CHAPTER II

REVIEW OF LITERATURE AND METHODOLOGY

This chapter has been devoted to present a brief review of the related literature related to the study of “An Analysis of India’s public debt” and to explain the methodology adopted in this study. While section A of this chapter deals with the review of literature, section B discusses the methodology adopted in this study.

SECTION A

REVIEW OF LITERATURE

2.1 Reviews on Debt in General

In this section, an attempt had been made to present a brief review of the important studies made on internal debt, external debt, other liabilities and the total public debt of India. After making a brief mention of the general studies on India’s public Debt, a review of literature regarding debt had been presented first, and the various studies on internal, external and that of the total public debt of the central government had been reviewed next.
Dilip Ratha (2002)\(^1\) had made an Econometric Analysis of the effects of BIS (Bank for International Settlement) regulations on commercial lending to the developing countries for the period of 1986-89, using BIS data. The author had argued that, differential treatments of risks may be one of the factors behind the rapid growth of the short term banking debt to the developing countries in 1990’s and short term lending may be one of the major causes for financial crisis in Asia, Russia and Brazil. The author had concluded that, BIS regulations might have encouraged a switch over from long-term loans to short-term loans by applying a lower risk weight to the short-term debt flow to the developing countries. However these differential rates of weighting were not made applicable to the OECD countries.

Raghbendra Jha and Mridul K. Saggar (2001)\(^2\) had evaluated the performance of the IMF’s rationale for its role in the international economy, particularly in helping those countries, which were faced, with the balance of payments crises.


The authors have examined as to whether the actual lending patterns of the IMF was in conformity with this rationale. This was based on the panel data model for several groups of countries. After analyzing quantitatively, the authors had stated that the reliance on the IMF loans was steadily increasing in the developing countries. It had been declining only in the case OECD countries.

Secondly, the response of the IMF loans to the macro economic variables in the different countries had varied considerably. Thirdly, the key macro economic magnitudes, which were supposed to be important for determining the IMF loans, were sometimes insignificant and sometimes tended to misguide. Finally, the authors had concluded that, there was arbitrariness to a certain extent in the IMF’s loan programmes.

Subbiah (2000) had analysed the growth of central government’s internal and external debt. This study covered a period of nine-years from 1989-90 to 1997-98. The author had observed that, in all the years under study, more than four-fifths of the total debt consisted of internal debt and less than one-fifths of the total debt had consisted the external debt. From the analysis, he had also pointed out that the growth rates of the internal debt were higher than the growth rates of the external debt except in the year 1991-92.

---

In his concluding remarks, he had stated that, the internal debt would never result in a money burden to the whole community, since the repayment of principal and the payment of interest involved merely a transfer of money from one section to another section of the people in the community. However external debt involved both money as well as a real burden as the repayment of the external debt would involve a drain of wealth in the debtor country.

Among the many lessons learnt from the **South East Asian Crisis,** an important lesson was that the external debt had remained a major determinant of the external vulnerability in the developing countries during the early 1990’s. When the foreign direct and portfolio investment flows increased in the developing countries, the access to international liquidity, excessive external borrowings of the kind, which led up to the debt crisis of the 1980s, was seen as being an increasingly unlikely phenomenon, especially in the developing countries. There were three reasons to buttress this argument.

1. Capital flows needed to finance the current account deficits were increasingly available in the non-debt forms such as portfolio and direct investments.

2. Government predominantly resorted to debt financing, and in the wake of the debt crisis it was forced to restructure the finances and reduce the

---

quantum of deficit financing, especially, that which was based on external borrowings. Banks, which had over exposed themselves in a few developing countries and had burnt their fingers, had now become far more prudent.

Thus it was argued, that a combination of the supply as well as the demand side factors had contributed to the debt crisis.

**Uri Dadush and others (2000)** had analysed the rapid growth of term loans in the 1990’s. The authors had pointed out that the international banks were making short-term loans even as they were reducing their exposure in terms of their capital at risk.

In this work, it was also pointed out that the short-term capital flows appeared to be pro-cyclical in the developing countries and were increasing when the economic growth was cyclically faster and declining when the growth rate was slower.

The study concluded that, the growth of the short-term borrowings in the 1990’s was naturally accompanied by higher incomes, a faster growth, and greater openness to trade in the developing countries. But the rapid rise in such borrowings had also reflected in speculative booms in some countries.

---

Srinivasa Gowda\(^6\)(1998) in his article had stated that the net results of the unabated failure to match the deficits with the requisite tax revenues had led to huge fiscal deficits year after year. The percentage of government borrowings to the GDP had increased from 4.6 in 1960-61 to 10.3 in the year 1994-95. Between 1950-51 and 1990-91 the gross debt of the central government (internal, external and other liabilities) had risen from 32 per cent to 68 per cent of the GNP. The growth of external debt was far more serious than that of the growth of the internal debt. External debt directly affected the country’s balance of payments position, trade flows and the external value of the currency. The fiscal crisis of 1990-1991 was caused by the phenomenal increase in the balance of payments deficit. The external debt was all the more difficult, since the principal amount and the interest repayments keep on mounting with an increasing debt and there might be due to currency devaluation owing to the balance of payments crisis. This in fact formed a vicious circle and the country might be made to fall into a debt trap, which might threaten its sovereignty in the long run.

M.M. Metwally and Dennis ‘O’ Brien (1994)\(^7\) had examined the effect of debt servicing on the economic development of six heavily indebted Asian

---


countries namely Bangladesh, India, Indonesia, Pakistan, Papua New Guinea and the Philippines.

Single and simultaneous equation models had been used to test the interaction between debt servicing and the rates of growth in exports, domestic savings, domestic absorption, inflow of foreign capital and that of outstanding foreign debt. Debt servicing had a negative effect on economic growth in all these countries studied during the period of 1975-1990.

By using the simultaneous model, the author came to the conclusion that servicing a heavy debt might actually contribute towards the worsening of the debt problem in the borrowing countries by limiting their ability to generate economic growth. The debt problem of the Six Asian countries was attributed to the adverse development in the world economy and the inappropriate domestic policies adopted. Further, it was also pointed out that debt servicing had imposed a serious strain on the balance of payments position of these countries.

