price fluctuation in India and around the world. Is it the impact of an increase in wage bills? In general, does it reveal the dominants of money supply? Is it the result of scarce of the output? Is inflation inevitable of growth projections? All this issues emerged in light of the current inflationary trends observed globally in general and nationally in particular. This demands a small but systematic effort to inquire into the conceptual stand and the case as the outcome. It is in this context that an attempt is made here to reveal their interacts of the concept and to testify the validity of the concept.

Thus this research attempts to inquire specifically the following:

1. A certain degree of inflation in any economy is warranted and acceptable by policy makers. The severity of inflation gets a cause of concern when it crosses acceptable limits. Thus the current research tries to capture the magnitude / the degree of inflation over six decades. Certain period of Indian economic history has observed unexpected levels of fluctuations, which needs to be specifically observed.

2. It is a matter of inquiry if inflation in India follows any particular patterns or moves randomly. It can be inquired if any particular trend can be observed for the crests and troughs in the inflationary trend. If it follows any particular pattern it might be easier for the policy makers to more precisely inquire into its reasons.

3. A lot of reasons are well-established in theory to reason out inflationary trends. History of various countries too reveals some clues to the factors affecting inflationary trends. Thus this research would attempt an inquiry into various components affecting inflation at various points of time in Indian history over five decades. Various factors responsible for both upward and downward movements of inflation shall be inquired in this research attempt.

4. Also not all components play a crucial role in influencing inflation. Various factors may have caused different levels of effect on various levels of inflation in various periods. It would be inquired in this research if certain factors affected inflation more than some other factors in the overall inflationary trends by observing the component wise break up of inflationary trends.

5. Policy makers of any government always walk on two edged sword of controlling inflation and inducing growth. Being one of the primary objectives of monetary policy, current research would attempt to understand if monetary
policy is able to control inflationary pressures, and if they do what is the time lag in the effect of the same.

6. Ever since India has opened up its doors for being a global economic participant, India has obviously become more fragile to international events. Thus finally it would be a matter of inquiry of this research to observe if there is any similar trends can be observed between Indian and International / global inflationary trends.

2.2 Review of literature:
The inflationary process has been a controversial topic in the literature, both theoretically as well as empirically. The precise nature of the relationship of price level with other macroeconomic variables has, despite years of research, remained an area of contention. The debate on the inflationary process in the closed economy context can be theoretically contained in these propositions:

1. The Monetarist School usually assumes a stable relationship between money-stock to nominal income. In their opinion 'fiscal deficit' is the root cause of the inflationary process in so far as it affects money supply. They argue that by reducing the rate of growth of base money (H or M), which in most cases requires cutting down the 'fiscal deficit' of the government; the rate of inflation could be brought down. Friedman argues, 'Inflation is always and everywhere a monetary phenomenon' (1963, p 17). The role of money-financed fiscal deficits in the inflation process is theoretically well established and empirically documented (see for instance Polak, 1957; Khan and Knight, 1985).

2. Structuralist School, in contrast, argues that crucial sources of price rise are structural rigidities usually in the farm sector of a developing country. Excess demand drives up the price level triggering the inflationary process. Sectoral imbalances (caused by the rapid growth of the non-agricultural or industrial sector) could lead to an excess demand for wage goods and consequently it can result in rise in agricultural prices, as imports cannot come in. This is often complemented by the conflicting claims models which give an account of the inflationary process, by which clashing claims of different social classes cannot be reconciled and inflation is argued to be a symptom of these
conflicting claims (Sanyal, 1996; Bhaduri, 1986; Kalecki, 1972; Baer and Beckmann, 1974).

3. Cost-plus pricing is an important feature of the price formation process especially in the non-farm sector. This sector has been growing fairly rapidly in most of the developing countries (World Bank, 2000/1). This argument is based on the cost-push factors in explaining the inflationary process. Interest rate and food prices are supposed to be the main cost transmission channels in this context.

4. In their paper “Growth – Inflation Trade Off; Empirical Estimation Of Threshold Rate of Inflation for India ‘’, R Kannan & Himanshu Joshi have intensively reviewed the existing literature on the effects of inflation upon growth and determination of optimum ”, level of inflation.

5. According to them, the effect of inflation upon growth has often been queried by some investigators who argue that adverse effects on economic growth occur only during extreme inflationary periods and not otherwise. Brano and Easterly (1998) concluded that there was no evidence of growth inflation trade off in a sample, which excluded discrete high inflationary crisis. On the other hand there was ample advice to show that growth turned sharply negative when inflation crossed passed a high threshold rate of 40 percent per annum. They also argue that the failure of investigators in detecting a meaningful relationship between inflation and growth can be attributed to a stylized rapid recovery of output after inflation, which, on an average, renders the overall statistical relationship insignificant.

