CHAPTER V

IMPACT OF PUBLIC EXPENDITURE

5.1 INTRODUCTION

Public expenditure impacts numerous economic parameters in different ways. The theoretical and empirical literature abounds with such an analysis. The theoretical discussion on the impact of public expenditure probably is the widest among all aspects of public expenditure. The outpouring of empirical studies is no less both in terms of number and areas it covered. As noted earlier in this study, of all the aspects of public expenditure, the impact analysis seems to be the most widely discussed and researched aspect, if one goes by number of studies available at different level and over different periods of time.

Public expenditure, by the strength of its size/magnitude along with its composition, financing pattern, direction and pattern of growth, influences a plethora of economic variables both under public and private sector domains. Its possible impact is also determined by the nature of the transmission mechanism i.e., the route through which public expenditure affects set of variables or a particular macroeconomic variable. Public expenditure also may have positive or negative consequences on a particular variable again depending upon certain other parameters. However, empirically a particular economic variable say GDP, is affected by numerous other independent variables (apart from public expenditure) and therefore the decomposition or disaggregation of the precise impact of the public expenditure alone on a particular variable may not be possible. Further, public expenditure may be ‘growth enhancing’ as well as ‘growth retarding’ and both empirical and theoretical evidences on this are inconclusive. This differential impact may, in turn, depend upon the recurrent macroeconomic situation and whether public expenditure policy is initiated as a contra cyclical measure, or under stable macro-economic (under employment equilibrium) situation.
Hence irrespective of whether, its impact is positive or negative, public expenditure has significant influence on numerous economic variables. At a general level, public expenditure immediately influences the aggregate demand (in fact public expenditure is an important component of it, along with the private demand) and also the level of private demand. Hence change in the public expenditure is likely to affect both the level and composition of the aggregate demand. As it is, aptly noted, “in most countries the government sector is directly responsible for a large part of economic activity and, through its spending and resource mobilization, indirectly influence the way resources are used in the private sector” (FAD, IMF 1995:2).

5.2 THEORETICAL SETTING

Several theoretical explanations are put forward about the impact of fiscal policy, deficits and public expenditure on several economic parameters, on both internal and external sectors of the economy. The government intervention through the fiscal policy means- its desirability and efficiency - received first detailed treatment in the hands of J.M. Keynes, following the publication of his magnum opus, ‘The General Theory of Employment, Output and Prices’. The classical economists as they firmly believed in the working of the ‘invisible hand’, restricted role of government to only few activities, and therefore did not go into the analysis of the possible impact of public expenditure. Following the ‘Keynesian Revolution’, several views/theories have been advanced analyzing impact aspect of public expenditure. Before we traverse through this theoretical journey, the traditional explanation of the impact of public expenditure is considered first.

5.2.1 TRADITIONAL OUTLOOK

Traditionally, the impact of public expenditure is analysed under three heads, namely, production, distribution and stabilization. The impact of public expenditure on production may be direct or indirect. Public expenditure through the public sector industrial and commercial enterprises leads to capital creation and asset formation thereby directly adds to output levels, especially in areas requiring huge initial
investment and projects that involve long gestation periods (these factors inhibit private sector participation in certain areas). Indirect contribution of public expenditure to output generation takes effect through the provision of social and physical infrastructure that facilitates private sector activities. The various components of public expenditure in number of areas also affect the production, by influencing the willingness and ability to work acting both as incentive and disincentive. Public expenditures on defense, law and order, i.e., both internal and external security also make indirect contribution to national output.

The welfare states try to influence the distribution of income and wealth through public expenditure. This is necessitated due to the failure of market mechanism to ensure this as per the requirements of the polity. In fact, left to it, the market mechanism may rather enhance the inequalities. Public expenditure therefore is used by modern welfare states, as a “powerful and democratic method to realize distributive justice” (Sury, 2000:183). The governments ensure this by way of several social security schemes, poverty alleviation programmes, food and fertilizer subsidies, housing and sanitation facilities and several other kinds of transfer payments.

Economic stability is integral to the sustained long-term economic growth. The economies, especially the market based capitalist system often experience business cycles that involve fluctuations in output, employment and income generation. The government intervention through the fiscal policy means becomes necessary especially during the periods of recession, stagflation and depression. Too high fluctuations in prices, interest rates, exchange rates require the help of fiscal instruments. During the periods of recession and depression when the chips are down with acute ‘demand deficiency’ (both consumption and investment) government policy of ‘compensatory finance’ involves stepping up of government consumption and investment expenditures to solve the problem of lack of aggregate demand. Hence public expenditure is considered to be a potent anti-cyclical weapon in different situations.
5.2.2 KEYNESIAN VIEW

The Keynesian analysis of the impact of public expenditure is contained in his 'General Theory'. The Great Depression of 1930s and resultant Keynesian prescription for the economic revival clearly brought out the important role played by the public expenditure (as the chief instrument of fiscal policy) in ensuring output, income and employment generation and thereby rescuing the economy from the under employment equilibrium.

Keynesian analysis clearly brought home the futility of relying on the invisible hand - market forces - wage price flexibility to ensure full employment/economic revival. Keynes mainly pointed out that in a classical system lack of effective demand arises due to behaviour of consumption in response to increases in income. Since the Marginal Propensity to Consume (MPC) is less than unity, that creates lack of demand. The savings that arise due to the gap between income and consumption are not automatically invested, thereby accentuating the problem further.

Hence the state intervention and the increase in investment (i.e. public expenditure) would increase aggregate demand and cover the deflationary gap. "This would bring about adjustment between supply and demand and restore equilibrium, so as to reduce over production and general unemployment" (Kothari, 2001:71). Thus public expenditure solves the economic ills by way of mainly correcting the lack of effective demand, bridging the deflationary gap, brings about the revival of output income and employment generation.

Keynes, through his concept of functional finance asserted that in times of depression, states should formulate deficit budgets. The war contributed to the propagation of Keynes ideas by demonstrating the success of state intervention. The enormous expenditure by the state during the war resulted in breaking the under employment equilibrium and full utilization of installed capacity of the production apparatus" (Ibid: 71-72). But the Keynesian prescription found utility even beyond the
wars. This reflected in the growing size of the governments throughout the world and the consequences of this on the output/production/income/employment generation.

In the Keynesian set up, the government investment expenditure operates through his novel concept of 'multiplier', also known as 'investment multiplier'.

5.2.3 NEO - CLASSICAL VIEW

The Keynesian prescription of higher public expenditure – the need and efficacy of it – to fight recession/deflationary tendencies is not disputed by many even in the theoretical literature. The budgetary deficit-run in such situations is referred to as 'cyclical deficit'. It is the 'structural deficit', i.e., the deficit (expenditure in excess of revenue) that occurs during normal economic situations/even when the economy is not at full employment that is considered to be undesirable. Neo-classical economists view such deficit “as the source of variety of economic ills” (Alm and Barreto, 1999: 138). The focus of this school is on the negative consequences of fiscal policy, deficit and public expenditure.

