CHAPTER III

ANALYTICAL FRAMEWORK

The massive growth in external debt and the debt being faced by developing countries like Mexico, Argentina, Brazil, Sub-saharan African countries has raised questions about the debt servicing capacity of debtor countries.\(^1\) India has also used foreign loans and grants to accelerate the growth process in the economy. This has led to accumulation of external debt. A debtor country cannot default on its external obligations because of the implications for the credit worthiness of the country in question. It is in this context the debt servicing capacity of India has to be examined.

The relationship between external debt and economic growth is not simple.\(^2\) Logically speaking, no country can face a debt crisis if its debt servicing capacity rises pari passu with the increase in its debt service obligations. Since the debt servicing capacity is influenced by its economic growth, the external borrowing should be utilized to accelerate the growth process. Therefore, external borrowing must speed up the economic growth or else relative on external borrowing can cause problems related to the repayment of external debt and macroeconomic instability.

A developing country would generally rely on external borrowing for the following reasons:

i. Financing of investments into fixed capital to increase production capacities leading to the economic growth of the country.

ii. Foreign funds are needed not only to meet domestic investment requirements but also to meet essential imports. External borrowing in this context is required to fill saving investment (SI) gap of the borrowing country.
iii. Stabilization of balance of payments (BOP) and exchange rate as BOP held also contributes to rising external debt.

The debt servicing capacity and development of a low income country are inseparable. In actual practice the debt crisis take the form of liquidity crisis in BOP. Since the development is long term process a study attempting to examine the debt servicing capacity should focused on the factors effecting the long term debt servicing capacity.

I

**Long Term Debt Servicing Capacity**

In the long-run, the mechanism of external debt accumulation and its impact on the macroeconomic situation should be addressed in the context of national accounts theory. Thus, the long term debt servicing capacity can be examined in terms of benefits of foreign capital accrued to the recipient country and the costs of foreign capital. Foreign capital allows a country to invest and consume beyond the limits of current domestic production. Foreign capital helps a country to overcome constraints to growth, namely, savings constraint and foreign exchange constraint. The availability of foreign capital by relieving these constraints should enable a country to grow at a faster rate than it is feasible for a developing country who depends on its own savings.

(A) **Savings Constraint to Growth**

Economic growth in a developing economy is considered to be a function of investment. The foreign capital by supplementing the domestic savings can enable a country to raise its level of investment and therefore achieve higher growth rate. At the same time balance to growth becomes feasible due to availability of foreign capital. the investment requirements are high at early stages of developments because of
indivisibility of social overhead capital. An irreducible minimum social overhead capital industry mix is a condition for getting out of the dead end. Given the low level of savings higher the inflow of foreign capital, higher will be growth in income. The foreign capital when helps to increase GDP, the per capita income level increases, which helps in meeting debt service out of country’s GDP.

The acceleration in income not only depends on level of investment and savings but it also depends on productivity of capital which is indicated by a numerical relationship between investment and output generated. The productivity of capital is influenced by a number of factors like the pattern of investment, availability of skilled workers, managers, technical personnel, infrastructure facilities, etc. These factors are also considered to set a limit on the ability to invest productively. This is also termed as absorptive capacity of an economy. The inflow of foreign capital can be used to augment the productivity of capital in a developing economy. It has been argued that the ability to carry out investment programme effectively is a matter of learning by doing. In this sense, absorptive capacity becomes a function of development and a matter of time. It also means the Incremental Capital Output Ratio (ICOR) would improve with the passage of time. The magnitude of savings constraint is dependent on ICOR given the savings rate, the targeted growth rate.

In the long-run, the rate of domestic savings constrains a country’s rate of investment, and therefore, economic growth. Thus, in a situation with outstanding external debt, low level of savings, ultimately imply low levels of domestic investment. To the extent of that, one views net additions of capital as essential for a country’s future growth, prospects, low savings may signify a reduction in future standards of living. Thus, if GDP is growing then savings out of incremental GDP i.e.
marginal rate of savings (MRS) should grow. Marginal rate of savings is a key variable in determining the rate of economic growth in a low income country. The higher the marginal rate of savings greater the flow of resources into capital formation. The gap between savings and investment requirements would disappear as marginal rate of savings grows.\textsuperscript{16} Thus, the need for borrowing abroad for economic development should gradually reduce.