6. Sarel (1997) attempts an alternative empirical investigation of the problem and also concludes that inflation affects growth only if it breaches a specific “threshold” rate of inflation but not otherwise. He concludes that an inflation threshold of about 8% for pooled sample of a large number of countries including India, serves as a good common bench mark for the sample as a whole. It was also estimated that if the threshold rate of inflation doubled from 8 to 16% per annum than growth was sharply reduced by as much as 1.7 percent per annum.

7. In India the committee to review the working of the monetary system (1985) suggested that an inflation rate of 4% per annum is an optimum level for the Indian economy and will facilitates “changes in relative prices necessary to
attract resources to growth sectors. Both Rangrajan (1998) and Vasudevan in (1998) have suggested that an inflation rate of no more than 6% should be an optimum level for the Indian economy.

8. According to Keynesian views, the trade-off debate was rooted in the proposition of non-linearity of money and advanced the view that an increase in money supply, by raising price levels, can reduce real wages and thus bring about an improvement in real economic activity over the underemployment level. This significantly introduced non-neutrality of money and gave rise to an apparent tradeoff between price stability and growth.

9. The evidence of an inverse relationship between inflation and growth was vociferously advocated mainly since the beginning of the 1980s in contradiction to the earlier stands taken by several researchers including Johnson (1967) who indicated that there was no conclusive empirical evidence one way or the other.

10. Notable among the recent papers that address this relationship are by De Gregorio (1993), Fisher (1993), Barro (1995), Sdordone and Kuttner (1994), and Smith (1994), all of whom technically confirm that inflation has a negative effect on economic growth. Sthanu R Nair and Leena Mary Eapen in their article ‘Food Price Inflation in India (2008 to 2010) A Commodity – wise analysis of the casual Factors’ published in EPW Vol XLVII NO 20, May 19, 2012. They examined the factors responsible for high inflation experienced in various food commodities in India between January 2008 and July 2010. A majority of the food commodities faced upward price pressure due to supply-side constraints. They include pulses, fruits, vegetables, meat, fish, spices, tea, coffee, and sugar. On the other hand, the prices of milk and eggs remained high though there was no serious shortage in the market. This was due to the cost-push factor, namely, high inflation in the animal feed (oil cakes), resulting from a shortfall in the production of oil seeds. Despite a favorable supply scenario, rice, the most important food grain, witnessed high inflationary pressure due to a complex interplay of a set of factors. The genesis of these factors lies in the following two systemic problems plaguing India’s food grain management: high MSPs and imprudent piling up of grain stocks in government depots at this higher MSP. Besides this, the inflationary expectation caused by erratic rainfall in 2009-10 played a role in jacking up
rice prices. Contrary to popular perception, it is revealed that, barring milk, the recent phase of high food inflation cannot be attributed substantially to structural demand-side factors relating to non-cereal food items. At best, food inflation was a short-term supply issue. The developments in the global economy influenced the domestic food price scenario mainly through “passing on” of world oil price increases. Only in the case of sugar and tea, the world market prices had an influence on domestic prices via costly imports. In fact, for a substantial part of the period between January 2008 and July 2010, the food inflation rate at the global level was in the negative zone. This reiterates the fact that high food inflation witnessed in India during 2008-2009 and 2009-10 was primarily due to domestic constraints on the supply-side.

11. The earliest papers by Triffin and Grudel(1962) had looked into economic performance of EEC and observed that more open economies tended to experience lower price inflation. Their explanation was that openness served as a safety valve and the domestic inflationary pressure spilled over into the BOPs in the open economy. Correspondingly this resulted in softening influence on domestic inflation.

12. Iyoha (1973) used a sample of 33 less developed countries and analysed the relationship for both yearly and 5-year averaged data from 1960-61 through 1964-65. The method used was OLS. The paper related inflation (proxied by rate of growth of WPI/ CPI) and openness in simple bivariate framework. It was found that openness is negatively related to inflation. However, the results in the multivariate exercise were not unambiguous although openness variable always had negative sign but it was found to be significant only occasionally. Changes in income and money growth were the other explanatory variables found to be significant when used separately. Otherwise, change in income variable tended to dominate the money growth variable. This could possibly be due to the presence of high degree of multi co-linearity between the two variables.