Here the public expenditure and fiscal policy negatively affect the output growth that mainly occurs through what is known as 'crowding out' effect. One way through which crowding out results is by affecting the cost of loanable funds. That is, when excess of public expenditure is financed through borrowings, the increased government demand for credit puts upward pressure on interest rates and crowds out private investors competing for the same funds. Therefore in the long run, it reduces private capital stock, lowers economic growth and future standards of living. This negative effect of public expenditure, however, depends on the composition of public expenditure, i.e., whether the borrowed funds are utilized to meet the current or capital expenditure. If it is in favour of the latter, like infrastructure investment, the burden on the future generations is reduced (provided the public expenditure is more productive than the displaced private sector investment). However, deficits in most developing countries do not appear to have contributed in a consistent and significant way to such investments (Ibid). If the borrowed funds instead are used for the revenue or current expenditure, i.e., to meet the
current expenses (especially if borrowed from abroad, i.e., external debt), the debt servicing and other requirements impose costs on the future generations. If the financing of the excessive public expenditure happens by way of monetization of the deficit — the resultant money supply increase — leads to increase in inflation that has been a fairly common experience of many developing countries including India.

The high level of public expenditure and the consequent budget deficit also has adverse impact on the external front especially on the export performance. Increase in the interest rates due to higher government borrowing to finance the ever increasing public expenditure attracts foreign capital (capital inflows) and that translates into appreciation of the domestic currency. This makes our exports dearer; this therefore “crowds out domestic exporters, which leads to a loss of employment and income in export sectors of the economy” (Ibid: 138). This problem becomes even more acute, if economy is more open.

In toto, these group of economists believe that the harmful effects of public expenditure primarily arise “because some individuals and sectors are burdened now by government borrowing and because future generations are burdened both by the involuntary taxes that they must pay to service the principal and interest on debt and also by the small capital stock that they receive from the current generation” (Ibid: 139).

5.2.4 RICARDIAN EQUIVALENCE THEORY

This proposition also referred to as the ‘Barro-Ricardo Equivalence Proposition’ believes that perceived adverse consequences of public expenditure and deficit as envisaged by the neo-classical theorists are both unsubstantiated and unjustified.

This proposition put forward by David Ricardo, and made prominent by Robert Barro (1974), propounds that public expenditure which is debt or bond financed has no adverse effect on the interest rates and on private investment. That is, the much feared crowding out is unlikely to take place. This happens as the rational tax paying households reduce later current consumption (conversely increasing the current savings)
in anticipation of increased taxation in the future in order for the government to finance its debt obligations. This is done "to avoid sharp decline in future disposable income and thus consumption when taxes are actually raised in the future" (Rajan and Asher, 1997: 30).

In sum, the government domestic borrowings to cover public expenditure will not lead to increase in the total or aggregate expenditure in the economy; it will only shift the pattern of expenditure from private to public. Extra public dissaving will be matched by extra private saving (Ibid). The proposition "rests on the notion that the individuals should recognize when the deficit increases, by say, $1 that their future taxes may also eventually increase by $1 in present value terms, since $1 of additional debt requires service of $1 over its life time. If individuals recognize that deficits now require taxes later, then the tax and debt finance are equivalent ways of financing government expenditure and have the same effects. In both cases, the burden is felt by generations at the time the expenditure is made (Alm and Barreto, 1999:139-140)

However this view rests on some restrictive and unrealistic assumptions, which negate the policy relevance and practical significance of the theorem, and this was acknowledged by both Ricardo and Barro. The available empirical evidence also is not favorable to this proposition (Rajan and Asher, 1997). "Nevertheless, less stringent versions of the Barro-Ricardo hypothesis can be a useful benchmark for assessing fiscal policy, and thus could not be disregarded in its totality"(ibid: 72).

5.2.5 IS-LM ANALYSIS

The IS-LM analysis without taking a position either about beneficial or detrimental effect of public expenditure and fiscal policy, provides a useful frame work for the analysis of the impact of public expenditure, both in short term and long term and under both closed and open economic situations. The IS curve depicts the locus of combination of interest rate and income (output) at which goods market is in equilibrium. It is downward sloping because decrease in interest rate increases investment, thereby increasing aggregate demand and the level of output at which goods
market is in equilibrium. LM curve depicts the locus of combinations of interest rates and income at which money market clears. It has positive slope because increase in income level also increases the money demand thereby increasing the level of interest rate. The intersection of IS and LM curves, simultaneously clears goods and money market and gives equilibrium levels of output and interest rates. The government expenditure and other fiscal policy changes shift the IS curve, whereas the monetary policy changes shift the LM curve.

Public debt financed increase in public expenditure by increasing the aggregate demand (rightward shift in IS curve) increases both output and interest rates. The "increase in output is dampened by higher interest rate which crowds out some private investment spending" (Khan and Nsouli, 2002:202). The extent of crowding out however depends on how sensitive the demand for money is to the changes in the interest rate (i.e. slope of the LM curve).

The analysis of the same under an open economy requires the introduction of BP (Balance of Payment) curve, which depicts combinations of interest rates and income at which BOP is in equilibrium. The effect of fiscal expansion here depends on the degree of capital mobility (and the type of exchange rate regime). Fiscal expansion initially affects both trade flows and capital flows in the BOP by affecting income and domestic interest rate respectively. When capital is relatively immobile, the trade flow component (fiscal expansion leads to trade deficit) dominates and the consequent currency depreciation reinforces the initial expansion in output. "When capital is mobile, the capital flow component dominates, and the consequent currency appreciation offsets the initial expansionary effect on output" (ibid: 206).

5.3 IMPACT OF PUBLIC EXPENDITURE IN INDIA

Numerous empirical investigations have been carried out assessing the incidence of the public expenditure in both parts of the world. One set of studies - look at the impact of aggregate public expenditure on macro-economic variables like outputs, poverty, money supply, welfare level, income distribution etc - some or all of them
considered at a time (Aziz and Leruth, 1997; Fisher and Tumovsky, 1992; Ruge and Francisco, 1999 etc), in a set. Another group of studies look at the different components of public expenditure and analyze their possible impact on the macro variables (Magnes, 1994). However, the large number of studies pertain to the analysis of specific component of public expenditure and its effect on the sectoral indicators (and on macro indicators as well) like impact of public spending on education and health care on respective sectoral indicators as also on poverty and efficiency, growth and welfare (Gupta et al., 1999; Matoon, 2000; Gupta et al., 2001; impact of social and military expenditures (Landau, 1993). The source of financing the public expenditure holds several implications for the rest of the economy that has been analyzed by quite a sizeable number of studies (Ludvigson, 1996; Dalamagas, 1992, etc).

Several studies are also available in the Indian context concerning the various, aspect of public expenditure incidence viz., the level of welfare (Dholakia, 1990), economic growth (Singh, 1996), output (Reddy et al, 1984), and income distribution (Zahir, 1996), social indicators (Pradhan et al, 2000).

