

CHAPTER ONE

INTRODUCTION

This chapter presents a brief overview of the thesis. To start with, a few relevant theoretical issues are discussed covering the inter linkage between money, output and the price level, the concept of monetarism and its role in India, transformation of monetary policy in India since 1991, besides a few others. A separate section is devoted to inflationary trends in India during recent years. Furthermore theoretical and conceptual frameworks are separately presented for the sake of clarity. The objectives and hypotheses of the present are finally outlined. A brief explanatory note is also provided as justification behind selection of such objectives and hypotheses.

1.1 Introduction

The nexus between **money**, **output** and **prices** has been one of the most popular areas of research in empirical macroeconomics. The main objective of researchers in this field has been to explain the precise nature of the ‘nexus’. In an attempt to understand the *money – output – price level* inter-linkage, the issue of the relative effectiveness of monetary and fiscal policy in economic stabilisation and growth has come under sharp focus. In this debate economists are divided into two distinct groups – the ‘**Monetarists**’ and the ‘**Neo-Keynesians**’ (Barro, 2008, pp. 287). One of the most fundamental objectives of macroeconomic policies in India is to sustain high economic growth together with low inflation. Not surprisingly, there has been considerable debate on the existence and nature of the inflation and growth

relationship. Some consensus exists, suggesting that macroeconomic stability, specifically defined as low inflation, is positively related to economic growth. Macroeconomists, central bankers and policymakers have often emphasised the costs associated with high and variable inflation. Inflation imposes negative externalities on the economy when it interferes with an economy's efficiency. Examples of these inefficiencies are not hard to find, at least at the theoretical level. Inflation can lead to uncertainty about the future profitability of investment projects (especially when high inflation is also associated with increased price variability). This leads to more conservative investment strategies than would otherwise be the case, ultimately leading to lower levels of investment and economic growth. Inflation may also reduce a country's international competitiveness, by making its exports relatively more expensive, thus impacting on the balance of payments. Moreover, inflation can interact with the tax system to distort borrowing and lending decisions. Firms may have to devote more resources to dealing with the effects of inflation (for example, more vigilant monitoring of their competitors' prices to see if any increases are part of a general inflationary trend in the economy or due to more industry specific causes).

In India, the monetary policy framework underwent a significant change with the onset of the macroeconomic reforms program post-1991. Monetary policy emerged as the chief instrument of macroeconomic stabilization as well as a precursor to subsequent structural reforms in the entire financial system. The objective was to create a competitive environment in the financial sector besides ensuring price stability and sustained GDP growth. This issue requires a little elaboration.

1.2 The Shift in Monetary Policy during Post 1991 Era

The reforms in monetary and credit policies in India during the post 1991 period aimed to control monetary expansion and thereby to control inflation. Since the onset

of the structural reforms of 1991, monetary management in terms of framework and instruments has undergone significant changes, reflecting broadly the transition of the economy from a regulated to a deregulated regime. Since 1991, the financial system in India has undergone substantial transformation through a measured, gradual, cautious, and steady process. It has been transformed into a reasonably sophisticated, diverse and resilient system through well-sequenced and coordinated policy measures aimed at making the Indian financial sector more competitive, efficient, and stable. The challenge for India is to unwind the expansionary policies harmoniously since inconsistencies between fiscal and monetary policies can be costly especially in macroeconomic terms.

The monetary policy framework has undergone significant transformation in India over time. In the 1960s, inflation was considered to be structural and inflation volatility was attributed to agricultural failure. At this juncture greater reliance was placed on selective credit controls. In the 1970s, there was a surge in inflation on account of monetary expansion induced by expansionary fiscal policies besides the oil price shocks. By the early 1980s, it was argued that while fluctuations in agricultural prices and oil shocks did affect the general price level, sustained inflation since the early 1960s was the aftermath of continuous excessive monetary expansion generated by the large-scale monetisation of the fiscal deficit. Since the mid1990s, apart from dealing with the usual supply shocks, monetary policy had to increasingly contend with external shocks emanating from swings in capital flows, volatility in the exchange rate and global business cycles. The reforms in monetary and credit policies are aimed at slowing down monetary expansion and thereby controlling inflation. The financial sector reforms were initiated on the recommendations of Narasimham Committee Report. The first phase of reform started with a reduction of Statutory

Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) and permitted a degree of flexibility to the banks in the matter of deposit interest rates. Money markets facilitate the conduct of monetary policy in a country.

The development of money market in India in the last few years has been facilitated by some major factors. **First** it permitted a gradual de-emphasis on cash reserve ratio as a monetary policy instrument; and **second**, it facilitated the development of an array of instruments of indirect monetary control, such as, the Bank Rate and the Liquidity Adjustment Facility (LAF).

Since the onset of the reforms process, monetary management in terms of framework and instruments has undergone significant changes, reflecting broadly the transition of the economy from a regulated to liberalized and deregulated regime. While the twin objectives of monetary policy of maintaining price stability and ensuring availability of adequate credit to productive sectors of the economy to support growth have remained unchanged; the relative emphasis on either of these objectives has varied over the years depending on the circumstances. Reflecting the development of financial markets and the opening up of the economy, the use of broad money as an intermediate target has been de-emphasised, but the growth in broad money (M_3) continues to be used as an important indicator of monetary policy. The composition of reserve money has also changed with net foreign exchange assets currently accounting for nearly one-half. A multiple indicator approach was adopted in 1998-99, wherein interest rates or rates of return in different markets (money, capital and government securities markets) along with such data as on currency, credit extended by banks and financial institutions, fiscal position, trade, capital flows, inflation rate, exchange rate, refinancing and transactions in foreign exchange available on high frequency basis were juxtaposed with output data for drawing policy perspectives.

Such a shift was gradual and a logical outcome of measures taken over the reform period since early nineties (Chacko and Balagopal, 2013).

1.3 Statement of the Problem

Since the 1950s fiscal dominance affected the conduct of monetary policy in India. It was necessary for the RBI to implement policies aimed at better fiscal-monetary coordination. The RBI did this through the replacement of *ad hoc* Treasury Bills by a system of ways and means advances to the central government. Arguably, this reduced inflationary pressures in India during mid- and late-1990s.

By the end of 1980s it was being increasingly felt that excessive monetary expansion emanating from the monetization of conventional budgetary deficit was beginning to spill over into inflation. Possibly, elasticity of government expenditure with respect to prices is higher relative to receipts (*RBI Report on Currency and Finance*, 2005, pp 79-80). This has led higher inflation to further widen the fiscal deficit. As a consequence, higher monetization of debt (annual) was necessitated. This brought the *inflation – fiscal – monetary* nexus into focus.

A systematic and a comprehensive attempt need to be undertaken to unveil the “**budget deficit–money— inflation**” nexus in India during 1960 – 2010. But the question of national economic importance is whether such money injections necessitated by rising budgetary deficits has at all had any significant impact on GDP growth since 1960. The crucial issue here is that monetary expansion in a backward, rigid or inflexible supply system affects inflation levels more rather than GDP growth. The present problem may be expressed alternatively in the form of the following research questions.

- (1) Has fiscal deficit over the years been inflationary in India? If so then to what extent?
- (2) Usually how long does the inflationary impact of a monetary shock last in India? Has this varied from decade to decade? Has it died down in recent years?
- (3) Has monetary and fiscal policies been effective in promoting GDP growth in India? If so to what extent?
- (4) Has industrial growth been influenced by expansionary monetary policies?