13. Kirkpatrick and Nixon (1977) in their comment on the paper by Iyoha (1973) argued that cut down of imports could worsen the inflationary situation. They argued that composition of imports needs to be examined to check the inflation and openness link and more reliable indicators of openness are needed for a thorough understanding of the issues involved.
IMF (1990) in a review of the literature of inflation brought in the openness variable and argued its potential influence on the inflationary process in the developing countries. The paper points out that inflation in large part of the developing world had remained considerably higher in the industrialized countries. In many of these countries inflation has still been a serious problem with some experiencing hyper inflationary situations. This paper besides the conventional variables, such as money growth and fiscal deficit, which influence inflation process, brought in the import price and degree of openness as other possible factors that might influence the inflationary dynamics. There was, however, no empirical or econometric estimation in the paper.

Romer (1993) argues that openness puts a check on the government’s incentive to engage in unanticipated inflation, because of induced exchange rate depreciation. He demonstrated that average inflation rate to be lower for smaller and relatively more open economies. In addition, he finds this relationship to be significant, quantitatively large, and robust. This is supposed to be because the more open an economy the higher the possibility of her prices to come in alignment with the international prices. Romer’s analysis started by regressing logarithm of inflation rate on openness for a cross section of 114 countries. His results were found to hold for a wide range of countries, except for a small group of developed OECD countries. He also found that the empirical analysis finds the relationship between inflation and openness to be stronger in countries which are politically less stable and with less independent central banks. He divided the countries of his sample in four broad groups: first group excluded the hyper inflation countries, second group, excluded the countries whose monetary policy is tied up with that of other countries; thirdly, according to the quality of data, and excluding major oil producers; and fourthly, geographical region wise. The results were on expected lines except for a small group of most highly developed countries mainly OCED countries.

Lane (1997) using the same data set as Romer (1993) also found support for the above proposition of negative relationship between inflation and openness. An interesting finding was that the openness effect was stronger when country size was included as the control variable. This paper, like Romer (1993), also included the proxies for ‘central bank independence’ and ‘political instability’.
The grouping used by her was based on rich countries, OECD countries, and the overall sample.

17. Terre (1998) also observed similar evidence in her paper written in response to Romer (1993) but she found the negative relationship between inflation and openness to be significantly influenced by the extent of indebtedness of the country. The argument forwarded by the paper is that consider 2 countries with the same debt burden, therefore needing the same trade surplus to make the external transfer. Assuming identical price elasticity, the less open economy will need a larger exchange rate devaluation to generate the trade surplus. The devaluation, in turn, further tightens the internal constraint by raising the value of external liabilities in domestic currency; more resources will have to be transferred from private to the public sector. When inflation tax is the major mechanism for this transfer, a higher inflation rate will result. Hence, the less open a country is, the higher its inflation will be during a debt crisis.

18. Jin (2000) in his analysis of East Asian economies found openness to be an important variable for growth but fiscal policy and foreign price shocks were coming out to be even more important in his analysis, which was based on the time series data for these economies using vector auto-regression (VAR) framework.

19. Empirical studies of inflation in India have generally followed either a monetarist or structuralist approach. Moosa (1997), for instance, finds one to one correspondence between prices and money stock in case of Indian economy. Rao (1997) also finds similar evidence supporting monetarists approach.

20. In one of the papers following structuralist frame work, Balakrishnan (1991) models prices of manufacturers through an error-correction specification based on a mark-up pricing rule using annual data 1952-80. Labour and raw material costs are both found to be significant determinacy of inflation in the industrial sector. Agricultural prices are modeled as a function of per capita output, per capita income of the non-agricultural sector, and, government procurement of food grains through the public distribution system. Bhattacharya and Lodh (1990) too find the superiority of the structuralist over the monetarist model in explaining Indian inflation.
21. Mallick (1998) finds the cost-push factors are more important in causing price level than the excess demand, as the magnitude of its impact is very negligible. Price level, measured by the wholesale price index is positively and significantly affected by the domestic unit labour costs and the cost of imported inputs (measured in US dollars). This model combines both demand and supply factors and suggests a weak role of money in its influence on prices in India. However, the empirical literature in India does not report openness to be a significant factor in explaining the inflation outcome.