The focus of the present study is on the analysis of the total public expenditure of the centre during the study period on certain macro economic variables. Here the input with respect to the dependent variables is provided by the economic theory, at the first instance. On certain variables the direction of causality is obvious and while in some cases it is not clear even in the theoretical literature. Hence before the variables are chosen the question about the cause-effect relation between the variables is to be settled first. Here the help of the econometric tools comes handy. As discussed in the previous chapter, the Granger causality test is one of the often used procedures in this context. The procedure and results of this test are already summarized in Chapter IV. Based on the causality results and the theoretical literature the variables short listed for the impact assessment are –

1. GDP and Economic Growth
2. Savings and Capital Formation

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3. Money Supply and Inflation
4. Poverty
5. Labour Supply and
6. Public Debt (both internal and external)

Table No.5.1 IMPACT OF PUBLIC EXPENDITURE
Results of Regression Analysis

<table>
<thead>
<tr>
<th>Impact On</th>
<th>Model</th>
<th>Adj. R²</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>GDP, = 53419.55 + 0.93 PE,</td>
<td>0.859</td>
<td>176.56</td>
</tr>
<tr>
<td></td>
<td>(1.003) (13.287)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONEY SUPPLY</td>
<td>M, = -9351.10 + 0.94 PE,</td>
<td>0.882</td>
<td>217.25</td>
</tr>
<tr>
<td></td>
<td>(-3.077) (14.739)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAVINGS</td>
<td>SAV, = -4430.19 + 0.91 PE,</td>
<td>0.829</td>
<td>141.61</td>
</tr>
<tr>
<td></td>
<td>(-0.350) (11.900)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDCF</td>
<td>GDCF, = -1235.41 + 0.93 PE,</td>
<td>0.859</td>
<td>177.57</td>
</tr>
<tr>
<td></td>
<td>(-0.100) (13.326)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POVERTY</td>
<td>POV, = 34.49 - 0.80 PE,</td>
<td>0.629</td>
<td>50.16</td>
</tr>
<tr>
<td></td>
<td>(64.257) (7.082)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LABOUR SUPPLY</td>
<td>LAB SS, = 14.03 + 0.941 PE,</td>
<td>0.882</td>
<td>217.72</td>
</tr>
<tr>
<td></td>
<td>(14.439) (14.755)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUBLIC DEBT</td>
<td>PBDEBT, = -47850.70 + 0.98 PE,</td>
<td>0.952</td>
<td>651.02</td>
</tr>
<tr>
<td></td>
<td>(-2.918) (25.515)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNAL DEBT</td>
<td>INTDEBT, = -80566.30 + 0.902 PE,</td>
<td>0.807</td>
<td>122.56</td>
</tr>
<tr>
<td></td>
<td>(-3.012) (11.071)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXTERNAL DEBT</td>
<td>EXTDEBT, = 30298.26 + 0.22 PE,</td>
<td>0.013</td>
<td>1.39</td>
</tr>
<tr>
<td></td>
<td>(7.006) (1.180)</td>
<td></td>
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</tr>
</tbody>
</table>

Source: Derived from Indian Public Finance Statistics, Various issues

Table (5.1) gives the results of OLS regression analysis with respect to the impact of public expenditure on the above listed variables. A simple linear regression is run taking public expenditure as the independent variable and each of the short listed variables at a time as the dependent variable in each model and the results are obtained. The analysis shows that the impact of public expenditure on all these variables is found significant at 5 percent level, except for the external debt. And in most cases as the adjusted R² values indicate that public expenditure explains far above 80 percent of the variation in all these variables, clearly signaling that public expenditure was the major
determinant of these variables in the models chosen. In the following paragraphs take up
the detailed analysis of the impact of public expenditure in India is taken up.

5.4 PUBLIC EXPENDITURE AND ECONOMIC GROWTH

Public expenditure like a double-edged sword acts in either of the direction. That is, it may have both positive and negative effect on growth. On the negative side public expenditure has 'crowding out' effect i.e., extent to which public spending crowds out private spending. Crowding out may occur in two ways. The 'direct crowding out' or 'transactions crowding out' takes place when the public spending displaces private spending which is a close substitute. This may also happen when the debt financed public expenditure by virtue of its huge size corners all or most of the resources available in the market, thereby crowding out more productive private investment expenditure in favour of government expenditure. This holds implications for both the current output and future growth of income. On the other hand the 'financial crowding out' or 'portfolio crowding out' occurs when the excessive government borrowings to finance the ever increasing public expenditure puts upward pressure on interest rates (and also exchange rates), and discourages more productive domestic investment (Chu and Hemming, 1991; Khan and Nsouli, 2002, FAD IMF, 1995; Nagpal and Mittal, 1993).

According to Harrod Domar model of growth, saving is one of the major determinants of growth as it affects the extent of capital formation. But, the excess public expenditure, by resulting in excess deficit in the budget simply means that government has negative savings to its account. The problem is further exacerbated buy the dissaving in the PSEs, which further has negative effect on growth.

On the positive side public expenditure adding to the aggregate demand aids the output growth (provided appropriate supply responses exist). The typical behavior of the supply/consumption response happens through the 'multiplier effect' where a small increase in public investment brings about more than proportionate increase in output/income level resulting in higher economic growth. If the 'super multiplier' is also
under operation (i.e., the combined effect of both multiplier and accelerator) it may result in very high or explosive growth in income/output.

Contrary to the 'crowding out' effect discussed in the previous paragraph public expenditure may rather by virtue of its composition (say in favour of capital expenditure), for example, infrastructure investment, may ‘crowd in’ private investment, thereby acting as a catalyst in enhancing output growth. Moreover, the much feared crowding out basically occurs due to increase in the demand for the loanable funds from government side with the supply of loanable funds remaining constant. Hence, this assumes un-accommodative monetary policy and a closed economy situation. However, if the monetary authorities adopt an accommodative policy by appropriately increasing the money supply or/and if economy is open with free mobility of international capital the much feared ‘crowding out’ may not happen or there may be only partial crowding out and interest rate world remain unaltered or may increase only marginally. In this situation, the higher public expenditure may have more expansionary effect on the output, by building upon the initial impulses provided by the addition to the aggregate demand than it happens in the presence of crowding out. As aptly summarized by Chu and Hemming (1991), the extent of crowding out depends on the number of factors: “how the increase in public expenditure is financed, the stance of monetary policy and the interest elasticity of demand; the mobility of international capital and the exchange rate regime; and supply responses” (pp 15).

Further if public expenditure is incurred with the aim of correcting the market failure and ensuring appropriate resource allocation, the effect would be even more beneficial. Public expenditure can also enhance growth by increasing private sector productivity (the externality or public good effect) and therefore in the final effect of public expenditure on growth depends on the relative strengths of the crowding out and externality effects (FAD, IMF, 1995). Even some of the items of current/revenue expenditure – like public expenditure on education, health etc. may have beneficial impact on the output growth. How far the preceding analysis applies to the public
The nature of the relationship between the public expenditure and GDP (economic growth) therefore is not firmly established in the economic literature, theoretical as well as empirical. The Keynesian school considers public expenditure as impacting GDP/economic growth/output. Wagner's hypothesis on the other hand, looking from the other way considers GDP as the cause of the public expenditure growth. Our analysis for the Indian economy for the period 1970-71 to 2000-01, with respect to the central government expenditure indicated that public expenditure 'Granger causes' economic growth and not the other way round, thereby clearly repudiating the Wagner's hypothesis in case of Indian economy and upholding the Keynesian proposition that public expenditure is a major tool for bringing about economic revival and ensuring economic growth. In our regression model, public expenditure explains for about 85 percent of the variation in the output (GDP) (as indicated by the value of adjusted $R^2$) and sign of the regression coefficient (the slope coefficient) indicates that the nature of the relationship between the two is positive.

