1.1 Introduction:

The monetary policy of a country is an important aspect of its overall economic policy. An appropriate monetary policy contributes to economic growth by adjusting money supply to the needs of growth, by directing the flow of funds in the required channels and by providing institutional facilities for credit in specific fields of economic activities. In this way, monetary policy helps a healthy growth of the economy of the country.

Monetary policy consists of the measures taken by the central banking authority to regulate the cost and availability of credit. Monetary and credit policy operates through five interrelated factors; the availability of credit, the volume of money, the cost of borrowing, the prices of capital assets and the general liquidity of the economy. One of the fundamental tasks of monetary authorities in the growth context remains the creation of conditions for the effective mobilisation of the supply of actual and potential savings through the promotion of financial intermediaries and the creation of a spectrum of financial assets on the one hand and on the other the effective investment of these resources through the adaptation of the credit structure to sub-serve the needs of development.

Economic growth is primarily a real phenomenon and is naturally dependent on real factors. It can be defined as the persistent increase
in the real GDP of the country. Money does not purchase growth but can facilitate economic growth. A proper monetary policy is not a sufficient condition but a necessary one for economic growth. There is a general consensus of opinion among economists, that a sound monetary policy is an important prerequisite of a comprehensive programme of economic development. In spite of limitations, the monetary policy has a crucial role to play in the strategy of planned development of underdeveloped economies. The *raison d'être* of a planned economy is the fullest mobilisation of the available resources and their allocation so as to secure optimum result. Monetary policy is a powerful instrument for securing the desired result.

In a developing economy like India, the monetary policy has to be one of *controlled expansion* to facilitate economic growth and to restrain inflationary pressures. This policy in the long-run aims at a secular expansion of credit but in the short-run seeks to control its rate of expansion. In a development programme of the magnitude that we have cannot but release inflationary pressures and, therefore, the monetary policy has to be so reorganised as to prevent these pressures from jeopardising economic growth of the economy. There are two aspects of such a policy: (a) positive one – promotional role of the central banking in increasing savings and credits, and (b) negative one
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The changes in the monetary policy stimulate the economy only after some time lag. There are basically three types of lag. First is the "recognition lag", which refers to the lag between the time at which a monetary policy action becomes necessary, and the time at which the monetary authorities become aware that action is necessary. This lag is related to the problems of getting up-to-date information on the state of the economy and the forecasting. The second type is "action lag" which refers to the time between recognition of the need for action and the actual carrying out of that action. The sum of the recognition lag and the action lag is called the "inside lag". The third type is called "outside lag" which refers to the time between the taking of a monetary policy action and its effects on the real variables such as output and employment etc. The causes of outside lag are difficult to analyse because they involved the complex inter relationship in the way the economy works. However, monetary policy as an instrument of economic policy has certain advantages "inside lag" which refers to the lag between the time actions is needed and the time the action is actually taken is shorter in the case of monetary policy than in case of fiscal policy. Monetary policy changes, unlike the changes in fiscal policy can and do occur at any time during a year.¹⁰
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The effectiveness of such policy depends on the will and imagination with which it is framed and followed in practice, especially the extent to which the monetary authorities are able to control or curb inflationary rise in prices.

1.2 Significance of Study:

There is wide agreement about the major goals of economic policy; high employment, stable prices and rapid growth. There is less agreement that these goals are mutually compatible or among those who regard them as incompatible, about the terms at which they can and should be substituted for one another. There is least agreement about the role that various instruments of policy can and should play and accomplishing these several goals.

My topic for research will throw light on the role of one such instrument – Monetary Policy as to what it can contribute and how it should be conducted to contribute for the most desired and agreed results in the context of India. Further it will also give a critical insight about monetary policy adopted monetary policy since the first generation reforms.

Before switching over to the topic of Research, it is increasingly essential to go through some literatures related to the same or similar subject. Keeping this view in mind an effort has been made here to
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review some of the existing literatures related to the pros and cons of monetary policy on the economic growth.

1.3 Review of Literature:

Deepak Mohanty, Amitava Sardar and Abha Prasad (1997): In the paper entitled, “Perspectives of monetary developments and policy in India”, an attempt has been made to throw the light on the monetary developments, the theoretical and empirical underpinnings of monetary policy. It has also thrown the light on the changing efficacy of the different instruments of monetary policy in India. The study delineates the evolution of the role of monetary policy from one of developmental in nature during 1950s and 1960s to that of neutralising huge liquidity generated in the economy consequent upon weakening of fiscal balance of the government during 1970s and 1980s. The Article also focuses on how the emphasis has been given on the various instruments of monetary policy. Further the evolution from essentially one of the direct and administered instruments to that of relatively indirect and market-based instruments has been made. The analysis of money, output and prices in a historical perspective shows that unbridled growth of money supply translates largely into rise in prices.