Ashwini Deshpande\(^8\) (1993) had stated that as a result of the debt crisis, the eighties were a lost decade for most of the indebted countries. Economic crisis and its handling by the creditors had contributed to the social and political destabilization in the third world. Yet, the commercial banks and the creditor nations insisted on shrinking all responsibilities for the consequences of the debt

---

crisis. The IMF and the World Bank have essentially acted as custodians of these two players in the debt game and thus the debt strategy had served the banks well but had completely failed to free the debtors countries (LDC) from the predicament in which they had been trapped. The typical adjustment package was not only unfair and was in disregard of the history of the debt crisis, to borrow a phrase from the south commission’s report (written under the secretary ship of Dr. Manmohan Singh) it was “marked by excessive dogmatism and lack of common sense.”

Thus substantial write offs might become inevitable as first step towards the solution of the debt crisis. However, in so far as the debt crisis was a reflection of the underlying structural imbalances in the debtor economies, reforms were essential as a quick second step. Most of the debtor countries urgently had to be pulled up from the deadly combination of poverty, illiteracy, hunger, and disease due to their low economic growth and inequality. It should be noted that this was possible only through the effective reversal of the current strategy, failing which, stagnation and indebtedness would persist through the 1990s, making way for yet another lost decade.
2.1.2  Review of Literature Related to Public Debt

C. Rangarajan, D.K. Srivastava\(^9\) (2003) in their article based on the analysis of accumulation of the debt, there are two factors identified to contributing the debt–GDP ratio. One was the cumulated primary deficit and the other, the cumulated effect of the difference between growth rate and interest rate.

This study points out the relative contribution of cumulated primary deficits and the cumulated effect of the excess of growth rate over interest rate on the accumulation of outstanding liabilities of the Central Government of India, over the period of 1951-52 to 2001-02. This paper particularly highlights the implications of the sign reversal in the difference between the real growth rate and interest rate.

In the concluding part, the authors pointed out the following findings:

- Starting with a debt-GDP ratio of about 29 per cent GDP at market prices in 1950-51 for the central government, by 2001-02, the debt GDP, and ratio had reached a level of 55.36 percent of GDP, an increase of about 26.5 percentage points. Nearly half of this increase occurred in the first three plans.

---

Accumulation of central debt relative to GDP, for an unbroken period of 45 years since 1955-56, has been due entirely to cumulated primary deficit relative to GDP, with the factor of excess of growth rate over interest rate mitigating its impact in a significant way.

With liberalisation and the end of the regime of financial repression, large excesses of growth rate over interest rate may not be expected on a sustained basis.

For stabilising the debt GDP ratio at current levels, fiscal reforms aimed at attaining a balance on a primary account are imperative. For reducing the debt-GDP ratio, primary surplus will have to be generated on a sustained basis. Hence the need to focus on primary balances in any effort to control the growth in the debt-GDP ratio becomes unavoidable.

Pathak's\textsuperscript{10}(2000) analysis of debt management and fiscal operations had revealed that the behaviour of the RBI was endogenous. Its debt holding operations had strongly been influenced by the budgetary deficits. The exogenous component of the fiscal policy had exerted a strong positive influence on the

RBI’s credit operations. The revenues were endogenously determined and had exerted a negative influence on the behaviour of the RBI.

Money supplies were found to be strongly influenced by the monetary assets of the RBI. Asset elasticity of money supply was almost equal to unity. Fiscal and monetary policies were congruent. Greater autonomy in credit management was felt to be desirable. Most of the variables had shown a stable functional relationship.

S.P. Gupta,\textsuperscript{11} (1994) in his work had made an attempt to assess the impact of fiscal and monetary changes introduced by the government of India on domestic and external debt. For this purpose the author had used an analytical model, which was very close to the model developed by Stanley Fischer, former Vice-President of the World Bank. To analyse the impact of the present and near future policy changes adopted and the reform programme, alternative projections over a period of ten years for the relevant debt parameters had been made for the domestic as well as the external sectors of the Indian Economy. One type of projection was made for the base scenario and another projection was attempted for the optimistic scenario.

According to the author, the base projection could be regarded as a standard exercise in forecasting and the optimistic projection assumed a successful implementation of the reform measures and a near fulfillment of the targets.

Eight major policy variables were included in the model; namely, the level of gross fiscal deficit, budget deficit, the revenue deficit, nominal interest rates, external borrowings, the level of current account balance, repayment schedule of debts and exchange rate changes. The three exogenous variables included in the model were: GNP, export growth and domestic inflation rate. The major endogenous variables were considered debt servicing liabilities, growth of public debt, real interest rate and the growth of external debt.

The author had attempted using the above model, the two alternative scenarios for the future with 1993-94 as the base year, and the year 2003-04 as the terminal year. The major conclusions of the study were:

1. Public debt as a percentage of GNP would come down from 57 percent in the year 1994-95 to 53 percent of GNP in the year 2003-2004. If fiscal deficit increased or the real interest rates increased or if there should be any further reduction in the growth of the GDP, this marginal improvements would get jeopardised. In the optimistic case, the situation was found to be slightly better. The total debt might go down
from 57 percent of the GNP to 50.5 percent. Still the burden of the per capita public debt would increase by more than three times between 1992-93 and 2003-2004.

2. If the ratio of public debt to GNP was reduced by one per cent and the real interest rate was reduced by one percent, nearly a one percent reduction in the public debt per year at current price was possible. Hence, prudent interest rate and austere fiscal policy had become necessary to reduce the volume of public debt.

3. The external debt crisis was likely to be over by 1988-89 after crossing the hump of 1994-95 when the debt-servicing ratio reached the highest level of 31.2 per cent. Hence in the external sector, the progress would be relatively better. Even after admitting many of the observed defaults and short-falls in the reform measures and their impacts, the scope for coming out from the debt and balance of payments crisis was bright.

4. To sustain the present climate, all efforts should be made to speed up the reform process and its implementation to achieve the desired results.

5. A clear-cut foreign exchange reserve policy should be evolved and maintained keeping in view the characteristic features of the inflows and the outflows of the portfolio investments from the experience of other countries.
6. An exclusive concentration on exchange rate or balance of payments policy would not help to solve the external debt crisis of India; if these policies were not supported by appropriate supply side economic polices.