Chart No. 5.1 Behaviour of Public Expenditure and GDP (Rs in Crores at 1993-94 Prices)

As far the growth of output is concerned, as is widely documented and discussed, Indian economy for about three decades of planning was caught in the low level equilibrium trap with the economic growth measured in terms of GDP growth getting trapped at about 3 to 3.5 percent level, the rate famously referred to as ‘Hindu Growth Rate’. This holds true for half our study period too i.e., the period from early seventies to about mid-eighties when the economy’s growth was at this typical rate. This period, as chronicled in this study was the period when public expenditure (as percentage of GDP, also in nominal and real terms) increased gradually and reached the peak by about mid eighties before taking downward turn. As the regression results show the public expenditure in India has positive influence on the GDP for the period as a whole including the first half. Then, what factors explain this positive impact of public expenditure on GDP during the first half of the study period?

Despite the steadily rising trend the public expenditure for major part of the first half was still below 15 percent GDP mark and public expenditure got past this mark only in 1983-84. The capital expenditure widely considered being growth promoting was during this period at a healthy level of over 30 percent of the total expenditure that must have assisted GDP growth. With the revenue surplus for most period (till mid eighties) government positively contributed to the gross domestic savings. The financing pattern of public expenditure further reveals that the rising tax and total current receipts financed substantial part of public expenditure, and the borrowing was resorted to in a limited manner and hence the ‘crowding out effect’ was not much. Moreover, with the regulated or administered interest rate regime in place, the possibility of government borrowings pushing up the interest rate and hence the ‘financial crowding out’ did not arise. The major part of public investment was in capital intensive and infrastructure projects (like power and irrigation projects, transport and communication, etc). The provision of other public goods generated positive externality effects. All these features greatly helped the cause of GDP growth. Though public expenditure seems to have positively contributed
to the GDP growth, what explains the low level equilibrium trap during the pre-reform period?

Public expenditure is just one of the several factors, probably a minor factor, influencing the GDP growth. Even if increase in public expenditure provides incentives to the production by influencing the aggregate demand, the supply and production responses must accompany aggregate demand in good measure. But in the presence of various infrastructural, foreign exchange, policy and structural bottlenecks rooted in the Indian economy, supply responses were not strong enough to build on the signals. The occurrences of exogenous shocks - oil shocks (1973, 1979), draughts (1965-66, 1966-67, 1972-73, 1979-80 and 1987-88) further acted as dampening factors. The higher demand when does not elicit appropriate supply responses due to structural and other bottlenecks inevitably leads to inflation. The deficit financing and monetization of the public debt added further fuel to the inflation fire. The continued fiscal expansion in addition to inflation also leads to “deterioration in the external current account. The government’s response in India to such inflationary situations often was to impose domestic price controls and trade and foreign exchange restrictions (e.g., FERA in 1972). “These measures exacerbate supply shortfalls, as resource misallocation increases and lack of inputs limits domestic capacity utilization and experts” (FAD, IMF, 1995: 6). The ‘loss of confidence’ in the domestic economy further exacerbates the situation, which reduces capital inflows or might result in capital flight out of the country, further increasing the resource constraint resulting into BOP crisis, which gradually may snow-ball into a macroeconomic crisis. “At this point, country has both problems of low or negative growth and underlying adjustment problems. This scenario has close approximations to reality in many countries” (including typical Indian experience of 1991 BOP crisis (ibid: 6).

Beginning with the decade of 1980s India experienced higher growth record (average annual GDP growth of over 5 percent per annum), unshackled from the low level equilibrium level where we were positioned for a very long time. The fiscal expansion, termed as ‘fiscal profligacy’ by many, lead by expenditure increases (though
public expenditure-GDP ratio declined since mid eighties), along with the proclaimed albeit limited external (read as important) liberalization measures of 1980s definitely added to the higher income growth. This growth of GDP, however clearly became unsustainable by early nineties due to several factors. The ever increasing public debt (due to financing of the deficit in the budget with declining tax GDP ratio) due to higher public expenditure clearly resulted in the crowding out at least of 'transactions crowding out' type (finance crowding out was not yet a possibility as the interest rates were still regulated till about mid 1990s). The decline in the share of capital expenditure that began during the period further affected the sustainability of growth. Huge increases in money supply with the continued monetization of the deficit led to higher prices that reduced our export competitiveness. With imports surging upwards due to substantial import liberalization measures along with strong support from the fiscal expansion and with exports not picking up accordingly, resulted in huge trade deficits. Higher deficits, basically caused by internal budgetary deficits, on the external account were financed by increased external commercial borrowings adding to the woes of external and total debt burden, mounting interest payments and debt servicing. Internal disequilibrium, therefore, also led to external disequilibrium resulting in BOP crisis. This had severe repercussions on the growth performance that plummeted to very low levels by early 1990s.

The immediate response to this crisis was stabilization package (SP) immediately followed by Structural Adjustment Programme (SAP). Under SP, the focus was to bring about economic compression with the help of fiscal and public expenditure compression. As a result in early 1990s public expenditure and fiscal deficit reduction that was achieved immediately resulted in the lower GDP growth for about a year or two. SP was immediately followed by SAP of which fiscal, tax, and expenditure reforms were major components. Though a clear expenditure management policy was unveiled only at the end of 1990s, the expenditure compression continued from the beginning itself. The reduction in public expenditure and several deficit indicators resulted in fiscal discipline
that ultimately contributed to higher GDP growth in the 1990s (except for the first two
years following SP). The growth revival therefore mainly occurred due to course
correction, where the ill effect of excess public expenditure was curtailed and that turned
out to be growth promoting. This was further complemented by the host of internal and
external liberalization measures (which are under way till today). But the budgetary
deficit measures through declining still remained at a high level both in absolute and
relative terms. Hence it is being argued that buoyant performance of the GDP be rightly
attributed to the higher public expenditure and deficit that released enough forces to have
high GDP performance and growth therefore cannot be attributed to the so called ‘LPG’
(Liberalization, Privatization, Globalization) policies, which helped only in the initial
years by releasing the ‘pent up demand’. The aggregate demand, it may be argued, in the
subsequent years was sustained by these higher public expenditure and deficits. Either
way public expenditure has aided the cause of growth.

The LPG measures undisputedly have helped the GDP growth in some other
ways too. This has happened in two ways: One, by reduced monetization and two,
through the lesser crowding out. Thanks to the conscious decision taken by the policy
makers the automatic monetization has been done away with the replacement of the
system of ‘adhoc treasury bills’ in the old system (where additional money from the RBI
was procured simply by issuing adhoc treasury bills, that directly resulted in the
monetization of deficit) with the ‘Ways and Means Advances’ in the new regime. This
has greatly reduced the possibility of inflationary pressures that partly explains the
relative stable prices and low to moderate inflation achieved in the nineties.

Further thanks to the financial liberalization measures, both internal and external
those seem to have avoided the crowding out effect thereby insulating the economy
from the negative consequences. The decreasing tax GDP ratio necessitated higher public
borrowing to finance the higher level of deficits in the budget. The total debt and the
internal debt stabilized and marginally declined and yet remained at above 50 percent (of
GDP) mark. But inflow of foreign capital and the accretion to foreign exchange reserves
released enough liquidity into the system. Therefore, even a very high level of government borrowings do not seem to have crowded out the revived private investment demand. The huge availability (or supply) of loanable funds, even with the surge in the demand for loanable funds, thus prevented the upwardly pressure on the interest, and financial crowding out. If any, the level of nominal interest rates has come down, (thanks also to the low inflation rate), further preventing the possibility of financial crowding out.