Manohar Rao, M.J. (2003): The Article entitled “Science of Monetary Policy - some perspectives on the Indian economy”, exhibits the problem regarding the design of the monetary policy within the limits of
an empirical framework for the Indian economy. The article peeps into some theories, which have been advanced to explain the stylised facts of the fluctuations in the economy and then evaluates the main features of the business cycles in the Indian economy over the past 50yrs. It has also measured the threshold rate of inflation empirically within the framework of growth-inflation trade-offs and derives the optimal rate of monetary expansion required to make the fluctuations smooth and stabilize the inflation rate at its threshold levels. In the study the optimal rate of monetary expansion has been estimated around 15% to stabilize the inflation rate at the threshold level and the corresponding optimal fiscal deficit, which maximises the growth rate around 4% of GDP.

Meltzer, Allen H. (1997):[^13] In his book entitled, “On making policy more effective domestically and internationally” published from McMillan press limited, London has found that the conduct of monetary policy has become extremely complex in the environment of interdependent risks. Infact the choice and adoption of monetary policy depends on the choice that other countries make. Further, the effectiveness of the monetary policy depends on the environmental and political climate under which the monetary policy is formulated.

Dr. Rakesh Mohan (2004):[^14] In his article entitled, “Challenges to monetary policy in a globlising context”, published in Reserve Bank of India Bulletin, Jan 2004 has discussed the challenges to be faced in the
monetary policy operation caused by the recent global developments.
The article throws the light on how the globalisation has accentuated
the economic interdependence and interaction of the countries. In this
complex world the need of the hour is to develop the greater
coordination in terms of the design reflected in the adoption of monetary
policy approaches so as to enjoy the fruitful gains of monetary policy
over economic growth.

timey theory” published from McMillan India limited has examined the effect of
monetary policy on some macro-economic variables. In order to know
the effectiveness of monetary policy on specified macro economic
variables, the author has used the Granger— Sims Vector auto-
regression (VAR) methodology. The Study result shows that the
relationship between money supply and real out put of the economy is
very weak. It has also been found that the effect of money supply on
interest rates is significant. Moreover, the M1 money supply level is
more important to have an effect on the interest rate. In the study it has
also been suggested by the author that the monetary policy should be
made more active in order to smoothen its effectiveness.

*Kaushik Bhattacharya* (2007): In his article “Monetary policy
Approaches in India” published from BIS papers no.31 has argued that
the monetary policy has played an important role in combating the rate
of inflation and accelerated the rate of growth in India. It has also been argued in the study that this achievement was possible due to combinations of monetary, fiscal, competition and administrative policies. These polices by enhancing efficiency and competition, usher shifts in the aggregate supply curve. Thus to examine the separate contribution of monetary policy in reducing the rate of inflation becomes a difficult tasks due to non-availability of relevant statistics regarding the aggregate supply. The paper, however, observes that even in this area monetary policy in India played an important role. It facilitated the increase in efficiency and competitiveness leading to the increase in growth rate in the over all economy.

Smith, Christie (2004): In the paper entitled, “The long run effects of monetary policy on output growth” has made New Zealand as a case of study. This article looks at how interest rates and inflation affect growth in the capital stock, labour supply, and technology, the main determinants of long run economic growth. There are many additional factors affecting long run economic growth lie outside the sphere of monetary policy. Based on these facts it has been found out that monetary policy therefore has only a limited capacity to contribute to economic growth over longer term. However the evidence does indicate that keeping the inflation low and stable makes a positive contribution to the long run economic growth and that is the most effective.
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Larry E Jones (2007): In the article entitled “The growth effects of monetary policy”, the author has tried to investigate the relationship between inflation and output. The article has reported that the cross-country empirical studies have found a non-linear, negative relationship between inflation and output. The article has given the suggestion that in order to study the effects of monetary policy on growth, printing money is not the only yardstick but the structural adjustments and the study banking and financial regulation is also equally important.

Orlando Gomes (2006): In the article entitled “Monetary Policy and Economic Growth: Combining short and long run Macro Analysis”, has analysed the pros and cons of inflation on economic growth taking the new Keynesian monetary policy model as the basis which is based on an important strong assumption that the central bank should be concerned primarily with price stability. The study has specified the reason for this that the inflation is a serious threat for the correct allocation of resources, which certainly harms the process of growth in the long run. The analysis has focused only on the short run relationship between the inflation rate and the output gap. No consideration has been made about the trend of long-run growth and how this is constrained by a high or low degree of price stability.