All these questions are related. Monetary policy in the organised sector works mainly through the credit channel. So it is expected to affect industry, trade and services more than other sectors. But the effectiveness of these policies depends on the supply infrastructure or the flexibility in the supply determining mechanism. Generally in backward nations with supply bottlenecks monetary expansion is the result of governments' deficits and deficits are the result of excess of spending over revenues, or in other words, expansionary fiscal policies. Spending is unutilized, underutilised and often misused and misdirected by the government's delivery mechanism. In sum, corruption and misuse of public funds do not channelize the government spending into desired directions so that supply bottlenecks keep continuing over long periods of time. Thus a large part of the inflation in LDCs like India is also the direct result of inefficiency of the government's delivery system, misuse of scarce public funds (that includes revenue earnings as well as borrowed funds) and the incompetence of the government to strengthen the supply infrastructure system on a macroeconomic scale over the planning horizon. This includes all sectors - agriculture, industry, mining and quarrying, services and trade. In Friedmanian jargon India is a typical case of too much money chasing too little or too few goods. But the question is, to what extent?

Moreover there are reasons to doubt whether monetary policy works independently of fiscal policy in India and there are reasons to believe that the former is a direct cause of the latter.

1.4 Rationale of the Study

In the backdrop of accelerated and persistent inflation and fiscal deficits, global macroeconomic slowdown, moderate level of high skilled unemployment alongside moderate GDP growth in India in the past few years, the present study is too crucial to be ignored. From the macroeconomic policy maker's perspective it is highly necessary to know (i) whether in India Monetary policy is independent or is primarily triggered by expansionary fiscal policy leading to rising fiscal deficit, (ii) whether monetary expansion has been inflationary and (iii) whether such monetary expansion has triggered growth of real GDP. In other words the issues raised in (i), (ii) and (iii) jointly can answer whether India has been experiencing growth along with inflation.

From the macroeconomic policy maker's view point it is highly necessary to understand and evaluate this *money – output – price* nexus or chain reaction phenomena (or in econometric jargon, causality from Money supply to GDP, from Money to inflation, and from expansionary fiscal policy to monetary expansion) for the Indian economy over the past five decades. The key is to understand whether monetary expansion is primarily triggered by fiscal expansion and further by persistent fiscal and budgetary deficits in the backdrop of the growth potentials of expansionary fiscal policy. Finally it is imperative to search for a long run stable relationship between money supply, GDP, price level and interest rates in the context of the Indian economy over the study period.

Inflationary impacts of both monetary and fiscal expansion need separate discussions. The burning issue of high rates of food inflation in India along with moderate industrial price inflation demands urgent attention from economists and government policy makers so that necessary commodity price inflation may be kept lower than personal income growth, otherwise drop in real incomes is inevitable. In India a peculiar observation in the recent past has been falling or stable prices of hi-tech goods or even other manufactured goods but severely rising prices of pulses (dal), edible oil, and other perishable food items. In other words the trend has been towards cheaper laptops and mobiles alongside ever-rising food prices. Unfortunately a dedicated study on inflation that can explain the detailed dynamics of price behaviour in India across commodities is beyond the coverage of the present study. All this study can do is measure and estimate the impact of budgetary deficits and monetary expansion on the general price level. In fact, it is quite possible that global inflationary pressures over the last decade are due to high liquidity in all major economies (including G-8, G-10, and G-20 nations) including those of South Asian nations where the global macroeconomic slowdown led central banks to pump in liquidity as a consequence of the Fiscal Stimulus packages given to these economies in phases all throughout 2009 – 14. The deeper issue here is that countries with a flexible supply system (in agriculture, industry and services)

1.5 Theoretical and Conceptual Framework

Traditional economic analysis takes the behaviour of monetary policymakers, as exogenous. Currently, consensus exists on the view that inflation is a monetary phenomenon, in the sense that there would be no inflation without sustained increases in the money supply. This leads to the obvious policy statement that long-run price stability can be achieved by limiting that rate of money growth to long-run real rate of

growth in the economy. However, monetary authorities across the world have allowed monetary growth in excess of real growth rates. The dominant trend in theory and practice of monetary policy over the last two decades has been its dedication to price stability. Central Banks from New Zealand to Finland have undertaken this commitment, either by mandates from their Governments or by exercises of discretion granted to them by their governments. The consequence to dedicating monetary policy to price stability is the perceived indifference to real macroeconomic outcomes –unemployment, real GDP and its growth rate. These are seemingly ignored or drastically subordinated in the priorities of most central banks. Real outcomes become a policy concern only after the central bank is confident the objective of price stability is met.

Having stated the primary central bank objective, most people interested in the conduct of monetary policy would acknowledge that central bank actions can and do affect measures of real economic activity, especially in the short-run. The two way economic interactions between monetary policy and economic behaviour is a process that operates over sometime. Some consequences of central bank actions are permanent, others only transitory. These complex and crudely understood dynamics present particular difficulties for monetary policymakers, especially in the face of the short-run inflation and output trade off. General consensus exists amongst policymakers and central banks that inflation is indeed harmful to economic growth. Many central banks around the world are becoming more transparent in their dealings and operations to instil confidence in the economy that the central bank is committed to maintaining price stability. Since 1990, when the Reserve Bank of New Zealand became the first central bank to adopt an inflation targeting regime, the numbers have steadily increased, with at least 19 other central banks operating under the same

regime (*Source*: RBI Report on Currency and Finance 2004, pp. 66). The common belief being that price stability or low inflation would lay the foundation for higher economic growth.

Historically, in the absence of what is termed ‘persistent inflation’, the early inflation-growth theories were built on cyclical observations. Persistent inflation is regarded as a post World War II phenomenon. Before then, bouts of inflation were followed by bouts of deflation. Having showed no upward or downward trend, inflation was said to behave like a ‘lazy dog’. It stays at a particular level unless and until there is a disturbance. Thereafter, it moves to another level, at which it settles. Theory, therefore sought to account for a positive correlation between inflation and growth³. The aggregate supply-aggregate demand (AS-AD) framework also postulated a positive relationship between inflation and growth where, as growth increased, so did inflation. In the 1970s, however, the concept of stagflation gained prominence, and the validity of the positive relationship was questioned. Widely accepted at that time, the Phillips Curve relationship had appeared to not hold. This was evidenced by periods of low or negative output growth, and inflation rates that were historically high. During this period, prices rose sharply, while the economies around the world experienced massive unemployment.

Classical economics recalls supply-side theories, which emphasise the need for incentives to save and invest if the nation's economy is to grow, linking it to land, capital and labour. Keynesian and Neo-Keynesian theory provided a more comprehensive model for linking inflation to growth. Monetarism updated the Quantity Theory, reemphasising the critical role of monetary growth in determining inflation, while Neo-classical and Endogenous Growth theories sought to account for

the effects of inflation on growth through its impact on investment and capital accumulation.