Krishaveni\(^\text{12}\) (1993) had examined the trends in the gross total deficit of both the Central and that of the State Governments during the period 1980-81 to 1992-93. The author had collected the data from the various issues of the Reserve Bank of India Bulletins and the Annual Reports. Various components of the internal as well as the external debt were evaluated using the percentage approach. Finally the author had arrived at the conclusion that the Indian economy would certainly prosper, in spite of its heavy burden of public debt, provided, the debt amount was utilized for development purposes.

Bhattacharya and Srabani Guha (1990)\(^\text{13}\) have critically examined the growth and the composition of the internal public debt of the Government of India. Their study period was from 1970-71 to 1987-88. They had criticized the definition and the procedure of the measurement of public debt adopted, and they were of the view that the budget classification was not an appropriate measure of


the internal debt of the Government, due to its tendency of over estimating or
under-estimating the public debt.

In the concluding part, they had mentioned that, the public debt in India
was increasing at a much faster rate than that of the GDP and they had pointed out
the fact that a major portion of the public debt in India was raised through the
domestic private sector. In order to manage the debt to GDP ratio within the
permitted critical level, they had suggested a curb on the growth of the non-
productive public expenditure.

Arun Ghosh (1988) in his article on “India’s public Debt: A Practical
Analysis” had examined the nature of the public debt in India and had assessed
the impact of the public debt on the Indian economy in general. For his study, he
had taken the year 1986-87 and collected data from the Budget Document and the
RBI Report on Currency and Finance. It had been concluded by him that the rapid
increase in India’s public debt and the more rapid increase in the burden of
interest on the government’s budget had posed grave dangers to the orderly
implementation of India’s plan programmes of development, not only in the
public sector but also in the private sector.

---

14 Arun Ghosh, “India’s Public Debt: A Practical Analysis”, Economic and
Prabhat Patnaik (1985)\textsuperscript{15} had analysed the consequences of public debt if it was employed as a mode of financing public expenditure. The author was of the view that, selling Government securities to buyers other than the Reserve Bank of India as a means of financing public expenditure was less inflationary than selling securities to the Reserve Bank of India. This view had the support of the Chakravarthy Committee on the working of the monetary system.

The first two sections focussed primarily on the behavior of the Banks and process of money creation and inflation, with the assumption of a given monetary policy-complex, notably with a given spectrum of interest rates. The next section explains briefly the effect of public debt on inflation and the distribution of income if the interest rate on the government securities was increased.

2.13 Review of Literature related to External Debt

Reddy (2000)\textsuperscript{16} had stated that in the external sector, the external debt to the GDP ratio came down from 41 per cent in 1991-92 to 23.5 per cent in 1998-99. The debt service payments as a ratio of current receipts continued to improve steadily from 30.2 per cent in 1991-92 to 18 per cent in 1998-99. This was due to the fact that during the nineties, the Government had accumulated over $ 30


billions of foreign currency assets, while liberalizing trade, including that of gold and due to a steep reduction in the tariff rate and the maintenance of a consistently high rate of growth in the GDP.

The RBI (2000) had stated that India’s external debt had increased by 0.8 per cent from US $ 97,666 millions as at the end of March 1999 to US $ 98,435 millions as at the end March 2000. Analysing the various components wise, the long-term non-resident deposits, multilateral (excepting IMF) and bilateral debt had increased while the debt owed to the IMF, the external commercial borrowings and the rupee debt owed to the east fell in absolute terms. While the proportion of multilateral (excepting IMF) and bilateral debt in the total debt inched up from 49.2 per cent as at end march 1999 to 50.2 per cent as at the end of March 2000 and that of the debt under long-term non-resident deposits had increased from 12.6 per cent to 14.8 per cent, the share of the commercial borrowings had fallen from 28.6 per cent to 26.4 per cent and that of the rupee debt from 4.8 per cent to 4.5 per cent during the same period.

The marginal increase in the outstanding debt notwithstanding, the strengthening of the process of consolidation could be noticed in the movements of the key indicators of debt sustainability. The external debt to GDP ratio had declined from 23.5 per cent as at the end of March 1999 to 22 per cent as at the

---

17 Reserve Bank of India Annual Report, Mumbai, 1999-2000, p.112
end of March 2000; while the ratio of public debt to current receipts fell from 163.4 per cent to 144.3 per cent.

Prabir Purkayastha (1999)\(^{18}\) in his study had pointed out that India’s external debt stood at $95.72 billion at the end of December 1998. The debt service payment as a percentage of current receipts was of the order of 20 per cent while the debt to GDP ratio was estimated to be of the order of 23 per cent. While these were not figures, which appeared to be dangerous by current international standards of indebtedness, India had been classified among as one of the top 15 indebted countries in the world in recent times. Further, though the growth rate of the debt determined in terms of dollars appeared to be small, it had increased at an annual compound growth rate of 1.6 per cent (1991-98) due to the erosion of the value of the rupee. The growth in rupee terms was 12.5 per cent for the corresponding period. However, the short-term debt as a proportion of the total debt, which was the major problem of the South East Asian countries, had come down substantially to the level of 3.8 per cent during this period.

Jegadish Gandhi (1999)\(^{19}\) in his paper on Globalisation and debt crisis stated that the problem of external debt had been regarded as a reflection of a development crisis. As economic development took place and per capita income

---


increased, the dependence on external finance would also tend to increase. The countries with a higher per capita income growth rate, higher inflation rate and a larger volume of current account payments deficits also happened to be the more indebted countries. It was argued that the burden of the debt might get diffused through the improved economic performance of the country.

There was need for an inward-looking development strategy, facilitated by a careful macro economic policy and a judicious allocation of resources as well as prudent borrowings. This should take the place of an outward looking export free market economic approach, which was much emphasized by the international monetary agencies. It had been felt that too much reliance on the market mechanism, the negligence of socio-institutional reforms, an over emphasis on capital and technology, had all been largely responsible for the debt crisis.