22. Sthanu R Nair and Leena Mary Eapen in their article ‘Food Price Inflation in India (2008 to 2010) A Commodity – wise analysis of the casual Factors” published in EPW VOL XLVII NO 20, May 19, 2012. They examined the factors responsible for high inflation experienced in various food commodities in India between January 2008 and July 2010. A majority of the food commodities faced upward price pressure due to supply-side constraints. They include pulses, fruits, vegetables, meat, fish, spices, tea, coffee and sugar. On the other hand, the prices of milk and eggs remained high though there was no serious shortage in the market. This was due to the cost-push factor, namely, high inflation in the animal feed (oil cakes), resulting from a shortfall in the production of oil seeds. Despite a favorable supply scenario, rice, the most important food grain, witnessed high inflationary pressure due to a complex interplay of a set of factors. The genesis of these factors lies in the following two systemic problems plaguing India’s food grain management: high MSPs and imprudent piling up of grain stocks in government depots at this higher MSP. Besides this, the inflationary expectation caused by erratic rainfall in 2009-10 played a role in jacking up rice prices. Contrary to popular perception, it is revealed that, barring milk, the recent phase of high food inflation cannot be attributed substantially to structural demand-side factors relating to non-cereal food items. At best, food inflation was a short-term supply issue. The developments in the global economy influenced the domestic food price scenario mainly through “passing on” of world oil price increases. Only in the case of sugar and tea, the world market prices had an influence on domestic prices via costly imports. In fact, for a substantial part of the period between January 2008 and July 2010, the food inflation rate at the global level was in the negative zone. This reiterates the fact that high food
inflation witnessed in India during 2008-2009 and 2009-10 was primarily due to domestic constraints on the supply-side.

23. According to Md. Quddus and Rajendra Pd. Gupta in their paper entitled “Inflation: An Iniquitous Tax” present a generalised view of inflation in India. They are of the view that the runaway inflation is unannounced and painful taxation on people. In their opinion the time has to make yet another departure from conventional thinking. Because India has emerged as the world’s 10th trillion-dollar economy. It’s GDP growing at an annual rate of 8% on a sustained basis. It is world’s second fastest growing economy and expected to become the world’s fifth largest consumer market by the year 2020 and third largest economy by 2035. But the unabated rise in inflation to a crazy height is highly uncomfortable and unwelcome. In this connection the Finance Minister said, “fast growing economies like India will face such problem but the right attitude, patience and grift can help us not only face the problem but also tackle it.” It is said that inflation in India is part of the larger global phenomenon and the government has taken several steps to ease the liquidity and increase the money supply to lowering down the rate of inflation.

24. The paper entitled “Commodity Prices and Inflation in a Global Scenario” with special reference to India by Dev Raj emphasizes that the inflation confronted the policy makers throughout the world in the form of dominant economic problem. The paper, purely of theoretical nature, presents the type of inflation and remedies to control it. According to author the present inflationary trend in India is profit inflation which is fueled basically by excess demand for a variety of goods, notably primary commodities, including food articles. Indeed, one can say that this was the first time since “economic liberalisation” was introduced in 1991 that we are witnessing excess demand caused “profit inflation.” This is because “liberalization” typically keeps the level of demand deflated, through a variety of instruments, including fiscal responsibility legislation.

25. Paramanand Singh and Shashi Bhusan trace some missing roots of current global meltdown in their paper “Inflation, Recession, Financial Meltdown and the Indian Economy: An Analysis of Some Missing Roots.” The authors present a historical view of policies of USA during the 20th century that resulted into inflation or recession from time to time. They, very categorically,
make it clear that monopolistic hegemony of US and European economies with its gigantic productive potential, acts as obstacles in the way of making full use of resources and manpower of the third world countries in the interest of their common people, thus, fails to producing a counteracting force against accumulation and as a result world witnesses the weakening of investment of demand. This can be changed only by providing alternative to this system and not by taking remedial measure which will use the resources at the disposal to provide livelihood bases and improving their livelihood condition by increasing their capacity building via generating creative psychology in their mind which in turn will enhance their confidence level in any endeavour of their own to ameliorate their poor living condition. This require drive against concentration, positive steps in terms of policies to establish an egalitarian order where everybody will have access to natural resources at their disposal to use it in a proper way to make the development goals sustainable cycle. Only then stagnation will never show its ugly face.

26. The paper “Inflation in India: A Result to the Excess Supply Money” by C.B.Sharma treats inflation as a monetary phenomena. The author is of the firm opinion that Indian policy makers often acted beyond the norms of financial discipline in terms of money supply. Government and the corporate world often compromise with high inflation for a higher growth of GDP. The author seems agree with the monetarists that there is a trade-off between inflation and growth implying that a country has to suffer inflation in order to achieve higher growth.

27. Anil Kumar Thackur and Aparna Bhardwaj emphasizes in their paper entitled “Inflationary Trends in India” that inflation is a global phenomenon in present-day time. There is hardly any country in the capitalist world today which is not affected by the specter inflation. The paper analysis the effects of inflation on production and the distribution. The most serious effect of inflation is that it disrupts the smooth working of the price mechanism. It also losses the flexibility under the inflation forces, which results in the reduction of mobilization of productive resources. The author is of the firm view that hyper inflation adversely affects the wage earners and the common man but stimulates businessman, traders, merchants and speculators which reap rich harvest on account of windfall profits accruing to them as a result of price rise.
28. Shrawan Kumar Singh’s paper entitled “Inflation in India: An Analysis” makes an attempt to analyze some of the complications that cloud the perception of the link in the short-run and tries to show that policy-makers cannot escape theory when dealing with the short-run. According to Prof. Singh money is generalized purchasing power, hence the monetary policy is very much concerned with the general price level. Prof. Singh is highly critical about the existing measure used to gauge inflation at any point of time. There is no all-purpose, all-inclusive and universally valid index that can be used to measure the trends in price rise.