Monetarism has several essential features, with its focus on the long-run supply-side properties of the economy as opposed to short-run dynamics. Milton Friedman, who coined the term “Monetarism”, emphasised several key long-run properties of the economy, including the Quantity Theory of Money and the Neutrality of Money. The Quantity Theory of Money linked inflation and economic growth by simply equating the total amount of spending in the economy to the total amount of money in existence. Friedman proposed that inflation was the product of an increase in the supply or velocity of money at a rate greater than the rate of growth in the economy. Friedman also challenged the concept of the Phillips Curve. His argument was based on the premise of an economy where the cost of everything doubles. Individuals have to pay twice as much for goods and services, but they don't mind, because their wages are also twice as large. Individuals anticipate the rate of future inflation and incorporate its effects into their behaviour. As such, employment and output is not affected. Economists call this concept the *neutrality of money*. Neutrality holds if the equilibrium values of real variables -including the level of GDP – are independent of the level of the money supply in the long-run. Super-neutrality holds when real variables - including the rate of growth of GDP - are independent of the rate of growth in the money supply in the long-run. If inflation worked this way, then it would be harmless. In reality however, inflation does have real consequences for other macroeconomic variables. Through its impact on capital accumulation, investment and exports, inflation can adversely impact a country's growth rate.

Blanchard and Kiyotaki (1987) in their pioneering study believe that the positive relationship can be due to agreements by some firms to supply goods at a later date at

an agreed price. Therefore, even if the prices of goods in the economy have increased, output would not decline, as the producer has to fulfil the demand of the consumer with whom the agreement was made. Two further features of the adjustment process are also important to note. Firstly, there are times when the output decreases and the inflation rate increases. This negative relationship between inflation and growth is important, as it quite often occurs in practise, as ascertained by empirical literature. This phenomenon is stagflation, when inflation rises as output falls or remains stable. Secondly, the economy does not move directly to a higher inflation rate, but follows a transitional path where inflation rises then falls. Under this model, there is a short-run trade-off between output and the change in inflation, but no permanent trade-off between output and inflation. For inflation to be held steady at any level, output must equal the natural rate. Any level of inflation is sustainable; however, for inflation to fall there must be a period when output is below the natural rate.

In summary, Monetarism suggests that in the long-run, prices are mainly affected by the growth rate in money, while having no real effect on growth. “If the growth of money supply is higher than GDP growth rate, inflation will result.” The next section outlines the objectives and hypotheses of the study and also presents justifications for the same.

1.6 Objectives and Hypotheses

The objectives of the study are presented below not necessarily in order of the priority.

- (1) To estimate the inflationary impact of monetary expansion in India during 1960-2010.
- (2) To study the relative effectiveness of fiscal policy vis-à-vis monetary policy in promoting GDP growth in India during 1960-2010.

- (3) To test for econometric causality, between (a) the fiscal deficit and monetary expansion, (b) monetary expansion and the rate of Industrial growth.

These objectives require some clarification. **First**, money supply expands even today in all nations of the world irrespective of its level and pace of development, India being no exception. Perhaps the advanced nations are arguably stricter about money supply in the sense that their budgetary deficits are financed through means other than central bank borrowings. Deficit financing is something not commonly followed by advanced western economies any longer. The rate of money supply growth however is expected to vary across nations and also over time for the same nation. For instance, during the first three decades of independence India's narrow and broad money supply grew faster than the rate at which it is growing today (this is discussed in detail in Chapter 4 on findings based on annual time-series data from RBI Handbook of Currency and Finance, various issues). But, whether it influences triggers changes in the aggregate price level or the average price (weighted) is a different question. The first objective basically studies the causality between the price level and the money supply. Alternatively both narrow and broad money is taken. This would help to judge the relative strengths of causality across narrow and broad money in influencing the general price level. The Whole Sale Price Index (WPI) is taken as the price indicator in the present study as opposed to the Consumer Price Index (CPI) which being now viewed as the more appropriate bench mark indicator of price. In case of WPI a single base year has been taken and the entire series has been expressed with respect to the chosen base to maintain consistency and parity. Thus the first objective is linked to the alternative hypothesis that monetary expansion influences or triggers changes in the aggregate price level, the null being that it does not. Monetary expansion has an immediate impact on aggregate demand. And if

supply does not match up to the demand growth (which is the more natural thing to happen in India with agricultural supply bottle necks) the general price level is likely to be affected. There may be several reasons for money supply growth. The principal reason during pre-1991 years has been that of 'financing of Central government's budgetary deficits' by issuing ad hoc Treasury Bills. This practice, as mentioned earlier in this chapter has been done away with.

Thus price is expected to be affected due to monetary expansion as planned aggregate demand is expected to outpace supply in the short run. Supply reaction (basically supply growth) would come much later when the general price level is already high and when entrepreneurs and producers expect prices to remain high. In agriculture however India's output growth has been meagre over the last two or three decades which essentially implies that any money injection or liquidity injection into the system would directly influence consumer demand resulting in food and primary goods inflation. Had India's agricultural sector been more flexible (in terms of supply elasticity), food inflation would have been far lower on account of demand boosting policies.

Second, objective number two is actually a set of two objectives or the twin objectives of measuring causality between monetary expansion and the aggregate output on the one hand and measuring the same between government expenditure and the aggregate output on the other. Aggregate output can be captured either by national income, or GNP (gross national product) or GDP (gross domestic product). The present study is based on GDP as a measure of macroeconomic output. The strength of expansionary monetary policy or monetarism is tested by examining the causality between money supply and GDP. If money supply causes GDP the monetarist's claim that GDP growth is primarily a monetary phenomenon is accepted.

Here it must be noted that the reverse causation is also an empirical and definitely a theoretical possibility. That is, GDP can cause money as well. The macroeconomic argument behind why GDP or aggregate output can influence money, hinges on the demand for money function. Macroeconomists and econometricians traditionally model demand for money at the macroeconomic level as a function of the income (current and/or past GDP), interest rate (or expected interest rate), the price level (or sometimes the expected rate of inflation) among a few other variables. Assuming that central bank optimally tunes the supply of money to match demand in every period (which is somewhat of a restrictive assumption) this implies that money supply figures can be used to proxy money demand as well. Thus there may be bi-directional causality between money supply and GDP. In this study, the causality between money supply and GDP is studied by using both narrow and broad money supply. This gives the advantage of examining exactly which of the two measures of money supply influences GDP more.

On the other hand, government's purchases of goods and services, or what is commonly known as government expenditure, is expected to influence the level of GDP (and sometimes growth of GDP as well), as government expenditure a key policy instrument for fiscal expansion in the hands of the Central Government. Indirect tax cuts on certain manufactured goods (consumer goods mostly), income tax exceptions, corporate profit tax holidays, among a few other tax relief measures also come under the umbrella of expansionary fiscal policies. Usually expansionary fiscal policies are conducted in terms of a combination of tax cuts along with a rise in government expenditure. This rise in expenditure is most likely to increase budgetary deficits but that issue is dealt with in the study separately. The present study estimates the causality between government expenditure and GDP in India over the

study period. Finally, the money supply – GDP causality results and the government expenditure – GDP causality results are compared in order to opine about the relative strengths of the two causations.