**Varghese and Wilson Varghese (1998)** in their article on “India’s Mounting External Debt Servicing Burden” had attempted to estimate the current magnitude of India’s external debt and its debt servicing obligations, the evolution of the debt over a period of time and the factors that had burdened during the period 1978 to 1986. The policy options available to India to keep the debt and its debt service burden within manageable limits had also been discussed. The

---

necessary data had been collected from the World Debt Tables and the World Development Report, 1987-88.

**Susheela Subrahmanya (1998)** had pointed out that the present value of India’s outstanding foreign borrowings continued to reflect the fact that a large proportion of the debt was in the form of long-term aid. The negative trend was a rise in the stock of the short-term debt in the total debt though it was only a small rise. However, since 1996 there had been a slow growth in export earnings and if exports continue to grow as slowly as they did in the year 1997-98, then the debt service burden would rise and with that the pressure to borrow more from abroad would increase. Therefore, a sustained growth in India’s foreign debt, was taking place at the time of the country’s balance of payments crisis in 1991.

**Singh, Suresh Sachdeva and Yogesh Upadhya (1997)** had stated that India’s external debt when compared to that of the other developing countries had shown that India depended less on external aid. After the third five-year plan, the excessive reliance on funds from foreign countries had become marginal. The burden of the external debt on the people of the country could be measured in relation to their current earnings. In this connection, the Government of India and the Reserve Bank of India had been taking a number of measures to check the

---

high level of internal debt. But the success of such a strategy would depend much upon the continuing process of the economic reforms.

Reddy (1997)\textsuperscript{23} in his study had pointed out that, first India could be classified as a “moderately indebted country”. In fact, it was not that the size of the external debt that was by itself large, but the level of exports was found to be too small. If we could improve our exports, we could easily be classified as a “Less indebted country”.

In the recent past, the extent of indebtedness had actually come down in terms of the ratio of the external debt to the GDP and also in terms of the ratio of debt servicing to current receipts.

We had been able to achieve these improvements after discharging our bulk liabilities under the India Development Bonds and that of the International Monetary Fund.

The cost at which the Indian corporate were in a position to raise funds from abroad was usually more advantageous than what the formal credit rating-by-credit rating agencies had suggested.

The external debt as a proportion of the total debt in the government account was very small. The cost at which the government obtained the external

assistance was less than that of the cost of the non-government external debt. The utilization of the debt by government was intimately linked with that of the development projects. By virtue of the past policies, the Government's debt was still found to be about half of the total external debt. However, as a proportion of the total external debt financing, the Government's debt had come down and currently (1997) it was just about 10 per cent.

The size of the short-term debt as a percentage of the total debt had been brought down and was low, compared with that of average of the developing countries. The ratio of short-term debt to the level of reserves was very low compared to most of the developing countries. Apart from the fact that our debt service ratio to current receipts was low as compared to that of many other countries, our payment obligations in terms of dividends were also far lower than that of many other developing countries.

In 1980s, the external debt had raised significantly, the foreign exchange reserves had declined. In the 1990s, the external debt had increased marginally, but the increase in the foreign exchange reserves was more than that of the external debt, showing clearly that it was not true to say that the reserves had been built with the help of the external debt.

The proportion of debt flows in the total capital flows had come down from about 97 per cent five years back; (1992) to half, that was 50 per cent in 1997.
The maturity structure of the new commitments to India had deteriorated, but it was still more favourable compared to that of many other developing countries.

Finally, it would be true to say that the Government of India had followed a prudent system in regard to the contracting the external debt and such a prudent policy had been in the national interest. Liberalizations of the debt flows had been undertaken on a gradual and measured basis, which had strengthened the external payments situation.

Nirupam Bajpai\textsuperscript{24} (1994) in his article had made an attempt to examine the need to reduce the external debt and its servicing burden. The author had also undertaken a modelling exercise to project the external debt and the balance of payments position of India.

Using the World Bank’s Revised Minimum Standard Model (RMSM) for India has done the debt projections. This was a disaggregated trade gap model and it consisted of a simple system of relationship based on the general economic principles.

The projections of external debt and the balance of payments were made for the period 1992-93 to 2001-02. The projections were made for two scenarios, one for an optimistic scenario and the other for the pessimistic scenario. The debt

projections were divided broadly into the following seven heads, namely, commitments, disbursements, net flows, net transfers, principal repayments, interest payments and debt services.

In the optimistic scenario, the total debt stock increased from 76.6 billions of US dollars in 1992-93 to 91.9 billions of US dollars in 1996-97 and to 104.5 billions of US dollars in 2001-02. In this scenario, the disbursements also had increased steadily while the debt service had increased considerably from the year 1995-96. Hence, the net transfers became negative from 1996-97 in these projections.

The debt outstanding had (long-term) increased from 68.9 billions of US dollars in 1992-93 to 81.8 billion of US dollars in 1996-97 and to 97.1 billions of US dollars in 2001-02. Of the total outstanding debt, 67 per cent was on account of official creditors and remaining 33 per cent was on account of private creditors.

In the optimistic scenario, the debt service ratio had touched the highest level of 27.5 per cent in the year 1996-97. Thereafter, it declined and the average was around 22.4 per cent. The current account balance to exports ratio started increasing after 1991-92 and reached the highest value of 29 per cent in 1996-97. It declined afterwards and touched the level of 10 per cent in 2001-02. The total debt stock to exports ratio had declined throughout the projection period and it
came down to 124 per cent in 2001-02 from the maximum of 283 per cent in 1992-93.

In the pessimistic scenario, the projected total debt stock had increased from 76.6 billions of US dollars in 1992-93 to 93.2 billions of US dollars in 1996-97 and to 116.6 billions of US dollars in 2001-02. The projected disbursements also grew steadily. However, they would be hardly sufficient to meet the debt service requirements. The debt service requirements started increasing at a higher rate from the year 1996-97 and as a result the net transfers became negative.

Debt outstanding (long-term) had increased from 68.9 billions of US dollars in 1992-93 to 84.1 billions of US dollars in 1996-97 and to 105.4 billions of US dollars in 2001-02. Of the total debt outstanding, 64 per cent was on account of official creditors and the remaining 36 per cent was on account of private creditors.