29. The paper “Inflationary Trends in India” An Analysis by Dalip Kumar, Rekha Rani and Bharti Kumari examines the causes and impact of inflation during 1995-96 to 008-09 giving more emphasis on the period from January 2008 to February 2009.

30. Abha Mittal’s paper “Inflation Pendulum strikes after 20 years 2008”, observes that the hyper inflation during 2008 was due to supply side constraints. A deep study of the inflation trends in the year 2008 revealed that the basic reason of uphill in inflation was largely due to increase in price of food articles and fuel. In other words, it was due to supply-side factors which were controlled largely by using measure from the supply-side. The efficient handling of supply management by the Indian Government helped inflation to ease at the end of the year December 2008. Thus, the single most important lesson from the events of 2008 is “BE PREPARED FOR THE UNEXPECTED”.

31. B.M. Jani examines various issues and policy options for inflation in India in his paper entitled “Issues and Policy Options for Inflationary Trends in India” the author is of the opinion that the current spate of inflation in India is an outcome of transmission of global inflation into India, rising oil prices in the international market, adverse balance of payment and finally the food inflation largely due to speculation in agricultural commodity exchange market. Inflationary pressures are result of excess expenditure and excess credit in the economy. It is not wage inflation. In Indian condition, non-core inflation is often the dominant part of inflation. As such, monetary policy is a week tool to curb the prices. Therefore, countries like China, Thailand, Indonesia, Vietnam, Egypt, Ethiopia and Cambodia made use of export-import policy than that of
monetary policy. Current state of inflation is not due to deficit finance but largely due to public debt and borrowed fund utilize. Thus, Friedman’s thesis related with trend analysis and consumption function has great relevance in western rich countries but not fit in Indian condition as growth less unemployed army is dominating. As such, income is main source for purchasing power. Neither interest rate policy nor other tools of the monetary policy proved successful to come out from global recession created by the US. Output-led growth and growth-led output policy in real sector of Indian economy appear to be more relevant in Indian condition to curb the inflationary pressures.

32. Zafar Ahmad Sultan and Sharful Hoda present a theoretical view of the measurement in their paper entitled “Determinants of Inflation in India: An Empirical Analysis”. The author says that in a closed economy, price level is generally influenced by domestic factors. When an economy is opened to the world economy, change in price level takes place even when domestic variables show normal trends they empirically proves that the world inflation and money supply have positive and significant relation with inflation in India. They find that inflation rate, growth rate of agricultural output and of money supply are stationary, whereas, growth rate of GDP and openness index are non-stationary. Therefore, regression equation of inflation on these two would be meaningless. Further, regression equations of inflation on inflation rate in the world economy, growth rate of agricultural output and of money supply shows that for the periods, world inflation rate and growth rate of agricultural have significant relations with price level in India. But money supply does not have significant relation with inflation, though the sign is in line with the earlier studies, which finds a positive and significant relationship between the two. Further, a positive relationship between growth rate of agricultural output and inflation is contrary to the findings of earlier studies.

33. S.P.Saha and Bishnu Roy’s paper “Inflationary Trends and Measures Taken to Curb” observes that declining the prices of crude oil has helped India to manage the inflation rate. The trade deficit will be 10.4% of GDP in the current year. The government has intended to tackle the temporarily inflation by demand compression and by raising interest rate. Even at the best times such a policy involves walking a tightrope. Having allowed the trade deficit to
become as large as we have implementing such a policy will require all the skills that the policy-makers can muster. The choice is between an orderly retreat and market driven scuttle. Of course, going by past experience, nothing of the sort will happen.

34. Shailesh Kumar and Ratnesh Kumar’s paper entitled “Inflation in India: Causes and Measures” they observe that inflation in India is structural as well as monetary phenomenon. In the short-term, localized demand supply imbalances in wage goods, often due to seasonal variations in production-coupled with market rigidities and failure of regulatory framework have supported the inflationary expectations. In the medium to long-term, increase in money supply fuelled the price rise in the economy. However, wide range of measures has been taken by the government to ensure stable conditions as well as to prevent speculators from taking an undue advantage of the conditions of scarcity.