Interestingly both money supply and government expenditure influence the demand side of the economy more directly and thus have potentially expansionary influences upon aggregate income or output. Thus the present study looks only at the demand boosting policies from a monetary and a fiscal angle. It must be noted here that a significant part of fiscal expansion finally finances vital infrastructure projects during a financial year and hence it has potentials of creating social overhead capital or what may otherwise be called gross capital formation. This takes care of the economy's supply side capabilities in the long run. However this social overhead asset creation or capital formation comes after a considerable time lag. Say for instance if a major project like a highway, or bridge or new railway track is taken up in the Annual Budget of year t, its implementation and completion may take 5 – 10 years under Indian conditions. Same is true for irrigation projects, dams ports, new railway stations, airports (and their expansions). But sometimes it is difficult to disentangle the impact of expansionary fiscal policy from expansionary fiscal policy on real capital formation. A classic example of this is “financing of government expenditure by RBI borrowing”. In such a case a fiscal expansion is immediately followed by a monetary expansion and the two are not independent. Real infrastructure development leads to development and enhancement of supply side of the economy. This covers roads, railways, dams and irrigation networks among others. It must be admitted however that supply is influenced in an indirect way compared to demand when either expansionary monetary or fiscal policies are adopted. Demand is influenced more directly and immediately due to liquidity injection into the system.

In a nutshell both the central bank (i.e., RBI in case of India) and the fiscal authority (Government of India in this case) are capable of bringing about changes in the level of aggregate output (that is GDP) by influencing or stepping up planned aggregate demand more directly (and immediately) and also aggregate supply beyond a time lag. Thus demand is expected to react faster compared to supply on account of such expansionary policies and this is the key reason why the general price level (as captured in WPI) is expected to rise. Interestingly macroeconomists do not stress upon the inflationary impacts of fiscal expansion, as they do in case of monetary expansion. The present study also remains silent on the issue of fiscal policy – price level interlinkage. The second objective (or the twin objectives) is thus justified.

Third, ever since the onset of Five Year Plans in India, fiscal deficits used to be conventionally financed through borrowings from RBI. That is historically in India conventional budgetary deficits used to lead to deficit financing. The first part of objective three it is examines whether there exists any causality between fiscal deficits and the level of money supply. Since a rise in money supply might cause inflation (as would be studied under the first objective), this indirectly studies whether fiscal deficits might be inflationary in India during the study period. Arguably the most vital aspect of the present study is the causality between fiscal deficit and monetary expansion in India over the study period. In fact the causality chain is established if fiscal deficit creates money supply and money supply ultimately causes inflation (or raises the price level). Fiscal deficits are actually created by excess of government spending over earnings.

The second part of the third and final objective studies whether money supply causes or influences industrial production. Any expansionary monetary policy must imply liquidity injection into the system. Monetary policy usually works well through the

credit channel with the help of the commercial banking system. Expansionary monetary policy boosts aggregate demand stimulating consumption and investment. If budgetary deficits are financed by RBI borrowing then the money injection goes into government purchases of goods and services. Thus there is a definite impact of expansionary monetary policy on planned aggregate demand. This objective tests whether there is a money supply – industrial output interlinkage. In other words as demand expands due to more liquidity in the system, organised sector output is expected to rise. The industry usually takes rising prices as an indicator of rising demand and hence tries to adjust or step up its production plans.

This particular impact of money growth has not been covered in the literature on empirical macro-econometrics in India so far. The present study considers the Index of Industrial Production (IIP) as the proxy indicator for industrial output and examines the causality between money supply and the IIP. If money supply growth influences industrial output either in the short run or in the long run, then it may partly explain the present phenomenon of stable manufacturing sector prices (where supply is more elastic and responds to demand) but soaring food prices (where supply is expectedly inflexible).

Hypotheses

The hypotheses for the present research are constructed as follows:

- (1) Monetary expansion in India during 1960-2010 has not been inflationary.
- (2) Neither monetary nor fiscal policies have been effective in promoting GDP growth.

Both hypotheses are framed in the form of null hypotheses. In case of the first null hypothesis, the alternative is that monetary expansion causes inflation. In case of the

second the alternative is that both monetary and fiscal expansions have caused GDP growth. Both these statistical hypotheses are straight forward and are in line with the objectives of the present study. After narration of objectives and hypotheses the following sub-section presents a brief history of India's central bank and its activities, i.e., a brief history of the Reserve Bank of India's monetary policy.

1.7 Monetary Policy in India since the Beginning of Five Year Plans

The entire period since Independence can be divided into four sub-periods in discussing the historical development of monetary policy in India. They are (a) Formative Period, during 1947-53, (b) Period of High Intervention (Regulation) during 1964-84, (c) Regime of Monetary Targeting with Partial Reforms during 1985-91, and (d) The Period of Strong Economic Reforms since 1992.

Formative Period: 1947 – 53

Prior to the Independence, the broad objectives of monetary policy in India were (a) issue of currency notes, acting in national interest by curtailing excessive money supply and to overcome stringency where it mitigated production activities, (b) public debt management, and (c) maintaining exchange value of the Rupee. In the initial days of Independence, there were some challenges for monetary operations due to the event of partition and consequent division of assets of RBI, and its responsibility of currency and banking management in the transitory phase.

During the First Five Year Plan, monetary management witnessed a distinguished order with effective coordination between the then Finance Minister Chintaman Deshmukh, a former Governor of RBI and the then Governor of RBI Benegal Rama Rau. The RBI decided to withdraw support to the gilt-edged market signifying the proof of an independent monetary policy (da Costa, 1985). The initiatives of the

Finance Minister to control government expenditure with emphasis to enhance revenue and capital receipts facilitated such a move. A mere 10.3 percent growth of money supply in the entire period of the First Plan reflects restrictive monetary policy during this period.

In the next two five year plans, conduct of monetary policy faced unprecedented challenges due to the new initiatives in the planning regime and the degree of independence enjoyed by the RBI was heavily curtailed. At the beginning of the Second Five Year Plan, both foreign exchange reserves and India's external credit were very high for easy availability of required investments. In this backdrop, under the able leadership of Prof. P. C. Mahalanobis the plan exercise emphasised on heavy industries. Although, there were notable success in the front of output expansion mainly lead by industrialisation during the Second Five Year Plan, there were some setbacks for monetary policy operations. Firstly, finance minister T. T. Krishnamachari emphasised on transforming sterling balances into investment goods since 1956-57. The foreign exchange assets depleted to the extent of Rs. 664 crores during a decade since then. There was increasing pressure on the RBI to provide credit to the government. Thus, when the real income (NNP) increased by 21.5 per cent in Second Five Year Plan, money supply (M1) increased by 29.4 per cent (da Costa, 1985). During this period, the prices increased by 35.0 per cent contrary to the magnificent control on it in the First Five Year Plan. 'Selective Credit Control' was followed during this period as a remedy to overcome the dilemma of controlling inflationary pressure and need for financing developmental expenditure (Iengar, 1958). Much needed expenditure on infrastructure projects, which was not immediately productive exerted upward pressure on the prices of consumer goods. On the other hand, the private sector was to be provided credit for complementary

expansion of investment. Hence, monetary policy did not adopt general tightening or relaxation of credit but some sectors were provided preferential credit and for some others the credit was made expensive.

In the Third Five Year Plan, the 1962 hostilities with China further added pressure on monetary policy operations. This was mainly due to the credit requirement of the government for the increasing defence and developmental expenditure. Thus, narrow money supply (M_1) during this period increased by as high as 57.9 percent. With only 11.8 percent growth of NNP in the Third Plan, prices rose by close to 32 percent. Thus, the conduct of monetary policy became a process of passive accommodation of budget deficits, by early 1960s. The decade of 1960s witnessed a gradual shift of priority from price stability to greater concerns for economic growth and accompanying credit control. A new differential interest rates regime emerged with a view to influence the demand for credit and imparting an element of discipline in the use of credit. Under the 'quota-cum-slab' introduced in October 1960, minimum lending rates were stipulated. This was the beginning of a move towards regulated regime of interest rates.