Under the pessimistic scenario, the debt service ratio was varied around 28 per cent till the year 1996-97 and thereafter it had declined to around 25 per cent. The current account balances to exports ratio had increased steadily from 15 per cent in the year 1992-93 to 21 per cent in 1996-97 and to 28 per cent in the year 2001-02. The total debt stocks to exports ratio had declined from 283 per cent in the year 1992-93 to 227 per cent in 1996-97 and to 159 per cent in 2001-02.
With these projections the author had suggested that measures should be taken to promote the level of domestic investment. Credit squeeze should be relaxed so as to increase the supply of investable funds. The prospects for attracting large foreign direct investment flows appeared to be bleak, and hence a comprehensive and sustained effort was necessary for changing the perceptions of the foreign investors. Equity flows would be necessary to replace the debt flows since the projections had suggested a large contraction of the external debt by the middle of the nineties.

**Sunanda Sen**²⁵ (1994) had made an attempt to analyse India’s recent external economic crisis and the study emphasized that the developmental dimensions of the crisis were quite distinct from the short-term liquidity aspects, which were of paramount importance to the lenders in the international market. The first section had analysed some conceptual issues. The rate of growth of GDP was defined as a function of the marginal propensity to save. If capital-output ratio were kept as a constant, an increase in the real transfers would increase the rate of growth of the GDP. With mounting debt service schedules, the debtor nations might be forced to borrow with a number of conditionalities mainly to continue the debt servicing obligations. The structural adjustment policies would raise the import propensities with a decline in the flow of the net

finance. An increase in imports might force the debtor nations to settle the issue at a lower level of real income. This was described as a part of the import led GDP compression.

The author also conceptualises three successive phases in the debt process, which generate unfavourable movements in the external accounts of a debtor country characterised by a continuous decline in the flow of debt of real transfers.

Section II had analysed the events and causes, which had led to the present crisis. Despite a significant improvement in the official capital inflows during the early years of the nineties, it had not been possible for India to compensate for the sharp reduction in the private source of finance, which was mainly due to the uncertain economic and political climate that prevailed in the country. The external accounts of India were subject to a set of adverse circumstances such as a decline in the private capital inflows and transfers; over utilisation of official exchange reserves and a reduction in export demand in the Gulf area, and in the socialist countries of East Europe and Russia. Efforts to finance the inflated import bill and other external liabilities by means of market sources of finance during the middle of the eighties had added further to the constraints in the external account of India by the end of the decade.

Under these circumstances, the country had little option to avoid the situation of a debt-trap. Any attempt to increase the imports under the liberalised
trade regime became difficult, since the capacity to imports had shrunk because of the non-availability of the external net finance. Hence, the difficulties of securing foreign exchange through exports and net capital inflows had become constraints to the growth of the GDP. India’s ability to make up the current account deficit by means of compressing the trade deficit was very limited.

In Section III, the author had arrived at the following major conclusions:

1. India had very limited access to sources of international finance. This had reduced the growth prospects of the economy considerably.
2. The low rate of growth of GDP had reduced the growth of the import demand.
3. The country had become a compulsive borrower to meet its debt charges in time.
4. While efforts were taken to reduce imports and trade deficit by means of restraints on output, the inflexible and growing debt services had constrained the capacity of the country by means of its endogenous efforts to limit the size of the current account deficits.
5. Since international capital markets had become hostile to the fresh demands for credit from the borrowers of developing countries, India would find it increasingly difficult to have access to the private markets for international credit.
6. The uncertain political and economic climate in the country would lead to further declines in the private capital inflows, which included the flow of short-term non-resident deposits in India, non-resident transfers, trade credits and medium-term commercial loans. These factors had exogenously brought down the receipts in the current and the capital accounts. Therefore, the options available to the Government of India to manage the balance of payments had been considerably narrowed down.

Sanjib Pohit\textsuperscript{26} (1994) in his article had analysed the trend of external debt, the mix of external obligations, and the shift in the sources and the determination of debt burden for a period of eighteen years from 1972-73 to 1988-89. In the introductory section, the author had stated that India had utilized a very low level of credit in the international markets till the 1970s due to the inward-oriented development strategy that was followed by India. However, from 1978 onwards, India had started utilizing the external credit at a moderate level in the beginning and then more progressively after the year 1985. The second section of the article had outlined the implications of the various types of loans and the various sources of data. In the third section, the growth and the burden of India’s external debt had been discussed and a comparison had also been made with other similar

countries. The mix of external obligation had been analysed in detail in section four. The burden of the debt service and a comparison of the determination of debt service burden had been given in section five. In the last section, the major findings and policy implications had been given.

The following were the major conclusions of this study:

1. Major changes in the economic policies of India in the late seventies had an impact on the growth of the external borrowings of India in the last decade.

2. External borrowings had grown at a faster rate in the eighties compared to that of the earlier period. However, the cumulative growth rate of external debt had been relatively low.

3. In the eighties, the defense debt had also increased sizably.

4. During the seventies, India’s external debt was mainly in the form of long-term public or publicly guaranteed debt. However from 1980 onwards, the shares of the private non-guaranteed debt, the short-term debt and the NRI deposits had been increasing.

5. Under the long-term public and publicly guaranteed loans, the bilateral assistance had formed a significant part of our borrowings in the seventies. However, from 1980 onwards, the
multilateral and private commercial loan had played a greater role.

6. Partly due to the growth of the private debt, the structure of the external debt had exhibited deterioration in the eighties. The burden of debt had also been increasing after the 1980s.

Based on the above observations, the author had made the following policy recommendations.

1. Considering the serious implications of the short-term debt and the IMF credit, India should minimize its borrowings from these sources.

2. In order to secure external loans from all possible sources, India should maintain a balance in respect of its foreign relations with the various groups of countries.

3. India should also try to reduce the large size of its defence debt and its external borrowings for defence purposes should be carefully scrutinised.