Lucas Papa demos (2003): In his article entitled “The contribution of monetary policy to economic growth” has analysed whether and how
monetary policy can contribute to the higher sustainable economic growth. His review regarding the weight of the theoretical arguments and empirical evidence is consistent with the notion that the best contribution that monetary policy can make to sustainable growth is to maintain the price stability. This is because the inflation is fundamentally a monetary phenomenon; monetary policy is the only tool that can effectively maintain price stability in the medium in the long run. The study has also taken into account the available empirical evidence and analysis, which shows that lower inflation, is associated with the higher long-term growth. However, there may be doubts about the robustness of some of these results. There is little empirical support for the view that monetary policy should abandon the pursuit of price stability in order to increase long-term economic growth.

The study has also analysed the factors, which limit the effectiveness of monetary policy in performing a stabilising role. These include the uncertainty regarding the timing and magnitude of its effects, which partly reflects the dynamics of the cycle, the nature of expectations and the type of shocks affecting the real economy.

Shamshad Akhter (2007): In his article entitled, “Monetary policy in Pakistan” has studied the implications of monetary policy in Pakistan especially. He concludes his analysis by stating that the current monetary policy posture appears to be striking the balance of gradually
reducing the excess demand pressures from the economy without prejudice to the high growth prospects. In short terms the bank will need to maintain its monetary tightening stands and enhance its communication to influence inflation expectations, and effectively advocate that the higher interest rates have the adverse effects on the competitiveness and growth. The study has also given the suggestion that monetary policy alone will not be able to contain the rise in inflationary pressures. What is needed is that the govt. has to alleviate supply side constraints because of the problems of market structure and distribution system. The success in containing inflation depends on the effective monetary management. The above study has the empirical evidence in most of the developing countries like India.

Paul S. Anderson (1963): In his article entitled “Relative economic growth rates Fiscal – Monetary Policies” has demonstrated the efficacy of monetary stimulation to growth in output. He has used the rank correlation analysis based on 7 industrial countries for the period 1954 – 1960. He has concluded that growth can be accelerated by the monetary expansion. But it has been criticised by other thinkers. They also contradict the current trade-off view that the price stability must be sacrificed to achieve rapid growth.

Arjun Chatrath, Sanjay Ramchander and Frank Song (2007): In the article entitled “stock prices, inflation and output: evidence from India”,...
has analysed the relationship between stock market returns and inflationary trends and the relationship between inflation and real economic activity. The study has shown a negative relationship between stock market returns and inflationary trends, which has been widely documented for developed economies in Europe and North America. This study provides the similar evidence for India. The Study tests whether the negative stock return-inflation relationship is explained by a negative relationship between inflation and real economic activity, and a positive relationship between real activity and stock returns. It has been proved that relationship between real activity and inflation does not account for the negative relationship between the real stock returns and the unexpected component of inflation.

I. J. McFarland (1997): In the paper entitled: "Monetary policy and economic growth" published by the Reserve Bank of Australia Bulletin, the author has analysed that the relationship between the monetary policy and economic growth is essentially a short-term or cyclical one. While the monetary policy measure long-term influence will be on the rate of inflation but in short period it will have a significant influence on economic activity and employment. This analysis of the study has also been the empirical evidence for India.

Ila Patnaik and D. K. Joshi (2007): In the article entitled "Inflation, investment and growth - The role of macro economic policy in India"
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The effort has been made to examine the relationship between growth and inflation. The study has concluded that the cross-country studies indicate a positive relationship between growth and inflation in the short run and a negative relationship between the two in the long run. Further it has been analysed that the investment is one of the most important determinants of the long-run rate of growth and the inflation as an indicator of macro economic instability is hypothesised to have an adverse impact on investment and hence on growth. The finding of the study regarding trade-off between inflation and growth suggests that controlling inflation and increasing public investment can achieve higher growth.

Thus a lot of work has been done on the monetary policy and growth and many more would be in the process. In fact review of these literatures helped me a lot in making the arguments and in setting up the objectives of the research work.

1.4 Objective of the Study:

The relevance of the structuralist versus monetarist approach to the growth and inflation dynamics has been an extensively explored theme of discussion among the economists throughout the world. The empirical works of both the schools of thought have not thrown the conclusive evidence regarding the subject of inflation and growth trade-offs. The structuralists are of the opinion that inflation positively
affects the growth. On the other hand the monetarists see inflation having an adverse impact on the growth. The proposition has been substantiated with opinion of some other economists who see a direct relationship between inflation and economic growth up to a certain level because there could be trade-offs beyond that threshold level.

Against this backdrop, the following objectives of the present study have been set:

(a) To examine the relationship between money supply, growth and prices.
(b) To know the trade-off between inflation and growth
(c) To examine the efficacy of different instruments of monetary policy after the financial sector reforms.
(d) To analyse whether a single target, single instrument rule is preferable over the multiple target approach.
(e) To know whether the monetary targeting is still feasible in the changed environment or not.