Period of High Intervention (Regulation): 1964 – 1984

This period witnessed radical changes in the conduct of monetary policy predominantly caused by interventionist character of credit policy and external developments. The process of monetary planning was severely constrained by heavily regulated regime consisting of priority sector lending, administered interest rates, refinance to the banks at concessional rates to enable them to lend at cheaper rates to priority sectors, high level of deficit financing, external oil price shocks, etc. Inflation was thought to be primarily caused by supply factors and not emanating from

monetary causes. Hence, output expansion was thought to be anti-inflationary and emphasis was attributed on the credit expansion to step up output. In the process, the government occupied the pivotal role in monetary management and the RBI was pushed down to the secondary position. Since the mid-1960s, regulation of the domestic interest rates became ubiquitous in India. In September 1964 a more stringent system for bank credit based on net liquidity position was introduced and both deposit and credit rates were regulated. The introduction of Credit Authorisation Scheme (CAS) in 1965 initiated rationing of bank credit (RBI, 1999). With implementation of CAS, prior permission of RBI was required for sanctioning of large credit or its augmentation. It served the twin objectives of mobilising financial resources for the Plans and imparting better credit discipline. The degree of constraints on the monetary authority started mounting up with the measures of 'social control' introduced by the Government of India in December 1967, which envisaged a purposive distribution of credit with a view to enhance the flow of credit to priority sectors like agriculture, small sector industries and exports coupled with mobilisation of savings. Accordingly, National Credit Council was set up to provide a forum for discussing and assessing the credit priorities. Credit to certain economic activities like exports was provided with concessional rates since 1968. The transfer of financing of public procurement and distribution and fertiliser operations from government to banks in 1975-76 further constrained the banking operations. The rationalisation of CAS guided by recommendations of Tandon Committee (1975), Chore Committee (1979) and Marathe Committee (1983) subsequently refined the process of credit rationing. The event of nationalisation of major commercial banks in July 1969 constitutes an important landmark in the monetary history of India, which had significant bearings on the banking expansion and social control of bank credit. The

nationalisation of banks led to use of bank credit as an instrument to meet socioeconomic needs for development. The RBI began to implement credit planning with the basic objective of regulating the quantum and distribution of credit to ensure credit flow to various sectors of the economy in consonance with national priorities and targets. There was massive branch expansion in the aftermath of bank nationalisation with the spread of banking facilities reaching to every nook and corner of the country. The number of bank branches rapidly increased from 8,262 in 1969 to 13,622 in 1972, which subsequently increased to 45,332 by 1984. These developments had significant implications for financial deepening of the economy. During this period the growth of financial assets was faster as compared to the growth of output. The volume of aggregate deposit of scheduled commercial banks increased from Rs 4,338 crore in March 1969 to Rs 60,596 crore in March 1984 and the volume of bank credit increased from Rs 3,396 crore to Rs 41,294 crore in between the same period. Particularly, non-food credit increased from Rs 3,915 crore in March 1970 to Rs 37,272 crore in March 1984. The average annual growth rate of aggregate deposits markedly increased from 9.5 per cent for the period 1951-52 to 1968-69 to 19.3 per cent for the period 1969-70 to 1983-84. In between the same period, bank credit increased from annual average of 10.9 per cent to 18.2 per cent. This period also witnessed growing volume of priority sector lending, which had not received sufficient attention by the commercial banks prior to nationalisation. The share of priority sector advances in the total bank credit of scheduled commercial banks rose from 14 per cent in 1969 to 36 per cent in 1982. The share of medium and large industries in the bank credit had come down from 60.6 per cent in 1968 to 37.6 per cent in 1982.

During this period, monetary policy of the RBI mainly focused on bank credit, particularly non-food credit, as the policy indicator. Basically, the attention was limited to the scheduled commercial banks, as they had high proportion of bank deposits and timely available data. Emphasis on demand management through control of money supply was not in much evidence up to mid-1980s. Reserve money was not considered for operational purposes as the major source of reserve money creation - RBI's credit to the government - was beyond its control. Due to lack of control on the reserve money and establishment of direct link between bank credit and output, credit aggregates were accorded greater importance as indicators of the stance of monetary policy and also as intermediate targets.

Among the policy instruments, SLR was mainly used to serve the purpose of raising resources for the government plan expenditure from the banks. The level of SLR had progressively increased from the statutory minimum of 25 per cent in February 1970 to 36 per cent in September 1984. Banks were provided funds through standing facilities such as 'general refinance' and 'export refinance' to facilitate developmental financing as per credit plans. The instrument of CRR was mainly used to neutralise the inflationary impact of deficit financing. The CRR was raised from its statutory minimum of 3 per cent since September 1962 to 5 per cent in June 1973. Gradually it was hiked to 9 per cent by February 1984. During this period, the Bank Rate had a limited role in monetary policy operations. The year 1976 constitutes one of the most eventful period in the monetary thinking in India, when a heated debate surfaced on the issue of validity of the then prevailing monetary policy procedure. The first dissenting note came from S.B. Gupta with his seminal article advocating in favour of 'money-multiplier' approach. Gupta (1976) argued that, the then practice of RBI's money supply analysis simply sums up its various components, and hence merely an

accounting or *ex post* analysis. It was accused of being tautological in nature. He suggested, money supply analysis based on some theory of money supply like money multiplier approach could provide better understanding of the determinants of money supply. He also highlighted the difference in monetary impact of financing government expenditure through credit from RBI *versus* investment of the banks in government securities.

However, RBI economists rejected Gupta's analysis as mechanistic and unsatisfactory in theory and useless in practice (Mujumdar, 1976) and claimed that, RBI's analysis provides an economic explanation of money supply in India. Mujumdar (1976) questioned the basic ingredients of 'money-multiplier approach' such as stability of the relationship between money supply and reserve money, controllability of reserve money and endogeneity of money-multiplier, and stated that, "... in certain years if the expansion in M does not confirm to the postulated relationship, one has to explain away the situation by saying that the multiplier itself has changed". He also claimed that, RBI analysis takes into account both primary money supply through the RBI and secondary expansion through commercial banks

and provides a total explanation of variations in money supply. As against this, multiplier approach explains only the secondary expansion through the money multiplier. Shetty, Avadhani and Menon (1976) supplemented Mujumdar in defending RBI's money supply analysis. They argued that, money supply is both an economic and a policy controlled variable. As an economic variable it may be determined by the behaviour of the public to hold currency and bank deposits, but as a policy controlled variable it depends on the monetary authority's perception about the appropriate level of primary and secondary money. Thus, they refuted any simple and mechanical relationship between reserve money and money supply. They completely

rejected the appropriateness of projecting monetary aggregates based on money-multiplier in the short-term due to erratic behaviour of related coefficients, but they do not rule out usefulness of long-term projections. On the issue of the relationship between reserve money and money supply, Shetty *et al* (1976) asserted that, "it is incorrect of Gupta to state that the RBI is ignorant of the significance of reserve money in monetary analysis. The RBI, however, does not consider it as the single element for explanation of the sources of changes in money supply." At this point a reconciliatory note came from Khatkhate (1976). He emphasised the usefulness of 'money-multiplier framework' as suggested by Gupta (1976), but was critical of him for accusing the RBI being not aware of it. According to Khatkhate (1976), "Gupta is quite right in suggesting this line, but the difficulty is that it has no connection with the RBI presentation of monetary data. And what is even worse is that Gupta does no better than the RBI in proposing his alternative." Towards end of 1970s, there were resentments regarding the way monetary management is operated in the policy circle. With large part of the monetary reserve outside the control of monetary authority, the channel of credit allocation to few pockets of the commercial sector could transmit very limited influence to the real economic variables. The neglect of issues related to monetary targeting viewed as an unnecessary by-product of the preoccupation with credit targeting.