A development on the public expenditure front in the nineties, which often is termed as disquieting, has been the near stubborn behaviour of revenue expenditure and consistent decline in the capital expenditure. This is supposed to have negatively affected the GDP growth. But it has to be noted that even current expenditure can be growth enhancing in the short run by adding to the aggregate demand. Some items of revenue expenditure like expenditure on social services, defence etc. will have beneficial consequences in the long run too. As rightly noted by Chu and Hemming (1991) “the distinction between capital and current expenditure can be misleading; the focus should be on trying to distinguish productive from unproductive expenditure” (pp 17). Further all capital expenditure is not productive and all current expenditure need not be unproductive. To instance it further, in the Indian context more than 50 percent of the capital outlay from the central budgetary sources is accounted by defence capital outlay. Since most of the defence capital equipments are imported or have high import contents, this defence capital expenditure does not necessarily lead to the domestic output growth. Therefore, here the capital expenditure cannot be termed to be productive in terms of contribution to domestic output.

All said and done, the public expenditure is only one of the determinants of GDP growth. Its effect on economic growth if any is indirect only by influencing the extent of domestic demand, savings and crowding out and overall, the “public spending is not among the most influential determinants of differences in growth rates either between the countries or over time” (Chu and Hemming, 1991: 16). It is not as if higher or lowers
public expenditure in growth promoting or distorting, it can only be said that the modest public expenditure may contribute to growth (Ibid).

5.5 PUBLIC EXPENDITURE, DOMESTIC SAVINGS AND CAPITAL FORMATION

Nobody denies the crucial role played by the domestic savings and capital formation in the process of economic growth. Foreign savings and capital are important but at best only add to the total figure. According to the pioneering work of Harrod and Domar, economic growth is achieved as a result of capital formation and growth of labour force. Capital is accumulated and formed in the economy through savings. Nations with a high saving rate, generally achieve a higher rate of economic growth (Shojai, 1999).

The traditional macro economic theories suggest that saving is a function of level of interest and income, with both bearing a direct relation and with the amount of savings. The conventional national income accounting identity reveals that saving is the result of excess of domestic income over domestic expenditure including public expenditure.

Therefore, government expenditure has a direct bearing on the savings. As public expenditure increases, savings will decline. The public expenditure can also influence the level of domestic savings indirectly by affecting the other variables in the national income identity by affecting income and private consumption and investment.

As analyzed in the previous section, public expenditure contributes to economic growth or income level in several ways in either of the directions, i.e., both positively and negatively. The increase in public expenditure, by adding to aggregate demand, if elicits appropriate responses it directly results in increased income levels and through that in higher savings. On the other hand, it is also possible that the excessive public expenditure by 'crowding out' more productive private investment results in lower growth of income and hence savings. The debt financed public expenditure by pushing up the level of interest rate affects savings in both the directions. The resultant higher interest
rate has positive effect on the savings, whereas it may reduce the level of savings by way of reduced investment and lower level of income there from. In an open economy, the influence of public expenditure in terms of attracting foreign savings and investment through BOP, exchange rate, etc., also determines whether there is addition to the existing domestic savings or not.

In the Indian context, public expenditure influencing the level of savings by affecting the level of interest rate is ruled out. Because the level of interest rate for most of our study period, even running up to mid 1990s was regulated. In fact the Indian financial system typically experienced something called as ‘financial repression’, where the interest rates were subjected to plethora of control/regulation and were administratively determined pegged at a very low levels (with the objective of boosting the level of investment) such that the real interest rates (nominal interest rates accounted for the inflation) were either zero or negative in many cases. Hence the level of public expenditure by increasing the interest rate and thereby positively causing the amount of savings (of the household and private corporate sector) was not the possibility.
Even in the nineties despite the substantial deregulation of interest rate, the process is not yet complete. Hence, the acute nature of the financial repression that maintained real interest rates at very low levels rather acted as the dampener to the savings growth. However in the 1990s (in fact starting in 1980s) the interest rates on government borrowings (on bonds and securities) have been upwardly revised and have now been linked to market rate of interest. This in the nineties acted as an incentive to the savings in the non-government sector. This was manifested, in the behaviour of the public sector banks, which preferred to invest their excess liquidity in the government securities (especially in the light of mild recession and uncertain investment climate due to the ongoing adjustment process and policy changes). However, for most part of the study period public expenditure does not seem to have influenced the savings (and thereby capital formation) by ‘interest rate route’. Therefore savings behaviour in India, as several studies also indicate is interest inelastic. Then what explains, as the regression results (Table 5.1) indicate, this apparently positive influence of (as indicated by the positive sign of the slope coefficient) public expenditure on saving behaviour in India?

Direct contribution of government to the GDS through government/public savings occurred only in the 1970s (considering only the study period). This in the seventies happened through the government generated surpluses from its current receipts as reflected in the ‘revenue surplus.’ As discussed earlier, the surpluses made way for deficits as reflected in the rise of ‘revenue deficit culture’, starting in the eighties and continued even through the 1990s and this clearly resulted in the dissaving in the government sector. The story with respect to the performance and hence the generation of surpluses from central PSEs except for few PSEs is no different.

Hence most of the explanation to the positive influence of public expenditure to GDS has to come through the ‘income’ route. That is public expenditure causing higher savings first by ensuring or resulting in the higher income generation. In the pre reform period contribution to income growth came from the higher share of capital expenditure and less ‘crowding out’ due to smaller budgetary deficits. Even, among the items of
revenue expenditure the amount of ‘committed expenditure’ was less and hence more funds could be earmarked for the relatively more productive activities (non-defence, non-salary and non-subsidy expenditures). In the post-reform period public expenditure reduction took place from very high levels in the pre reform period. However, it is not very high or very low levels, rather the modest level of public expenditure that contributes to growth (Chu and Hemming, 1991). The reduced or the modest level of public expenditure of in the post reform period itself contributed to GDP growth by lesser ‘transactions crowding out’. This also released more resources for the private sector thereby ensuring reallocation of resources in favour of the productive sections of the economy. Relatively modest level of public expenditure further could be less inflationary and lead to lesser deterioration in the external current account. All these factors turn out to be growth and saving enhancing agents. However, the decline in the share of capital expenditure during the period may have held back the growth to some extent, but it must have been more than compensated by the factors acting on the positive side.

The higher public expenditure and the resultant public debt, according to Ricardian Equivalence Theorem (RET) increase private savings because people increase their present savings in anticipation of future tax obligations. They save more now to pay for higher taxes in the future that the government may resort to for the purpose of debt servicing requirements. The RET seems to have operated in Indian case. The budgetary deficits and debt in India increased at a faster rate in 1980s. The fiscal deficit increased from about 5 percent of GDP early 1980s to about 8.5 percent at the end of eighties. Similarly the revenue deficits increased from virtually a surplus situation to above 3 percent (of GDP mark) deficits during the period. The total public debt as noted earlier, increased from below 40 percent of GDP to reach about 55 percent during the eighties. As if to follow the RET, the private sector saving responding to the increasing public debt, led by the house hold sector also has registered increase during the period. The
household savings reversing the declining trend set in late 1970s increased from about 12 percent (of GDP) in early 1980s to reach the highest peak of about 19 percent at the end of the period. Similarly the private corporate savings during the same period recorded increase from 2 to 3 percent of GDP. The public savings however has continuously declined since early 1980s from a high of about 4.5 percent to just about 1 percent by late eighties, which at the end of the study period has virtually turned negative. Following the savings behaviour in the private sector, the capital formation in this sector also increased, in contract to the decline in public sector capital formation.