35. Jagdish Prasad Sharma, Kanchan Prabha and Vivek Kumar’s paper entitled “Inflationary Trends in India” they find out that the facts which bring out the impact of the inflation on Indian economy. The inflation trends in India also follow some trends of globalised inflation. There are various measures led by the government to control the inflation and relieve the stress created by the inflation in the market. The analysis has been made to bring out the importance of stickiness in the context of the inflation.

36. Sunil Kumar and Sunil Kumar’s paper entitled “An Analysis of Inflationary Trends in India: Pre and Post-Reform Period” they observes that inflation in India has been by far persistent and unstable nature for long and consequently, troublesome for the people of every walk. Its pressure and variation during the pre-reform period were relatively high in comparison with those during the post-reform period. However, during overall period, period 1971-72 to 1980-81of the pre-reform period and period 1991-92 to 2000-01of the post-reform period were worse in terms of high and instable price situation.

37. Kumari Rekha and Vikash’s paper entitled “An Analysis of inflationary Trends in India with Special Reference to Foodgrains prices” they found that in India the impact of rapidly rising prices of food has been felt most sharply by poor people who tend to spend around half of their income in food items. Hence, to contain inflation the government should strengthen PDS by
universalizing it and removing the cuts in supply of food grains to states, and inclusion of some other essential items such as pulses, edible oil and sugar in the PDS. We have to effectively management of inflation by increasing the productivity in agricultural sector. A cut in custom and excise duties on oil and reduction in the retail prices of petrol and diesel is required. Action should be taken against hoarding of essential commodities and strengthening of the Essential Commodities Act to empower State government to deal with hoarding and black marketing.

38. Sudha Ranjan Sing and Ajit Kumar’s paper entitled “Global Inflation: Changing Dynamics and its Impact on Indian Economy” they observes that the global economy is wedged between slowing growth and rising inflation. While risks of the return to the widespread stagflation of the 1970s appear to be modest for most countries, we could instead be faced by a similarly challenging phenomenon: stagflation or a least low growth in the advanced economies and inflation in the emerging economies. With dynamics of global inflation changing, policy makers in emerging economies will need to play their part in ensuring that we avoid a repeat of the 1970s – keeping domestic inflation under control, but also ensuring policies for robust demand and supply responses to rising commodity prices. Financial shock absorbers are working too – through new channels as emerging economies as a group have shifted to being a net source of global savings as sovereign wealth funds are helping to recapitalize ailing banks.

39. Syed Alay Mujtaba and Pankaj Purushotam’s paper entitled “Inflationary Trend in India: During Five Year Plans” they observes that the theoretical as well as empirical study of price behavior and related applied polices for containing such an unusual phenomenon has been extensively explored themes of discussions both in the developed and developing nations. While the debate with regards to developed nations has generated a good deal of literature on the controversy between Kenyesianism and Monetrasim regarding the more dependable channel exhibiting the process of excess demand inflation in these economies, in developing nations especially in Latin America, this debate has given birth to so-called structural and monetary schools. The structuralist-monetarist controvercy reflects a deep difference of social and political attitudes towards the appropriate means to contain unusual
price behavior during the process of rapid economic development in developing economies. To structuralists, it is development through which the structural bottlenecks and basic rigidities can be eliminated. Any attempt to achieve complete price stability through monetary or fiscal means will result in unemployment, under utilization of Industrial capacity and will slow down the rate of growth, whereas according to the monetarists there is no necessary between stability and development. As long-run policy, they do not recognize inflation as serious possibility.

The problem of suitable price policy in the context of the Eleventh Plan arises largely due to the existence of persistent pressure of inflation. Price stability need not mean freezing the price at a given level. Slow and steady rise in the price level and has in addition the power to infuse a good degree momentum to the economy. This type of non-inflationary growth is necessary when the Indian economy is poised at 8 to 9 % annual rate of growth of GDP. The Indian Government has sufficient experience in controlling inflations.

Taking aggregative view of their paper, it may be concluded that economy should be capable of absorbing inflationary impact of development of expenditure, should have agricultural growth fast enough to meet the requirements of growing industrial incomes. Hence the monetarist anti-inflationary policy can get support only from expanded structural stabilization policies because the price behavior under the Indian conditions call for an attack on both the variables and it may effectively be tackled inflationary situation in the long-run perspective.