The period 1979-82 witnessed a turbulent phase for Indian economy. During 1979-80 adverse weather conditions caused record downfall in food grains production. It was accompanied by a setback in industrial production. The budget nonetheless continued to be expansionary. The budgetary deficit as percentage of GDP was 2.13 per cent in 1979-80 and 1.82 per cent in 1980-81. The external sector added to further deterioration of the situation with hike in prices of petroleum products and fertilisers.

All these contributed together towards prevalence of a widespread general inflation. Reserve money growth was explosive and financial crowding out threatened long run prospects of stable growth. These macroeconomic developments made the conduct of monetary policy extremely difficult and progressively brought a sharp shift in monetary policy.

Regime of Monetary Targeting with Partial Reforms: 1985 - 1991

In the backdrop of intellectual debate as discussed above and prevailing economic conditions, it was imperative to comprehensively review the functioning of the monetary system and carry out necessary changes in the institutional set up and policy framework of the monetary policy. This was materialised by setting up a high level committee in 1982, under the chairmanship of Prof. Sukhamoy Chakravarty. The major recommendations of the Chakravarty Committee include, *inter alia*, shifting to 'monetary targeting' as the basic framework of monetary policy, emphasis on the objectives of price stability and economic growth, coordination between monetary and fiscal policy to reduce the fiscal burden on the former and suggestion of a scheme of interest rates in accordance with some valid economic criteria. Clarifying the stand on monetary targeting with feedback, Rangarajan (2002) asserts that, the scheme of fixing monetary targets based on expected increase in output and the tolerable level of inflation is far removed from the Friedmanite or any other version of monetarism." The Committee endorsed the use of bank reserves as the main operating target of monetary policy and laid down guidelines relating to the optimal order of the growth of money supply in view of stability in demand for money.

The recommendations of Chakravarty Committee guided far-reaching transformation in the conduct of monetary policy in India. There was a shift to a new policy framework in the conduct of monetary policy by introducing monetary targeting. In

addition, recommendations of the Report of the Working Group on Money Market, 1987 (Chairman: Vaghul) and subsequent move to activate the money market by introducing new financial instruments such as 182-day Treasury Bills (TBs), Certificates of Deposit (CDs), Commercial Paper (CP) and Participation Certificates, and, establishment of Discount and Finance House of India (DFHI) in April 1988 created new institutional arrangements to support the process of monetary targeting.

It was felt that, the complex structure of administered interest rate and cross subsidisation resulted in higher lending rates for the non-concessional commercial sector. The concessional rates charged to the priority sector necessitated maintaining the cost of funds i.e. deposit rates at a low level. Nevertheless, there was a move to activate money market with new instruments to serve as a transmission channel of monetary policy, within this administered regime. Gradually, the complex lending rate structure in the banking sector was simplified in 1990. By linking the interest rate charged to the size of loan, the revised structure prescribed only six slabs (Rangarajan, 2002). However, credit rationing continued with its due importance in the new framework to support the growth process. The share of priority sectors in total non-food credit rose from 36.9 per cent in 1980-81 to the peak of 43.6 per cent in 1986-87. But, inadequacy of this system slowly emerged due to problems in the monitoring of credit thereby causing delays in the sanctioning of bank credit. With the strengthening of the credit appraisal systems in banks, the CAS lost its relevance through the 1980s, eventually leading to its abolition in 1988.

During this period, the primitive structure of the financial markets impeded their effective functioning. The money market lacked depth, with only the overnight interbank call money market in place. The interest rates in the government securities market and credit market were tightly regulated. The dispensation of credit to the

government took place via SLR stipulations, where commercial banks were made to set aside a substantial portion of their liabilities for investments in government securities at below market rates, known in the literature as 'financial repression'. The SLR had touched the peak of 38.5 by September 1990. As increasing SLR was not adequate, the RBI was forced to be a residual subscriber. The process of financing the government deficit involved 'automatic monetisation', in terms of providing short-term credit to the government that slipped into the practice of rolling over the facility. The situation was aggravated as the government's fiscal balance rapidly deteriorated. The process of creating 91-day *ad hoc* TBs and subsequently funding them into non-marketable special securities at a very low interest rate emerged as the principal source of monetary expansion. In addition, RBI had to subscribe dated securities those not taken up by the market. As a result, the net RBI credit to the Central Government which constituted about 77 per cent of the monetary base during the 1970s, accentuated to over 92 per cent during the 1980s.

In such an environment, monetary policy had to address itself to the task of neutralising the inflationary impact of the growing deficit by raising CRR from time to time. CRR was mainly being used to neutralise the financial impact of the government's budgetary operations rather than an independent monetary instrument.

The Period of Strong Economic Reforms: 1992 Onwards

Indian economy experienced severe economic crisis in mid-1991, mainly triggered by a balance of payment difficulty. This crisis was converted to an opportunity by introducing far-reaching reforms in terms of twin programs of stabilisation and structural adjustment. The financial sector received its due share of attention in the reform process mainly guided by the influential recommendations of Narasimham Committee - I (1991) and - II (1998). To curtail the excessive fiscal dominance on the

monetary policy in the spirit of the recommendations of the Chakravarty Committee (RBI, 1985) and Narasimham Committee (RBI, 1991), the memorandum of understanding (MoU) was signed between the Government of India and the RBI in 1994. Consequently, the issuance of *ad hoc* TBs was eliminated with effect from April 1, 1997. Instead, Ways and Means Advances (WMA) was introduced to cope with temporary mismatches. This was a momentous step and necessary condition towards greater autonomy in the conduct of monetary policy. As a result, the proportion of net RBI credit to government to reserve money has substantially come down to close to 50 per cent in recent years. Interestingly, this period witnessed the new problem of coping with increasing inflow of foreign capital due to opening up of the economy for foreign investment. Foreign exchange reserves increased from mere US \$ 5.83 billion in March 1991 to US \$ 25.18 billion in March 1995. Presently, foreign exchange reserves with RBI stand at close to US \$ 82 billion. Hence, increase in foreign exchange assets had a sizeable contribution to raise reserve money in this period. As a proportion of reserve money, the share of net foreign assets is increased from 9.1 per cent in 1990-91 to 38.1 per cent in 1995-96 and subsequently reached 78.1 per cent in 2001-02.

To negate the effect of large and persistent capital inflows, RBI absorbed excess liquidity through outright OMO and repos under liquidity adjustment facility. In the post reforms era, emphasis was placed to develop and deepen various components of the financial market such as money market, government securities market, forex market, which has significant implication for the monetary policy to shift from direct to indirect instruments of monetary control. To widen the money market in terms of improving short term liquidity and its efficient management, new instruments such as inter-bank Participation Certificates, CDs and CP were further activated and new

instruments in the form of TBs of varying maturities (14, 91 and 364-day) were introduced. The DFHI was instrumental to activate the secondary market in a range of money market instruments, and the interest rates in money market instruments left to be market determined.