Ramesh C. Garg\(^{(27)}\) (1993) in his article on India’s external debt had analysed the problems and prospects of India’s external debt based on the data on

the external debt of India for the period 1980-89. In the first part of his article, the author had explained how India had been rated by the international credit rating agencies. He had stated that the credit worthiness of India was deteriorating in recent times. Some of the international credit rating agencies had lowered the ratings on India’s long-term public debt. This was mainly due to the decline in the foreign exchange earnings sent by the Non-Resident Indians and the increasing import bill of the petroleum products. Nearly 30 per cent of the export earnings were spent on servicing external debt. The debt service ratio had increased to 26.3 per cent in 1989 from 9.1 per cent in 1980. During the period 1980 to 1989, the total outstanding of the external debt had increased by three times while the debt servicing payments had increased nearly by five times. In terms of the compound growth rate the debt outstanding and debt service payments grew by 13 and 19 per cent respectively. The total external debt formed 21 per cent of the GNP and 225 per cent of the exports by the end of 1989.

In the second part of the article, the author had analysed the sources of external borrowings and the cost of borrowing from each source category. Loans from international organizations formed 36 per cent of total out standings of external debt in the year 1989. The cost of borrowing was the lowest from this source. Loans from foreign governments formed 25 per cent of the total debt. The average cost of borrowings from this source was 5.7 per cent. The least
source of borrowings was from the private financial markets. The cost of borrowings from these sources was found to be the highest.

In the third part of the article, the structure of the external debt had been analysed for the period 1982-1989. The share of the official capital had come down to 61 per cent in 1989 from 85 per cent in 1982 and the share of the private capital had increased from 16 per cent in 1982 to 39 percent in 1989.

The fourth section had analysed the resource transfers. The percentage of resource transfers had declined considerably from 1982 onwards. On an average, India had received only 21 per cent of the total borrowings on account of external debt. The data on resource transfers had revealed a gloomy picture about India’s ability to continue the servicing of its external debt. The diminishing level of resource transfers was at an alarming rate and the deteriorating trend in the structure of the external debt might bring India closer to the level of default on its external debt.

The last part of the article had given the following policy recommendations:

1. An explicit policy on the management of external debt by the Indian planning authorities should be announced.
2. India should liberalise its foreign investment policy to encourage private capital and also to promote exports.
3. The tremendous supply of skilled manpower should be effectively used in industries geared for exports.

4. With a relatively lower level of wages for the skilled workers, India should try to utilize its potential for higher exports in the service related industries.

5. The Non-Resident Indians should be given more tax incentives to bring their savings to India for portfolio and direct investments.

6. Non-essential imports should be reduced and the available foreign exchange should be used to build and develop infrastructure and to improve the productive capacity of the economy.

7. India should reduce its borrowings from the private financial markets. Borrowings from international organizations, multilateral agencies and other governmental sources should be increased.

The EPW Research Foundation28(1993), had observed that there had been a noticeable improvement in the quality of the data on external debt published by the Reserve Bank of India and other sources of publications of the Government of India on the guidelines insisted upon by the IMF and the World Bank. The revised figures on external debt were significantly larger than those of the earlier estimates. Excluding short-term debt and defence debt, the total

external debt of India had increased from 53.9 billions of US dollars by the end of March 1989 to 71.11 billions of US dollars by the end of September 1992. The foreign debt as a percentage of GDP had increased from 19.8 in 1988-89 to 30.1 in 1991-92. When all the items were included, the aggregate external debt touched 87 billions of US dollars by the end of September 1992. As a percentage of GDP, the aggregate external debt worked out to 38.8 and as a percentage of exports, it had become 31.2.

Earlier, the World Bank in the group of the moderately indebted low-income countries included India. However in the World Debt Tables, of 1992-93, India was not placed in the above category and India was included under the ‘severely indebted group’. Due to the sizeable growth of the debt servicing cost, the net flows and the net transfers had declined significantly. India was about to reach the stage, in 1991-92, when net transfers would have become negative, as it had happened in the year 1990-91.

The debt service payments were projected to be around (1993-1998) 8 to 9 billions of US dollars per annum in the course of the next five years. Finally, a comparison was also made with China. External debt as the percentage of exports remained at a low level of 90 for China compared to 312 for India. Despite the low level of concessional credit and multilateral aid, during the year 1991-92,
China had attained an export level of 70 billions of US dollars compared to 24 billions of US dollars of exports for India.

Arun Ghosh,29 (1993) in his paper had analysed three main issues, namely, (1) The conceptual issues connected with the definition of the external debt and the concepts adopted by the RBI. (2) The total magnitude and nature of India’s external debt and (3) The impact of India’s external debt liabilities and the economic policy options available for India to meet these liabilities.

In the beginning the author points out that there had been a lot of differences between the estimates on external debt given by the Government of India and that of the Reserve Bank of India. The differences in the data on debt from various sources had created lots of confusions in knowing the correct value of the external debt. The RBI has attempted to reconcile the estimates of external debt given by different sources. The principles for working out future estimates were also laid down by a ‘policy group’ task force set up by the Reserve Bank of India. The author had admired the Reserve Bank of India for bringing about the transparency in the problem of the external debt obligations of India and also for attempting a long term over due reconciliation between the divergent estimates of India’s external debt liabilities.

---

According to the estimates worked out by the RBI, as per the new definition, the total external debt of India as on December 31, 1991 stood at 66.1 millions of US dollars. However, this figure did not include the Rouble-Rupee bilateral credit worth 1.2 billions of US dollars, short-term credit worth 2.2 billions of US dollars and NRI Rupee credit worth 0.4 billions of US dollars. If these three items were included, the total outstanding external debt worked out to 69.9 billions of US dollars. These estimates differed marginally with those of the IMF and World Bank estimates. While discussing the conceptual issues, the author had analysed the factors causing differences in the estimates on total debt by various sources.

The author had predicted that the gross debt service liability over the coming few years might vary between 9 and 10 billions of US dollars per annum, excluding the repayment of rouble debt. The repayment liability was expected to increase in future. If the repayment of rouble credit of around 10.3 billions of US dollars was included, the debt service liability might exceed 750 millions of US dollars per year.

The author had suggested the following policy options:

1. The government should not pressurize the State Bank of India and other highly rated companies like ONGC, IPCL, IOC to raise short-term loans from abroad to solve their payments problem.
2. A steady devaluation of the Rupee had occurred over the past decade and had discouraged the flow of foreign funds from foreign institutional investors since they would lose on the reconversion of the foreign exchange brought in by them.