The developing country however, may find it difficult to raise MRS because the burden of initiating investment activity on large scale and provision of social services rests to a considerable extent on the government in these countries. This can be exemplified with Indian case. The government expenditure in developing countries may result into growing fiscal deficit. For the government in developing countries would not like to follow unpopular policies of raising public revenue through taxation resulting into increase in deficit in budget.\textsuperscript{17} in a developing country the basic reason for rising trade deficit is the escalating central government fiscal deficit then the current account imbalance cannot be corrected unless policies that address government deficits are put in place. When this happens, a fiscal deficit is likely to be associated with increase in current account deficit.\textsuperscript{18} this engenders the need for foreign savings to finance development plans. Thus, the debt-growth nexus in the developing countries can be said to be working through fiscal account. When the debt servicing burden becomes unacceptably high, an effort can be made by the government to reduce fiscal deficit.\textsuperscript{19} The government should make an effort to introduce necessary policy reforms or else it may prove to be counter productive.

A reduction in government's expenditure can lead to a reduction in private investment also. For private investment in certain lines of production takes place because of public investment. The productivity of
investment may deteriorate as public investment is reduced. This means a reduction in infrastructural facilities which will adversely affect the productivity of capital. The reduction in the productivity of capital retards growth rates given the level of investment; a fall in the growth rate may result in a reduction in domestic savings. Thus, the need for new borrowings will grow up given the target growth rate. The borrowings will be required for financing new investment and also to service the debt obligations.

(B) Foreign Exchange Constraint to Growth

The foreign exchange gap (trade gap) emerges when the rate of exports is insufficient to keep pace with the growing demand for imports. The foreign exchange constraint would arise because of inelastic foreign demand curves for the country’s exports. This means that a country can still save more but cannot be converted into foreign exchange as there is no foreign demand for the domestic output. The proponents of foreign exchange constraint emphasized that certain goods required for capital formation cannot be produced domestically are imported. The imported goods (capital goods) play a strategic role in the economic development. By breaking a production bottleneck and allowing the utilisation of previously underutilised capacity. The importation of such goods needed for capital formation provided by external assistance can permit a sizeable expansion of output from complementary domestic resources that would otherwise remain unused. Thus, the foreign capital will relieve the import constraint on growth.

The foreign exchange gap is by definition equal to saving investment gap in an ex post sense. The equality of the two gaps in ex post sense is brought about by deterioration in terms of trade, which brings down the international value of domestic savings. The ex post equality of
saving -investment gap is explained with the help of well known income identity. Supply of goods in an economy comprises goods and services produced in an economy (Y) and imports of goods and services (M). Total supply of these goods may be used for domestic consumption (C), investment (I) and for the purpose of exports (X). Thus,
\[ Y + M = C + I + X, \]
\[ Y = C + I + (X-M) \]
By rearranging the income identity one gets
\[ S - I = X - M \]
The identity makes it clear that in an accounting sense the two gaps are equal though foreign capital plays a dual role.\(^{23}\)

The foreign exchange gap approach recognises the difficulties of developing countries in transforming domestically saved resources into foreign exchange. This appears to be basis of two-gap approach.\(^{24}\)

The foreign exchange constraint at any point of time can said to be a result of unsuitable policies followed in the past. These policies in turn result into rigidities in production structure making it unresponsive to changes in world demand conditions and fail to produce appropriate import substitutes needed in the production. Therefore, the exante divergence between saving-investment gap and foreign exchange gap would emerge due to faulty policies followed in the past.\(^{25}\) Hence, the foreign exchange constraint could not be a very convincing argument for seeking foreign capital for economic development.\(^{26}\) The use of foreign savings in the process of economic development should be accompanied by reforms in fiscal monetary and trade policies which are so critical for the desired impact of foreign savings in the acceleration of incomes.\(^{27}\)
One may, however, argue that the very fact that reallocation of resources is needed to break the structural rigidities at any point means that there exists a foreign exchange constraint.\(^{28}\)
It may be inferred from these seemingly same but conflicting views on foreign exchange gap that a debtor country must use foreign capital to change its production structure in such a way that domestic savings are easily converted into foreign exchange in order to meet external debt service obligations. Alternatively, the use of foreign funds should be accompanied by prudent policy reforms.