The government securities market witnessed radical transformation towards broadening its base and making the yields market determined. Major initiatives in this direction include introducing the system of auctions to impart greater transparency in the operations, setting up a system of Primary Dealers (PDs) and Satellite Dealers (SDs) to trade in Gilts, introducing a delivery versus payment (DvP) system for settlement, adopting new techniques of flotation, introducing new instruments with special features like zero coupon bonds, partly paid stock and capital-indexed bonds, etc. All these measures have helped in creating a new treasury culture in the country, and today, the demand for the government securities is not governed by solely SLR requirements but by considerations of treasury management. Now, the SLR is at the statutory minimum of 25 per cent since October 1997, far below than its peak of 38.5 per cent in February 1992 (Table II.2). Also, the CRR has been gradually brought down to the current level of 4.5 per cent (effective from June 2003) from 10 per cent in January 1997 and 15 per cent in October 1992. Certain initiatives to reform the foreign exchange market include, *inter alia*, moving to full convertibility of Rupee in the current account since August 1994, greater freedom to Authorised Dealers (ADs) to manage their foreign exchanges, activation of the forward market and setting up a High Level Committee (Chairman: S.S. Tarapore) to provide a roadmap for capital account convertibility. All these measures acted towards making the foreign exchange rate market-determined and linking it to the domestic interest rates. In the process of reforms, the interest rate structure was rationalised in the banking sector and there is

greater emphasis on prudential norms. Banks are given freedom to determine their domestic term deposit rates and prime lending rates (PLRs), except certain categories of export credit and small loans below 2 lakh Rupees. All money market rates were set free. The 'Bank Rate' was reactivated in 1997 by linking it to various refinance rates. Because of all these reforms, we find today, interest rates in various segments of the financial market are determined by the market and there is close association in their movement, as discussed in detail in Chapter 5. The developments in all the segments have led to gradual broadening and deepening of the financial market. This has created the enabling conditions for a smooth move towards use of indirect instruments of monetary policy such as open market operations (OMO) including repos and reverse repos. The operation of LAF has been used as an effective mechanism to withdraw or inject liquidity on day-to-day basis and providing a corridor for call money rate. In June 2002, RBI has come out with its Short Term Liquidity Forecasting Model to evaluate the short term interaction between the monetary policy measures and the financial markets, which will be immensely helpful for imparting discipline once started operation. Because of reforms in the financial market, new interest rate based transmission channels have opened up. Importantly, this period has witnessed emergence of monetary policy as an independent instrument of economic policy (Rangarajan, 2002).

In sum, this sub-section presents an overview of evolution of monetary policy in India. The existing policy regime and institutional arrangements constrained monetary management in the pre-reform period. Monetary policy during this period was limited to credit rationing only. The key segments of the financial market in India were developed only in the post-reform period and the interest rates were deregulated. Recently, there has been greater emphasis in short-term liquidity management in

monetary policy operation with emergence of a broad-based and developed financial market. In the new environment, the operating procedure and monetary transmission mechanism are completely transformed.

1.8 Fiscal Policy in India since the Onset of Planning

Fiscal Policy assumes a central place in the overall macroeconomic framework. As government sector and private sector compete for resources and for consumption in the economy, fiscal policy needs to be designed in a framework where an increase in government activity would result in net gains to the economy even when it may negatively impact in private sector activity, or reduce foreign exchange reserves or increase the monetary base. Fiscal reforms have initiated a right kind of approach to maintain fiscal discipline in the Indian economy and the Indian economy has met it successfully at the national level however there has been some problems at the state level. Fiscal reforms have brought a new vision and mission for the government both central and state towards competitiveness and efficient mode for managing the economy (Singh, 2013). According to Singh (2013), in the post-independence years, with the gradual abatement of political and economic uncertainty, stimulating and accelerating growth was one of the primary objectives of fiscal policy. In a nascent economy where the income levels and financial savings were low, the fiscal assumed the responsibility of creating the capital base in the form of infrastructure to stimulate growth. Thus, India embarked on a planning process since 1950 which assigned a large role to the public sector and taxation was made the mainstay of public finances. Early empirical literature on the operation of fiscal policy in India since independence was, thus, skewed more in favour of taxation reflecting its significance in the strategy of resource mobilization for planned development.

With the public sector assuming the commanding heights of the economy during the plan era, studies on public expenditure were closely associated with the performance of the five-year plans. Fiscal policy focused on achieving greater equity and social justice during the 1970s and both taxation and expenditure policies were employed towards fulfilling this objective. High marginal tax rates did not yield the necessary revenue to support the envisaged public expenditure. The growth in receipts thus lagged behind the surge in disbursements despite substantial amount of resources mobilized through additional taxation and hike in the administered prices. Thus, during the 1980s Indian public finance was in a state of disarray with the fiscal pattern destabilizing the relationship between the economy and the budget. This resulted in persistently large deficits which were seemingly intractable. Therefore, the decade of 1980s could be called the decade of fiscal deterioration which, in turn, raised the question of sustainability of fiscal stance of the Government. Empirical research thus, took cognizance of alternative concepts of deficit to analyze its impact on the economy. The fiscal semblances of the 1980s spilled over to the external sector resulting in the macroeconomic crisis of 1991. Another disquieting feature of the fiscal system was the large size of monetized deficit which exerted inflationary pressures. The persistent and burgeoning revenue deficit which became endemic in the system pre-empted the borrowed resources, reducing the availability of resources for capital investment. The structural adjustment programme and the consequent economic reforms gave a fresh dimension to empirical analysis of fiscal policy which focused not only on the various instruments of fiscal policy and issues of debt but also on the overall fiscal sustainability in the context of an open economy framework. Although the first half of the 1990s witnessed some fiscal correction, its retraction

during the second half of the decade underlined the need for a consistent and sustainable fiscal consolidation process.

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Taxation

In the planned economy model adopted since Independence, taxation was used as an instrument for reducing private consumption and transferring resources to the Government to enable it to undertake large-scale public investment in an effort to spur economic growth. Taxation was also used to reduce inequalities through progressivity in respect of income and wealth, particularly during the 1970s. The non-integrated and complex nature of the indirect tax structure and the problems it created in terms of multiplicity of levies and the resultant cascading effects received attention in the mid-1980s. Preliminary steps to reform the tax structure were taken in the form of introducing the modified value added tax (MODVAT). Tax reforms received a boost in the early 1990s under the structural adjustment programme initiated in the wake of the economic crisis of 1991. Since then, reforms in the tax structure, both direct and indirect, have been a continuous process.

Phase I: 1947-1968

In the post-independence era, taxation policy was geared towards achieving the economic objectives of promoting employment through grant of tax incentives to new investment; reducing inequality through progressive taxes on income and wealth; reducing pressure on balance of payments through increase of import duties; and stabilizing prices through tax rebate in excise duties on consumption goods. Given the narrow tax base, the tax policy relied more on indirect taxes. The first comprehensive attempt at reforming the tax system was by the Taxation Enquiry Commission (TEC)-1953-54 (Chairman: John Matthai). The first major official study on the incidence of direct and indirect taxation was brought out by the Matthai Commission. This was followed up by similar studies during 1961 and 1969 which employed derivatives of the original study. Shifting of corporate income tax incidence in India was studied by

Lall (1967) and Laumas (1966). Major thrust was given on tax system Taxation policy was geared to promote employment by providing incentives & tax holidays, reduce inequality of income through progressive taxation, reduce pressure on balance of payment through increase of import duty, stabilizing prices through tax rebate in excise duty on consumption goods, tax policy more relied on indirect tax.