3. The definition adopted by the IMF and the World Bank had classified the borrowings with a maturity period of more than one year as a long-term borrowing. Such a definition does not disclose the serious nature of the contractual obligation of the country and therefore the following definition might help to reveal the correct picture.
   a. Long-term borrowing (more than five years maturity period).
   b. Medium-term borrowings (one to five years maturity period) and
c. Short-term borrowing (up to one-year maturity).

4. The most urgent need was to reduce the high interest rate borrowings and the short-term borrowings.

5. Short-term borrowings had grown at a faster rate and this was not revealed in our debt statistics, since borrowings of up to six months had not been included in the debt statistics reported by the Government of India and the RBI. This gives us an under-estimate of the external debt and to the Indian public; the correct picture should be given.
6. Only increasing export profitability should increase exports. A general import liberalisation policy might not help the export of industrial products.

Malati Anagol\textsuperscript{30} (1992) had analysed the changing profile of India’s external debt during the period 1985-86 to 1990-91. The long-term debt during this period had gone up to 62 billions of US dollars in 1985-86 from 33 billions of US dollars. The short-term commercial borrowings of India was approximately 4.5 billions of US dollars per year during this period. The annual total debt service payments had increased to 5.5 billions of US dollars.

The author had examined the validity of the traditional norms to measure the liquidity requirements. According to the author, the debt service ratio was an inadequate and misleading measure of the movements in cash inflows and outflows. The author had suggested the following new norms recommended by the Apex Bank Study:

1. Flattering of net transfers
2. Excessive short-term debt
3. Deteriorating debt service ratios
   a. Cash flow ratio
   b. Key debt service ratio
   c. Interest payment ratio

In the third section of the article the above liquidity norms were applied for the external debt position of India for the period under study. Using these norms, the author had come to the conclusion that India was facing a serious liquidity problem during this period and had predicted that this liquidity problem may develop into a full-fledged balance of payment crisis when international interest rates increased and the NRI Deposits of the Latin American countries and some of the East Asian Countries declined. In the fourth section of the article, India was placed in a better position compared to those of other countries. In the last section, the author had suggested a few policy prescriptions for India. The author had suggested that the government should have a foreign exchange budget with details on sizes and the timings of all cash inflows and outflows. The government should monitor the cash flows at the macro level to lessen any abrupt departure from the budgetary amounts. Secondly, India should opt for low interest international credit. Commercial borrowings should be allowed to use foreign funds only for the financing of import payments. The author had also made several suggestions about the NRI-Deposits, direct foreign investments, net inflows of foreign exchange, export performance, reduction of oil import bill and an overall reduction of external debt in the long run.
G.C. Da Costa (1991)\textsuperscript{31} had traced the origin and the magnitude of the external indebtedness of a group of 17 highly indebted developing countries, and examined the economic effects associated with it. The study had also examined the policy measures, which had been implemented to alleviate the incidence of the indebtedness and the economic consequences and in particular, the effects of public debt on growth.

The author had assessed the indebtedness in terms of the principles of adjustment and equity. In the concluding part, it had been pointed out that, the experience of the highly indebted countries had suggested some lessons and this would be of some benefit to countries like India, which have been rapidly enlarging their external commitments.

2.1.4 Review of Literature related to Internal Debt

Charan Singh (1999)\textsuperscript{32} had investigated the relationship between the domestic debt and economic growth. The study examined the Ricardian equivalence hypothesis through the Co-integration test and the Granger causality test for India, over the period of 1959-1995.


The author had made his analysis in seven sections. The first section discussed about the theoretical issues of domestic debt and its relationship with economic growth.

The second section consists of a brief review of empirical literature. In the third section, the author used the trends and econometric tests for domestic debt in his analyses. In the next section, explains the database and the methodological issues concerned with the empirical estimation and also discussed the empirical results in the last two sections.

The author had collected the data from the national accounts statistics of the Government of India. The author had concluded that, the rise in the domestic debt had not necessarily been due to the utilization of the debt for investment purposes only, but also to meet the rising current Government expenditure and the Granger casualty test had supported the hypothesis of Ricardian equivalence in India.

Gulathi (1993)³³ had examined the growing burden of the internal public debt of the Central Government of India. For this study, he had chosen the period of ten years from 1980-81 and 1990-91, and had collected the necessary data from the Economic Surveys. In his analyses, gross interest obligations with respect to the center’s internal debt had become rather high during the decade of 1980-81 to

1990-91. The author pointed out that a mix of inadequate recovery ratio and insufficient revenue mobilization efforts had resulted in the large borrowings. For this Gulathi had advised the policy makers not to stop or reduce the amount of public borrowing, but to reallocate the Government Expenditure in an effective manner that contributed to the growth of the national income.

Gopalakrishnan (1991)\textsuperscript{34} had examined empirically the effects of the domestic government debt on private consumption and savings in the Indian economy during the period from 1951-52 to 1986-87. The required data were collected from various issues of the RBI Reports on Currency and Finance and the Budget Documents of the Central and that of the State Governments. The study had attempted to highlight the effects of government debt on private consumption - savings decision by testing the coefficient equivalence of debt and the tax variable as a private consumption function. The study based on the consumption function estimates had shown that domestic debt in the country except for its provident fund component, had mobilized very little real resources by affecting current private consumption and savings. The study had shown that the inference of the domestic government debt as a fiscal policy instrument had not fulfilled the objectives of mobilizing real private savings and reducing inequalities through the curtailment of private real consumption.

Thimmaiah (1977)\textsuperscript{35} had studied the growth trends and the distribution of the union loans to the states. He had analyzed the economic and financial burden of the repayment and the servicing of the union loans during the period 1951-52 to 1973-74. The study had critically analyzed the recommendations of various Finance Commissions with regard to the problems of Union loans to the States.

The study had made the following observations relating to the Tamil Nadu State. The total debt had phenomenally increased from Rs.1053 lakhs in 1951-52 to Rs.8077 lakhs in 1973-74. During this period the compound growth rate of the gross loan was 10.5 per cent. The average percentage of the gross loans to the total debt of the state was 66 per cent during the first plan and it was 64 per cent during the fourth plan.