The behaviour of the capital formation and its response to the changes in the public expenditure size and composition also runs on the similar lines of savings behaviour as explained above both during the pre and post reform period. During the pre reform period the public expenditure especially higher CE rightly accompanied by higher public savings helped in capital formation, whereas the post reform period witnessed withdrawal of the state as reflected in the reduction of PE-GDP ratio and released resources to the private sector. The significant policy changes in other spheres of the economy guided by LPG measure have contributed more to this development, with the fiscal regime being only a part of the new direction.

5.6 PUBLIC EXPENDITURE, MONEY SUPPLY AND INFLATION

Higher money supply and inflation have been some of the inevitable adverse consequences of higher public expenditure and deficits, especially in the developing countries. As the results of causality test discussed in the previous chapter show the public expenditure in India causes money supply. And as the table 5.1 and Chart 5.3 show, this has happened in India with the public expenditure positively influencing money supply growth.
The growth of public expenditure leads to monetary creation both directly as well indirectly. The direct monetary growth takes place either through "the actual printing of money" or through the more sophisticated method that involves the sale of government bonds and securities to the central bank (Rajan and Asher, 1997). Both these methods lead to the creation of high-powered money or base money which subsequently depending upon the value of the money multiplier result in far higher growth of money supply. The direct method has been a predominant/sole method of deficit monetization in India and accordingly higher public expenditure inevitably resulted in the higher and higher amounts of money supply all through the study period. The monetization provides easier sources of financing public expenditure and deficits and "it seems that monetary creation as a source of finance is a 'free lunch', because unlike borrowing and the revenues (which entail significant opportunity costs), this source allows the government to create money without any apparent adverse effects" (ibid: 68).

Therefore, the Indian authorities, as also elsewhere in the world, found quick and easy shelter in this method to cater to the increasing public expenditure requirements. As some studies indicate (Rajan and Asher, 1997) the extent of deficit monetization, has
been particularly higher in the eighties accounting for over 40 percent of the deficit, and the figures reaching as high as about 60 percent in some years.

The monetization of deficit may also take place in an indirect fashion. This happens when the monetary authorities in order to prevent upward pressure in the interest rate (that is due to higher government borrowing from the market) resort to increase in money supply. This is referred to as interest rate targeting route. However, this route was not resorted to India, as interest rate was not a worry as it was administratively determined for a very long time. Even in the 1990s, with the liberalization of the interest rates this route was not the cause for monetary growth as the excess liquidity in the economy (thanks to the policies of economic liberalization) prevented any possibility of upward pressure on the interest rates. If any, the pressure on the interest rates was in the other direction.

Increase in money supply per-se is not bad, as far as it is used for financing capital expenditure, capital creation that enhances growth. If it goes to finance the revenue expenditure, it may negatively impact including higher inflation. Either way the excess increase in money supply, whether directly or indirectly, would have several detrimental effects on the economy. Inflation is the obvious and immediate concern that directly stems from the money supply growth, more so in the absence of requisite supply response. The excessive monetary creation leads to capital losses on existing money holdings and it is a form of tax called 'inflation tax' or 'seigniorage'. The calculation of seigniorage and inflation tax by Little (1993), shows that this extent of inflation tax and seigniorage was particularly high in the 1980s as compared to the previous decades, which entailed additional burden on rest of the economy.

Apart from the monetary route, public expenditure also causes inflation in several other ways. Financial crowding out, in the presence of market determined interest rate regime, increases the level of interest rate, pushes up the cost of production and prices thereby. In the short run, public expenditure by directly contributing to the aggregate demand coupled with slower supply response (due to several production, infrastructure
and policy bottle necks, as was the typical Indian case) leads to price rise. However, the empirical relationship between the public expenditure, deficit and inflation is not conclusive. The alleged link between deficit and inflation as noted by Conklin and Courchane (1999) is not a theoretical necessity, but public expenditure it is meant for. However using the model based on adaptive and rational expectations certain studies confirm the positive link between deficits and the rate of inflation.

5.7 PUBLIC EXPENDITURE AND POVERTY

The proclaimed aim of all economic policies (fiscal; monetary) in general and public expenditure in particular is to make serious dent on both absolute and relative poverty levels. Certain items of public expenditure directly seek to do it, while several other items do it indirectly by first affecting income growth, price level, economic stability etc. Public expenditure indirectly helps poverty reduction to an extent it can stimulate growth and employment and “in doing so provides incomes for the poor and use some of the resources generated to make adequate social provisions for people who cannot benefit directly from rising incomes” (Ahmad and Hemming, 1991:130).

In other words, public expenditure reduces poverty indirectly by generating sufficient income growth and ultimately helps the poor by ‘the trickle down effect’. Along with the process of generation of incomes, higher economic growth generates the revenue necessary for spending on social security programmes meant to fight poverty in a direct fashion. For, considerable amount of time Indian planners relied on the tricked down theory to take effect. Hence the budgets did not contain any direct and explicit provisions for public expenditures to fight poverty. Instead the allocations for capital formation (i.e. capital expenditure) with stronger input-output linkages were believed to create conditions necessary for output growth. But as seen earlier, public expenditure can affect growth either way. While too little of it may not be of great help, excessive public expenditure (with crowding out of productive private investment, adverse consequences for saving and capital formation, external sector instability), by retarding growth fails to make a serious dent on the poverty; it may rather perpetuate poverty. As the discussion
in the preceding sections indicated public expenditure in India did have positive impact on economic growth (in GDP growth) during the study period. However public expenditure at best is only a secondary factor affecting income generation. In the presence of several bottlenecks and policy mistakes the GDP growth for long was stuck at a low level and hence any significant reduction especially on absolute poverty did not take place. In the post reform period the public expenditure reduction or public expenditure at moderate levels along with several other complementary policy changes boosted GDP growth and helped in bringing about highest ever reduction in the poverty levels (as per the official statistics).

However, realizing, mid way that trickle down route did not yield the desired results in the direction of reducing poverty, government decided to go in for direct measures to tackle poverty. This included the launching of poverty alleviation and employment generation programmes both for rural and urban areas. These programmes entailed labour intensive infrastructure projects covering several areas like soil and water conservation, irrigation and flood control, rural road connectivity, afforestation, etc. Such programmes had double advantages, wherein they created infrastructure and other capital assets and at the same time generated incomes for the poor. But too many such programmes with lot of overlapping, with too thin spread of resources resulted in reduced the efficacy of such programmes. Nevertheless they provided enough cushion for many poor, especially in rural areas both in times of drought and lower economic growth.

Another item of public expenditure in the budget that sought to influence poverty was the subsidy with food and fertilizer subsidies leading from the front. The PDS and the food subsidy have been an integral component of the poverty alleviation strategy in India. While the increasing food subsidy bill, both in absolute and relative terms, over the years resulted in the fiscal stress, there is no denying the fact that it went a long way in providing the poor access to food at reasonable prices. The universal nature of the PDS and lack of self-targeting or improper targeting (which means not only the inclusion
of the non-poor but also the exclusion of poor) reduced the efficacy of the system and hence resulted in the demand for food subsidy reduction. While the reduction of this subsidy bill, which is very much underway in the post reform period, may be desirable, in the absence of any concerted and deliberate attempts at targeting, it may have serious repercussions for the poverty reduction objective.