Phase II: 1969-1980

During this phase, in addition to promoting economic growth, fiscal policy was also used as a means to reduce income inequality. Taxation was used as a prime instrument to achieve this objective during the initial years. To meet its objective of alleviating poverty and bringing about greater social justice, the Government raised the income tax rates to substantially high levels during the 1970s - marginal rate of taxation moved up to 97 per cent and, together with the incidence of wealth tax, crossed 100 per cent. Wealth tax, estate duty (on inherited wealth) and gift tax (on transfer of wealth) were imposed. Indirect taxes were hiked on goods considered luxuries or inessential.

Phase III: 1981-90

This phase began with a grim economic situation characterized by low economic growth, high inflation and deterioration in balance of payments due to sharp increase in prices of crude oil imports. The Government sought to reduce its deficit through tax increases. New tax savings instruments were introduced to enable financing of the large plan expenditure. Tax concessions were also given to non-residents to encourage flow of foreign exchange remittances to address the balance of payments problem. Customs duties were hiked to contain growth in imports, augment revenue and protect the domestic industry The Long-term Fiscal Policy announced by the Government of

India in 1985 presented for the first time a long-term perspective for fiscal policy in which the Central Government recognized the deteriorating fiscal position as the most important challenge of the 1980s and set out specific targets and policies for achieving fiscal turnaround. It indicated a direction of change in tax policy required to promote growth, increase built-in elasticity of the tax system, secure better tax compliance and move towards a more equitable distribution of the burden of financing the Plan. A modified system of Value Added Tax (MODVAT) was introduced in 1986 in a phased manner to reduce the distortionary effect of tax on production, minimize tax cascading and increase progressively. Reforms in customs duty focused on increased reliance on tariff system rather than on quantitative restrictions to regulate imports in order to yield more revenue. This phase marked the first real effort towards a long-term perspective for tax reform, which in turn was spurred by the realization on the part of the policy makers that, (a) the economic effects of taxation have to be considered to ensure against distortions in resource allocation and adverse effect on economic growth; (b) the administrative implications and the possible behavioral response of both tax administrators as well as tax payers have to be considered while designing the tax structure.

Phase IV: 1991 onwards

Tax reform efforts prior to 1991 focused on enhancing revenue productivity to finance large developmental plans and promoting equity. Tax reforms since 1991 were initially undertaken as a part of the structural reform process following the macroeconomic crisis of 1991. The reforms aimed at augmenting revenues and removing anomalies in the tax structure through restructuring, simplification and rationalization of both direct and indirect taxes drawing mainly from the recommendations of the Tax Reforms Committee 1991 (Chairman:Dr.Raja J.

Chelliah). The key tax reforms include lowering the maximum marginal rate on personal income tax; widening of the tax base by way of a series of steps including introduction of presumptive taxes, adoption of a set of six (one-by-six) economic criteria for identification of potential tax payers in urban areas and taxation of services; reducing the corporate tax rate on both domestic and foreign companies; unification of tax rates on closely held as well as widely held domestic companies; rationalization of capital gains tax and dividend tax; and progressive reduction in the peak rate of customs duty on non-agricultural products and rationalization of excise duties it (Singh, 2013). In recent years there has been a valiant attempt at rationalising the VAT and finally replacing it by the single goods and services tax which avoids multiple taxation of the same commodity.

Expenditure Reforms in India

Public expenditure in India assumed significance in the context of the mixed economy model adopted since Independence whereby the primary responsibility of building the capital and infrastructural base rested with the Government. The concerns regarding equity and poverty alleviation, particularly since the 1970s, added another important dimension to public expenditure in terms of redistribution of resources. The inadequate returns on the huge capital outlays over the years as well as the macroeconomic crisis of 1991 stemming from high fiscal imbalances led to a shift in the focus from mere size to efficiency in public expenditure management so as to facilitate adequate returns and restore macroeconomic stability. The cutbacks in capital outlay undertaken as part of the expenditure management in the first half of the 1990s, however, raised concerns over the inadequate infrastructural investment and the repercussions on the long-term growth potential. The upward movement in Government's revenue expenditure was partly responsible for fiscal deterioration

which set in during the latter half of 1990s. With a renewed commitment towards fiscal consolidation since 2003-04, re-prioritization of expenditure and emphasis of outcomes rather than outlays are the guiding principles of public expenditure management. Apart from the emphasis on undertaking large-scale capital outlay, expenditure policy was also geared towards promotion of equity and social justice through public expenditure on social welfare and poverty alleviation schemes. Rural development received special attention in terms of larger outlays and directed lending by the newly nationalized banks. Several employment schemes were inaugurated and small-scale industry, which was touted to promote employment, was given special privileges. Exchange control and industrial licensing were tightened during this period. Strong fiscal measures were taken to reign in inflation during 1974-76.

The Eleventh Finance Commission examined at length the pattern of public expenditure at the level of Central and State Governments and made a number of suggestions to rationalize it in order to control budgetary deficits. It observed, “alongside revenue augmentation, restructuring of public finances will require structural changes on the expenditure side as well. While the thrust should be on compression, the composition of expenditure would need to be restricted in favour of priority sectors like elementary education, primary health care, water supply, sanitation, roads and bridges and other infrastructure. Items that would require a tight rein are salary and pensions, interest payments and subsidies. There has to be radical changes in the method of financing the plan expenditure as well”.

After examining in detail the structure of expenditure at the levels of Central and State Governments, the Twelfth Finance Commission recommended its restructuring on the following lines. —In restructuring expenditures, there is need to make reference to the basic objectives of government intervention in economic activities, as also to the basic

objectives for assignment of responsibilities as between central and sub-national governments. It is also important to relate government expenditures to outcome in terms of the quality, reach, and impact of government services. This would be facilitated if governments focus more on their primary responsibilities rather than spreading resources thinly in many areas where the private sector can provide the necessary services. The primary role of government is to provide public goods like defence, law and order, and general administration. The role of governments extended to merit goods and services with large positive externalities like education and health. The services should be assigned to the central government if the scope of public goods is nation-wide like defence. The services get assigned to state governments if the scope of the public good is limited regions or if externalities are more local in character like the health services. There is a felt need to examine whether the central government is not partaking in many responsibilities that legitimately belong to the domain of the states. To conclude expenditure reforms in the context of liberalization have two aspects (a) consolidation so as to reduce the quantum of expenditure and (b) restructuring with a view to changing the composition of government expenditure, i.e. shift towards growth-inducing expenditure on infrastructure and human resource development and reduction in unwarranted subsidies. A successful expenditure control policy should include the following : (a) subjecting all ongoing schemes to zero-based budgeting, (b) assessment of manpower requirements of government departments, (c) review of all subsidies, (d) introducing cost-based user charges wherever possible, (e) review of budgetary support to autonomous institutions, and (f) greater commercialization of the operations of public sector enterprises.

The following chapter presents a brief overview of studies on causality between money, GDP and inflation on one hand and between fiscal deficit, government expenditure and GDP on the other. Both developed and developing nations are covered in the review. The literature gap is then identified.