The percentage of total loans used for developmental purpose was 92.75 per cent in 1973-74 and it was 0.94 per cent for non-development purposes. The per capita total outstanding loan in Tamil Nadu in 1973-74 was 9.32 per cent of the total revenues. The percentage of interest charges to total revenue was found to be 4.38 in 1960-61 and it was 4.66 per cent in 1973-74. The percentage of repayment to the total debt in 1951-52 was 11 per cent and in 1973-74 it was 61 per cent. The percentage of interest on Union loans to state income was 0.36 in 1960-61 and it was 0.65 per cent in 1972-73.

SECTION - B
METHODOLOGY

Any serious and scientific study requires a “methodology, a well knit way to systematically, solve the research problem” which would be foot forth the authenticity of the work.

2.2.1 COLLECTION OF DATA

This study had been carried out with the help of the secondary data only. The required data for the analysis were collected from the various published sources. The main sources were collected from various issues of the Reserve Bank of India Bulletin, Report on Currency and finance, Economic Survey, Annual Report, Hand Book of Statistics on Indian Economy and the like. The study had also made use of the data published from the Centre for Monitoring Indian Economy and other national and international sources. There were variations in the data provided by the many agencies both at the national and at the international levels. Since the RBI was the authority in providing data related to external sector variables, the study relied heavily on RBI data sources.
2.2.2 CHOICE OF THE STUDY PERIOD

The study period constitutes an important aspect in respect of the fiscal operations and the fiscal management. In the evolutionary process of fiscal reform in India several discretionary measures have been resorted to during the period of reforms by the central administration in respect of structural changes in fiscal reforms. Complete and comprehensive data was also available for this period to make the study a scientific and fruitful one. Hence the researcher preferred to choose twenty-six years for his study.

A period of twenty-six years from 1981-82 to 2006-07 had been selected for the study. This period had been specifically chosen only after ascertaining about the availability of data. For the purpose of analysis, this period had been divided into two sub periods. The first period covers a period of ten years from 1981-82 to 1990-91 and the second sub period covers a period of 16 years from 1991-92 to 2006-07. In the present study, therefore, much emphasis had been paid to the period 1991-92 to 2006-07, that is the period, which was subsequent to the introduction of New Economic policy.
To analyse India’s Public debt, the following tools had been used.

2.2.3 TOOLS OF ANALYSIS

The following statistical tools had been used to analyze the collected data to enable a meaningful interpretation of the results obtained.

The researcher had analyzed the collected data with the basic objectives of the study in mind. Some of the tools involved in the study include

1. Index Numbers
2. The Time Series Analysis
3. The Semi – log Model
4. ‘t’ test
5. The Ratio analysis and
6. The Multiple Regression Model

INDEX NUMBERS

The index number is a statistical measure designed to exhibit the changes in a variable or the changes in a group of related variables, spread over a period of time, or with respect to the various geographical locations, or with such other types of characteristics.
Index number for current year = \[ \frac{\sum P_1}{\sum P_0} \times 100 \]

where,

\( P_1 = \) Current year

\( P_0 = \) Base year

**TREND ANALYSIS**

One of the objectives of the present study was to analyse the growth and the pattern of Public debt India. For this purpose, two popular forms of trend analysis, namely, the linear trend model and the semi-log trend model have been used.

The following type of a linear trend model had been used to analyse the trend of the Internal, the External and that of the Total Public debt.

\[ Y = a + bt + u_t \]

where,

\( Y = \) represents the dependent variable,

\( t = \) represents the time variable,

\( u_t = \) represents the stochastic disturbance term.

‘a’ is the intercept, and ‘b’ represents the slope,
The above trend model would give only the linear annual growth of the total public debt. To get the constant annual compound growth rate, yet another model of the following type had been used in this study.\(^{36}\)

**THE SEMI–LOG MODEL: LOG LINEAR MODEL**

\[
\text{Log } Y = a + bt
\]

The Compound growth rate was calculated by \(\text{CAGR} = [(\text{Anti log } b -1) \times 100]\).

The above regression models had been estimated by using the principle of the least squares. The same procedure had been applied for the Internal, the External and for the total public debt.

The compound growth rates of the internal, the external and that of the total public debt were estimated for the two-sub periods 1981-82 to 1990-1991 and 1991-92 to 2006-07 separately and also for the entire period of 1981-82 to 2006-07. Since New Economic Reforms were introduced in the year 1991, the cut-off year considered for the analysis was 1991. This had helped to form a comparative picture of the public debt during the pre-reform and the post-reform period.

---

‘t’ Test

\[
\frac{b_1 - b_2}{\sqrt{(S.E. b_1)^2 + (S.E. b_2)^2}}
\]

Here \(b_1\) represented the slope coefficient obtained in the regression model, which was estimated for the pre-reform period and \(b_2\) was the slope coefficient obtained in the regression model estimated for the post-reform period. S.E. is the standard error.

**Decision Rule**

If the calculated ‘t’ value was greater than the table value, ‘t’ value for \((n_1 + n_2 + 2)\) d.f., it had indicated that the change in the growth rate of the public debt was statistically significant; otherwise the change in the growth rate of the public debt was to be considered as statistically insignificant.

**Diagrams**

Statistical diagrams such as bar diagrams, pie-diagrams and time-series graphs had also been used wherever they were considered as necessary.
Ratio Analysis

In order to have a clear understanding about the importance of the public debt in its relationship with that of the GDP, population, exports, expenditure, fiscal deficits and imports the ratio analysis had been used.

Determinants of Public Debt

To assess the influence of the GDP, the fiscal deficit, population, expenditure, imports and exports on public debt, the following type of the multiple regression model had been used:

\[ Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + \beta_5 X_{5t} + \beta_6 X_{6t} + U_t \]

where,

\[
\begin{align*}
Y & = \text{Public debt}, \\
X_1 & = \text{Population}, \\
X_2 & = \text{Fiscal deficit}, \\
X_3 & = \text{Expenditure}, \\
X_4 & = \text{GDP}, \\
X_5 & = \text{Exports}, \\
X_6 & = \text{Imports}, \\
\beta_0, \beta_1, \ldots, \beta_6 & = \text{Regression coefficients} \\
U_t & = \text{Stochastic disturbance term.}
\end{align*}
\]