40. Chandra Shekhar Ravi and Narayan Sah’s paper entitled “Review of Inflationary Control Measures: A Micro Analysis” they found that inflation is a complex monetary phenomenon in economy, and it hurts common man or people the most whose income is fixed and more so those who do not have a regular job and steady source of income. Due to high inflation rate common people directly affected. So what should be the policy response to the rise in inflation rate? At political level, protecting the consumption? At political level, protecting the consumption level of poor is a high priority. Fiscal measures provide short-term relief. The monetary policy response is more potent and would be needed if there are no signs of inflation coming down. However, monetary policy measures can only provide temporary solution. We
are experiencing inflation results of “supply side” constrain especially in food sector. So the long-term remedies are in easing supply side constraints. Though both the phases of trade cycle (i.e. inflation and deflation) are harmful to the economy but a low rate of inflation is an inducing tonic to the developing economy. Slow rise in prices is supposed to induce the producers to increase the production which in turn ensures more and more employment opportunities in the country. But uncontrolled and ever-rising inflation rate disturbs the economy. Hence, it is required for the developing economies to keep a strict control on inflation rate in the economy by former measures as well as new invented measures like CPI and WPI.

41. Vivek Kumar, Manish Kumar and Niranjay Kumar’s paper entitled “Inflation Trends during Pre and Post-reform Era” they find out that due control avoid inflation altogether but can only minimize its retarding consequence through sound policy mix application in the pre-reform are inflation was largely domestic in nature but since the Indian economy has been steadily integrating with the world economy and therefore the ‘import-co-import’ of inflation cannot be avoided together. Large inflation of foreign capital will make the management of external value of rupee as well as domestic inflation a highly challenging and doubling task. Attempt should be made on enhancement of supplies through higher productions and efficient supply management to avoid wastage. Domestic supply management is therefore critical in stabilizing inflationary expectations, moderating pressures for upward revision of wages and prices, and containing pressures for cost-push inflation through monetary and fiscal accommodation. As the economic survey 2007-08 says that “inflation in India is a structural as well as a monetary phenomenon” thus both demand and supply side policies are needed to eliminate its negative fallout.

42. Rahul Kumar Santosh in his paper entitled “Monetary and Fiscal Policy to Control Inflation” he observes that in post world war 2 we have witnessed an increasing globalization of national economies. This means that product and factor market are getting integrated. Therefore, in such a situation making policies to contain inflation is not easy as it can have spillover effects. Also in an open economy along with inflation management, exchange rate management is also important because exchange instability can influence the external sector. This can impact output and employment generation in the
short-run. Therefore, it becomes important that right mix of fiscal and monetary policy is used as an anti inflationary device keeping in mind the open economy implication of the policy.

During recent times when the Indian economy was witnessing inflationary pressures the RBI hiked the key interest rates as an anti-inflationary policy measure. The idea was to raise the cost of capital, which would adversely impact investment and consumer demand and thus the aggregate demand. This in turn would help in cooling the overheated economy. As a policy measure the government must ensure structural reforms and raise the productive potential of the economy to augment the supply of goods and services in the economy.

2.3 ECONOMETRIC MODEL:
1. Another important contribution in this regard in Krishnamurty (1984). In his study “inflation and growth –A MODEL FOR INDIA”, Krishnamurty derives some interesting conclusions. He shows that after 1974, imported inflation had a significant effect on domestic inflation. Also, increased availability of raw materials, fuels, sustained good weather etc. improved growth performance and lowered inflation. Moreover control on money supply was also an important contributor containing inflation. Increase in public investment increase growth more than inflation, when inflationary financing is moderate. However, in this study the problem of the efficiency of public sector was not touched upon.

2. In their study entitled “inflation in India-A Multi-Dimensional View through Various Prices” R.B.BARMAN and A.K.NAG in the book national income account and data system have attempted to establish relationship between inflation rate and GDP growth rate for the Indian economy during the years 1950 to 1996. They have concluded that no strong relationship between the two existed. However, If lagged relationship (taking various time lags) is estimated, then a relatively low but statistically significant relationship was found (lagged by four years) between the two variables.

3. The objective of the study “Money and Price Level in India :an empirical analysis”, (Indian economic journal ,vol 38,1990),by Bishwas Basudev and Peter J Saunders, was to examine the relationship between the money supply

4. This study relies on the optimal lag selection causality technique outlined by Hsiao 1981. The result obtained by Hsiao’s causality testing method are compared with the result of similar study reported by Sharma (1985). The studies attempts to establish a causal flow between the stock of money nominal income. The main purpose of the research paper entitled “Inflation and Economic growth: an empirical investigation”, (Indian economic journal, vol 39 No.1 July-September) by Tribedy Gopal was to find out the long run implications of the relation between inflation and economic growth from available cross section data. It used the standard growth accounting technique of solow (1956,1957) in the manner it has been employed in examining the role of export promoting measures in the growth of income in the developing countries in Balassa (1978), feder (1982),Kavoussi (1984) and Rana (1988).