The fertilizer subsidy another major subsidy item helps farmers to go in for its usage and results in crop productivity increase thereby. This, in the Indian context greatly helped in adopting new agricultural technology and that turned out to be an important factor contributing to the successful achievement of food security. However, the fertilizer subsidy regime in India is also bereft of many anomalies especially the fact that most of the subsidy bill is cornered by the inefficient producers, which defeats the very purpose of the measure.

Despite the limitations, at times very serious ones public expenditure in India during the study period helped on poverty reduction efforts greatly, both in direct and indirect ways. This is substantiated by our regression results (Table 5.1) where the slope coefficient bears negative sign indicating that the higher levels of public expenditure has negatively affected the levels of absolute poverty (absolute number of poor or poverty population). This result is found to be significant at 5 percent level.

5.8 PUBLIC EXPENDITURE AND PUBLIC DEBT

Public debt has been a direct consequence of excessive public expenditure in India coupled with the inelasticity in tax revenues, perceived ill effects of monetization of deficit and other concurrent developments. The total public expenditure has been increasing both in absolute terms and as percent of GDP for most of the study period especially since mid 1970s. Despite apparent signs of getting stabilized at around 55 percent of GDP, the total public debt by virtue of its high cost of servicing and the consequent implications for the future generations continues to be a worrying trend.
As the chart 5.4 shows in the pre reform period PD has increased to allow for increasing public expenditure requirements. Even in the post reform period the near stubborn level of PD is, possibly less to do with the magnitude of public expenditure (which in any case is declining as a percentage of GDP) and has more to do with the difficulty with the other sources of financing public expenditure (viz., tax revenues, non tax revenues, extent of monetization etc.) Moreover at the end of the period, particularly from 1997-98 onwards the increase in public expenditure -GDP ratio also resulted in the increase of the PD-GDP ratio which otherwise was showing a declining trend since 1994-95 (till 1996-97).

The public borrowings may be either from internal or external sources. The reliance on external debt is declining as contained in the declining external debt GDP ratio since mid 1970s itself. Accordingly the internal debt has increased undeterred since mid 1970s only to decline marginally just by about 1 percentage point in the post reform period. Sharp increase in PD the last two years of the study period is an absolute cause of concern, which is directly attributed to the increase in PE as percentage of GDP.
Mounting PD puts, as seen earlier, a burden on the future generations, as debt has to be repaid ultimately, thus resulting in intergenerational inequity. The increasing interest payments, which now constitutes the largest item of public expenditure, being in the nature of committed expenditure, crowds out the other productive items (especially the capital expenditure) of public expenditure within the budget. In the post reform period as the interest rate on government borrowings are linked to market rate of interest, the interest burden is bound to increase. So far in 1990s the 'crowding out' (of portfolio or financial type) of private investment has not occurred, as there exists huge liquidity and relatively lower investment activity on the part of private sector. However with all the signs of economic revival in the new millennium, as the private investment picks up, the high level of government borrowings are bound to exert upward pressure on the level of interest rates. If this happens, the 'crowding out' phenomenon, which has not occurred so far in the post-reform period, may become inevitable thereby holding adverse repercussions for the growth prospects. Indian economy is currently possessed with high amount of foreign capital and huge accretion of foreign resources. This has often put pressure on exchange rate appreciation and therefore requiring periodic interventions by the RBI. If domestic interest rates increase, (due to financial crowding out that result in higher rate of interest) and the resultant surge in foreign capital inflows would result in the appreciation of Rupee. That is likely to affect export growth negatively and ultimately hampering domestic income growth. Hence, it is the internal debt, a predominant component of the total debt that is being significantly affected by the rising public expenditure. Unless the tax reform measures work vindicating the Laffer carve phenomenon in the Indian context and the slide of the Tax-GDP ratio, is arrested and also unless the non tax revenue (especially from the government departmental and commercial enterprises) also pick up the public expenditure will continue to exert pressure on the quantum of public debt, especially the internal debt. And economy may have to face the music of adverse consequences of even larger scale.
5.9 IMPACT OF PUBLIC EXPENDITURE BEFORE AND AFTER REFORMS

As noted earlier, the post 1986-87 has been marked by decline in the public expenditure as indicated by the public expenditure -GDP ratio. This moderation in the public expenditure is likely to have influenced different economic variables, which the study has considered. Hence to assess this, the whole of study period was divided out two phases pre and post 1986-87 and the analysis of the impact of public expenditure on different economic parameters like-GDP, GDS, GDCF etc was carried out separately running simple OLS regressions and the co-efficients were obtained for each period. In order to test the equality between the co-efficients Chow test, as suggested by G.C. Chow (1960) was carried out. The test shows some very interesting results. The results of OLS regression and Chow Test are summarised in the following tables 5.2 to 5.4. The results obtained are found to be significant at 5 percent level for all the variables considered except for the external debt.

Table 5.2 IMPACT OF PUBLIC EXPENDITURE BEFORE REFORMS
Results of Regression Analysis

<table>
<thead>
<tr>
<th>Impact On</th>
<th>Model</th>
<th>Adj. R²</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>GDP   = 231464 + 0.87 PE   (7.472) (6.752)</td>
<td>0.749</td>
<td>45.73</td>
</tr>
<tr>
<td>MONEY SUPPLY</td>
<td>M* = 4157.98 + 0.904PE   (0.024) (7.923)</td>
<td>0.805</td>
<td>62.78</td>
</tr>
<tr>
<td>SAVINGS</td>
<td>SAV  = -45852.62 + 0.59 PE   (3.950) (2.702)</td>
<td>0.296</td>
<td>7.29</td>
</tr>
<tr>
<td>GDCF</td>
<td>GDCF  = 17979.57 + 0.85 PE   (1.482) (6.149)</td>
<td>0.730</td>
<td>37.81</td>
</tr>
<tr>
<td>POVERTY</td>
<td>POV   = 33.12 - 0.61 PE   (102.697) (-2.878)</td>
<td>0.327</td>
<td>8.29</td>
</tr>
<tr>
<td>LABOUR SUPPLY</td>
<td>LAB SS  = 16.11 + 0.85 PE   (16.371) (6.294)</td>
<td>0.720</td>
<td>38.62</td>
</tr>
<tr>
<td>PUBLIC DEBT</td>
<td>PBDEBT = -21708.30 + 0.93 PE   (-0.958) (9.648)</td>
<td>0.860</td>
<td>93.08</td>
</tr>
<tr>
<td>INTERNAL DEBT</td>
<td>INTDEBT = -15235.40 + 0.910 PE   (-1.088) (8.218)</td>
<td>0.816</td>
<td>67.54</td>
</tr>
<tr>
<td>EXTERNAL DEBT</td>
<td>EXTDDEBT = -31765.16 - 0.008 PE   (3.476) (-0.30)</td>
<td>-0.071</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Source : Derived from Indian Public Finance Statistics, Various issues

233
While the public expenditure has bettered its performance with respect to money supply, savings, poverty and total debt, same is not true in case of GDP, GDCF and internal debt (Table- No 5.4).