1.5 Limitation of the Study:

The fact cannot be denied that the govt. has the two dominant policies - (1) Monetary and (2) Fiscal at its disposal to determine the fate of the economy. But the limitation of our present study is that while knowing the efficacy of monetary policy in the context of growth,
efficacy of the fiscal policy has not been considered. This is because the fiscal policy is also as good as the monetary policy for the economy.

Another limitation of the study is that the economic growth is not influenced by monetary policy alone but at the same time there are real factors also which carry the bearing on growth. These factors have not been taken into account in our study with their policy implications.

1.6 Hypothesis:

For our study we have formulated the null hypothesis, which has to be accepted or rejected as per the findings:

1) $H_0$: Financial liberalisation and globalisation has made the relationship between money supply, output (growth) and prices unstable and unpredictable.

2) $H_0$: There is a trade-off between growth and inflation at least in the short run.

3) $H_0$: The central bank should pursue a single target, single instrument rule.

4) $H_0$: Multiple indicator approach (MIA) – e.g. interest rates and exchange rate, has replaced the monetary targeting (MT) as an anchor of monetary policy.

1.7 Methodology and Sources of Data:

Our research work is an empirical study. In order to know the efficacy of monetary policy on growth and to test the developed hypothesis, the method of correlation coefficient has been used which
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shows the interdependence of different variables like inflation, GDP growth and money supply. The formula can be expressed as:

\[ r^* = \frac{\Sigma (Y - \bar{Y}) (I - \bar{I})}{\sqrt{\Sigma (Y - \bar{Y})^2 \Sigma (I - \bar{I})^2}} \]

where,

\[ r^* = \text{Correlation between Inflation and growth} \]

\[ Y = \text{Real GDP} \]

\[ I = \text{Inflation} \]

\[ \bar{Y} = \text{Average Real GDP (Mean of Real GDP)} \]

\[ \bar{I} = \text{Average Inflation} \]

\[ r^{**} = \frac{\Sigma (I - \bar{I}) (M_s - \bar{M}_s)}{\sqrt{\Sigma (I - \bar{I})^2 \Sigma (M_s - \bar{M}_s)^2}} \]

where,

\[ r^{**} = \text{Correlation between Inflation and money supply} \]

\[ I = \text{Inflation} \]

\[ M_s = \text{Money Supply} \]

\[ \bar{I} = \text{Average Inflation} \]

\[ \bar{M}_s = \text{Average Money Supply} \]

\[ r^{***} = \frac{\Sigma (Y - \bar{Y}) (M_s - \bar{M}_s)}{\sqrt{\Sigma (Y - \bar{Y})^2 \Sigma (M_s - \bar{M}_s)^2}} \]

where,

\[ r^{***} = \text{Correlation between Real GDP and money supply} \]

\[ Y = \text{Real GDP} \]
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\[ M_s = \text{Money Supply} \]
\[ \bar{Y} = \text{Average Real GDP (Mean of Real GDP)} \]
\[ \bar{M}_s = \text{Average Money Supply} \]

Moreover, the moving averages, and graphs have also been used to exposit the relationship among inflation, output and money supply in the economy. We have selected the period from 1990s onward for our study because the period of the 1990s is regarded as the landmark in the history of Indian economy. The basic data are secondary in nature, taken mainly from the various issues of the Reserve Bank of India publications, like the RBI Bulletin, Annual Reports, Reports on currency and Finance, Hand Book of Statistics for Indian economy. Also from CMIE reports, report on trend and progress in Banking in India, BIS papers, National Accounts statistics of CSO, EPW and economic surveys (various issues).

1.8 Plan of the study:

The present study has been divided into six chapters. In the first chapter, we have dealt with the introduction of the study. This chapter also covers related review of the literature for the study.

The second chapter deals with the concept, meaning, types and objectives of monetary policy. Alongwith the historical perspective of important monetary tools (e.g. quantitative and qualitative) the general framework of monetary policy in India has also been discussed.
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The third chapter deals with the general instruments of monetary regulation viz Bank rate, Open market operations and Cash reserve ratio at length. The relative efficacies of these instruments especially after the liberalisation have also been discussed.

The fourth chapter deals with the selective methods of monetary policy. In this chapter the use of different selective methods like, margin requirements, interest rate differential and moral suasion etc. have been discussed in three phases pre-nationalisation spell, post-nationalisation spell and post-liberation spell.

The fifth chapter deals with the correlation between monetary policy and growth. At first we have seen the trends in growth in the different plan periods along with the challenges to sustain the growth. Then we have dealt with the impact of monetary policy on various macro-economic variables. The relationship between inflation, growth and money supply has been established through the method of correlation coefficient.

Finally, the sixth chapter deals with the conclusions and suggestions.
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Reference:


4. Ibid.


7. Ibid., p. 37.