The period of study covered in this paper is from 1965 to 1986. The whole period has been divided into two subsets: one for the period 1965, 1980 and the other for 1980-1985.

The wide range of inflation rates experienced by a variety of highly dissimilar economies in the world during 1965-1986 is associated with almost equally divergent GDP growth rates. The statistical evidence exhibited by cross sectional data supports neither the accelerations hypothesis of positive impact of inflation on economic growth nor the retardation hypothesis of the structuralism and dispersion theories. In a wide range of conditions, inflation continues in a country, people become used to it and their real behavior remains unaltered.

The exception of a positive correlation between inflation and economic growth in industrial market economies in 1965-1980 is, however, highly suggested. These economies experience short run cyclical swings in income and employment is more than others. The trend growth itself might have been influenced by cyclical fluctuations.

Inflation caused by monetary expansion is moderated by the growth of output. Whatever be the mechanism through which money causes inflation, it is always and everywhere true that excessive money supply leads to inflation. The causal link running from inflation to money supply is not confirmed in this study. Had the causality been in the other way, the output growth should have been associated with
monetary growth. In other words, both inflation and output growth should have caused the expansion of money supply. But in fact the monetary growth appears as an exogenous variable not caused by the output growth.

2.4 Objectives:
This research work is undertaken in context of the following broad objectives.
1. To understand and examine the decadal trend of inflation.
2. To understand and examine components wise break up of inflation.
3. To highlight the causes and consequences relationship influencing inflation.
4. To understand and examine the three years moving average of WPI and CPI.
5. To understand the impact of government and RBI policy measures.
6. To understand and examine the impact of inflation on saving.
7. To understand and examine the impact of inflation on capital formation.
8. To understand and examine the impact of supply of money on inflation.

2.5 Hypothesis:
This research work is aimed at examining the following hypothesis.
1. There is likelihood of positive relationship between inflation and employment.
2. There is likelihood of significant relationship between inflation and economic growth.
3. There appears to be sound impact of inflationary pressure on investment.
4. There is likelihood of linear relationship between interest rate and inflation.
5. There is likelihood of positive relationship between inflation and savings.
6. There is no significant impact of M1 and M3(Supply of Money) on WPI.
7. There is likelihood of positive relationship between rainfall and price index of agricultural commodities.
8. There appears to have major divide between pre and post reforms inflationary pressure.

2.6 Methodology:
Research methodology explains the method of conducting research and shows the logical sequence of the steps involved in research. This research is to be carried out through using the following tools and techniques is to be:
Researcher has used research tools like, Microsoft Excel, and SPSS.
Researcher has done the following analysis in the report for the purpose of findings and conclusions:

- Graphical Analysis of Data
- Trend Analysis of WPI and CPI
- Correlation
- Multiple Regression Model for WPI
- Multiple Regression Model for CPI
- Paired Sample T-test

2.7 Sources of Data:
For the study purpose secondary data has been used. The secondary data will be collected from the following sources:

1. All India economic survey of various years.
2. RBI reports on currency and finance.
3. CSO reports.

2.8 Chapter Planning:
This research is divided into five chapters. The first chapter is an introductory one. It inquires into the conceptual and theoretical foundation of inflation.

Second chapter provides research map. It includes research problems, objectives, hypothesis and references to the tools to be applied for analysis of data. This chapter also looks at the review of literature in time order which reviles both the theoretical studies and also empirical observation across the nation and the state.

The third chapter depicts the inflationary trends in India. This gives the year wise review of inflationary trends in India.

The fourth chapter is devoted to data analysis and interpretation of inflationary trends in India during the period of 1951 to 2011.

The fifth chapter is devoted to testing of hypothesis.

The sixth chapter provides the major findings and conclusions.

2.9 The Importance of Study:
The study is important in view of following:

1) Global meltdown has generated contradictions in the economic order.
2) Growth prone strategies unabatedly increased economic inequality.
3) The Indian scenario has experienced peculiar trends in pricing for the respective segments.

4) The study should help to form a new monetary policy.

2.10 Limitations of the Study:

Efforts are made to provide systematic presentation of the areas involved in the research work. Detailed literature is also referred to in consideration of the proposed research work. However, the study cannot be regarded as the perfect one. Broad limitations can be highlighted as under:

1) The conclusions derived are strictly for one country and for a particular reference period 1951-2011. Therefore, generalizations based on this assumption may not be entirely valid for all regions and all time periods.

2) Usefulness of any such study depends upon the precision of the basic data used. To the extent the data are incorrect, the conclusions derived may not be valid.

3) This research study is a simple analytical study.
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