<table>
<thead>
<tr>
<th>Impact On</th>
<th>Model</th>
<th>Adj. R²</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>GDP = -285364 + 0.81 PE</td>
<td>0.633</td>
<td>23.43</td>
</tr>
<tr>
<td></td>
<td>t = -1.105 (4.840)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONEY SUPPLY</td>
<td>M* t = -363723 + 0.86 PE</td>
<td>0.725</td>
<td>35.27</td>
</tr>
<tr>
<td></td>
<td>t = -2.500 (5.939)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAVINGS</td>
<td>SAV, t = -300260 + 0.74 PE</td>
<td>0.509</td>
<td>14.49</td>
</tr>
<tr>
<td></td>
<td>t = -0.499 (3.808)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDCF</td>
<td>GDCF, t = -10257 + 0.70 PE</td>
<td>0.447</td>
<td>11.53</td>
</tr>
<tr>
<td></td>
<td>t = -0.157 (3.395)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POVERTY</td>
<td>POV, t = 40.93 - 0.81 PE</td>
<td>0.625</td>
<td>22.66</td>
</tr>
<tr>
<td></td>
<td>t = (17.097) (-4.760)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LABOUR SUPPLY</td>
<td>LAB SS = 11.532 + 0.71 PE</td>
<td>0.561</td>
<td>17.64</td>
</tr>
<tr>
<td></td>
<td>t = (2.241) (4.199)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUBLIC DEBT</td>
<td>PBDEBT, t = -13974 + 0.92 PE</td>
<td>0.842</td>
<td>70.04</td>
</tr>
<tr>
<td></td>
<td>t = -1.813 (8.369)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNAL DEBT</td>
<td>INTDEBT, t = -479789 + 0.92 PE</td>
<td>0.823</td>
<td>61.81</td>
</tr>
<tr>
<td></td>
<td>(-4.801) (7.849)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXTERNAL DEBT</td>
<td>EXTDEBT, t = 67476.13 -0.51 PE</td>
<td>0.420</td>
<td>10.39</td>
</tr>
<tr>
<td></td>
<td>t = (7.498) (-3.224)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Derived from Indian Public Finance Statistics, Various issues

The moderation in the quantum of public expenditure is expected to enhance the growth of income and output. While Public Expenditure continues to bear positive influence in the GDP during both pre and post 1986-87, its influence has waned, albeit slightly in the post 1986-1987 period. This, as noted, is contrary to the general expectations and also in contrast to the argument put forward to the Fund - Bank institutions, who advocate expenditure reduction mainly based on this argument. The process of moderation in public expenditure however has greatly helped the cause of
poverty, reduction as reflected in the significant improvement in the slope sufficient. It is clear that lesser the public expenditure more is the reduction in the levels or absolute poverty. This must be taking effect only indirectly, that is by promoting growth, as the reduction in the size of government leaves more resources for the productive use in the non-government sector.

<table>
<thead>
<tr>
<th>Impact On</th>
<th>Slope Co-efficient Pre-Reform</th>
<th>Slope Co-efficient Post-Reform</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>0.88</td>
<td>0.81</td>
<td>275.53*</td>
</tr>
<tr>
<td>MONEY SUPPLY</td>
<td>0.90</td>
<td>0.86</td>
<td>135.04*</td>
</tr>
<tr>
<td>SAVINGS</td>
<td>0.59</td>
<td>0.74</td>
<td>13.91*</td>
</tr>
<tr>
<td>GDCF</td>
<td>0.85</td>
<td>0.71</td>
<td>181.21*</td>
</tr>
<tr>
<td>POVERTY</td>
<td>-0.61</td>
<td>-0.81</td>
<td>7.36*</td>
</tr>
<tr>
<td>LABOUR SUPPLY</td>
<td>0.86</td>
<td>0.77</td>
<td>26.01*</td>
</tr>
<tr>
<td>PUBLIC DEBT</td>
<td>0.93</td>
<td>0.92</td>
<td>38.45*</td>
</tr>
<tr>
<td>INTERNAL DEBT</td>
<td>0.91</td>
<td>0.92</td>
<td>1173.9*</td>
</tr>
<tr>
<td>EXTERNAL DEBT</td>
<td>-0.008</td>
<td>-0.68</td>
<td>923.98*</td>
</tr>
</tbody>
</table>

Source: Derived from Indian Public Finance Statistics, Various issues
Note: * indicates significance at 5 percent level

The growth of public expenditure, in the post-1986-87 period has also, resulted in the positive impact on public debt, but its contribution is marginally lower as compared to the pre-reform (the co-efficient accompanying the internal debt, however is higher) period. This along with the cut in public expenditure has caused lower money supply growth in the post-reform period. Public expenditure moderation has, therefore
has resulted in lower deficit monetisation which in the pre-reform period led to huge increases in the money supply. Thanks, also to the historic agreement between the GOI and RBI, which resulted in the replacement of reckless borrowings by the government from RBI by issue of adhoc treasury bills. This now has been replaced by ways and means advances that greatly contained the money supply growth. This agreement, got the able support from declining public expenditure front, which otherwise would have put pressure on automatic deficit monetisation, source which provided easy and quick money to the government for considerable period of time.

The positive contribution of public expenditure to the gross domestic savings has also increased in the post-reform period. This increase however is not explained in the role played by public expenditure in causing GDP, the contribution of which as noted earlier though positive has slightly declined. The lower public debt (courtesy lower public expenditure) along with some other factors may have helped the cause of savings. The faster growth in savings, however has not resulted in the growth of capital formation (GDCF), the slope co efficient of which has came down in comparison with the pre-reform period. This, phenomenon, however needs to be further investigated. The extent of contribution of public expenditure to the growth of labour supply (as reflected in the size or working population) has come down in the post-reform period.

5.10 CONCLUSION

Hence, public expenditure holds both a positive as well as negative consequences for the various players in the economy. If public expenditure remains at a modest level, it could have beneficial impact on the economy. If excessive, it is bound to have adverse effect on both the internal and external macro-economic equilibrium. In India, public expenditure has positively influenced the GDP growth, and has ably helped the poverty reduction efforts. But it has resulted in the higher growth of money supply and public debt especially the internal debt.

In the post-reform period (that is since mid 1980s), the significant amount of moderation in the quantum of public expenditure has taken place as reflected in the
consistent decline of public expenditure to GDP ratio. This is expected to bring along several beneficial things for the economy. Lesser crowding out would release additional resources for more productive use in the private sector. This if rightly helped by several internal and external liberalization measures – is expected to result in significant output gains for the economy, signs of which are already evident. Also on the positive side, reduced public expenditure (along with complementary policy developments) has also resulted in reducing the contribution of public expenditure to the monetary creation. This further helped the economy in the maintenance of moderate levels of inflation. Public expenditure in India has also positively affected the savings and capital formation by positively contributing to their growth. All these positive consequences of the behaviour of the public expenditure in India made significant contribution towards poverty alleviation both in a direct and indirect manner. However, if some of the disquieting trends on the public expenditure and fiscal front, like declining share of capital expenditure, relatively higher levels of deficits and public debt, and higher levels of revenue expenditure (and committed nature of the expenditure within that), lack of focus on the productivity and efficiency aspects of public expenditure, etc., are taken care of, the fiscal and within that the public expenditure regime may end up contributing even more to the GDP growth and poverty reduction.