The foreign capital should be used in such a way that pattern of production becomes responsive to world demand, and substitutes for imports of capital goods and other essential imports necessary for growth should increase. From the long-run point of view, an examination of growth in savings and investment is not enough. Simultaneously with the growth in savings and income, the pattern of trade and changing balance of payments situation of a country needs to be analyzed.

It is often ascertained that the debt crisis takes the form of liquidity crisis in balance of payments. The changes in balance of payments position over time is useful in examining the possibility of occurrence of liquidity crisis. The liquidity in balance of payments can be analyzed in terms of short-term debt servicing capacity.

The benefits of foreign capital are to be related to the costs of using foreign funds. The pace at which benefits are accruing to the economy, the pace at which costs of using foreign funds is growing i.e. the relative growth of benefits and costs will determine the burden of using external funds on the borrowing country. Therefore, the constituents of the costs of foreign capital need to be identified.

(C) The Cost Of External Borrowings

The costs of foreign capital is affected by the terms on which foreign capital is borrowed. Two main components of the costs are average rate of interest on borrowings and the maturity period for
The grace period for loans if any also influences the costs. Another element in the terms of loans is external assistance / loans tied to source or project or both. Tied aid is generally costly and thus the real worth of aid in fact is low. This is especially when rise in general prices in the donor countries erodes the real value of aid. In addition the average maturity period of external obligations also forms part of the costs. From the development point of view a longer maturity of external liabilities would reduce the annual out flow and therefore, reduce the burden of debt. However, large debt service liabilities would not necessarily put an unbearable burden on the debtor’s country economy. The debt servicing liabilities have to be considered in relation to growth in domestic savings, GDP and a country’s capacity to translate domestic savings into foreign exchange. Therefore, debt servicing liabilities on account of terms of borrowings can be considered as a race between the growth of debt servicing liabilities and the strengthening of the economy. On the basis of stylised assumption an IBRD study distinguished three stages in growth cum debt process, the complete retirement of debt takes 25 years whereas domestic savings would become equal to investment requirement in 16 years.

So long as gross domestic savings fail to meet the investment requirements external debt would grow at a faster rate than average rate of interest on existing debt. The moment savings and investment becomes equal growth rate of debt would be equal to the rate of interest on existing debt. The growth in debt will equal growth in output when the amount of savings is sufficient to meet interest payments. Thus, growth in domestic savings is considered as minimum condition of freedom from the problem of unmanageable debt burden. Though the conditions for the successful management of the debt can be described in different forms yet two conditions appear to have been used even in the Indian context. As conditions for successful management of external debt. For e.g., critical interest rate and marginal rate of savings (MRS).
(D) Conditions for Successful Management of Debt in Long Run

The prediction of debt servicing problems is very difficult task because of the accumulations regarding the values of key variables like MRS, ICOR, etc. The debt servicing problems in future would also depend on terms of new borrowings. The terms of loans over a period of time can change from soft to hard loans in the form of commercial and short term loans carrying higher interest rates and low maturity period. Moreover, the debt service ration cannot be used for predicting debt servicing problems in future.38

It can be argued that instead of projecting the possible debt servicing difficulties at a future date a debtor country can try to avoid the existence of certain conditions so that the situation of unmanageable debt servicing problems would not arise in the future.39 It seems more practicable to avoid the persistence of certain conditions leading to debt servicing difficulties in the future.

Most often used condition for avoiding debt servicing problem is the critical rate of interest.40 The calculation of critical interest rate is based on a growth cum debt model described in Avaramovic’s work. Critical rate of interest is the average rate of interest on borrowing which equates the growth rate of debt with the growth rate of domestic product. If any country is paying a rate of interest greater than the critical interest rate, the growth in debt would be faster than the growth in output. The country concerned can certainly expect to face debt servicing difficulties in future if this condition persists.41 In the long-run if marginal rate of savings is more than required investment requirements, the surplus savings are available to meet debt service obligations and the growth in debt would be at a slower rate than growth in GDP. If the marginal rate of savings (MRS) is less than the required investment rate then in the long-run debt would continue to increase at a rate at least equal to the rate of
interest. If the rate of interest is higher than the growth rate in GDP, then debt would grow at a faster pace than the growth in GDP.

Similarly, critical marginal savings rate can also be calculated. According to this, the actual marginal rate of savings should be at least equal to the critical marginal rate of savings. It is always better from the debt servicing point of view that marginal rate of savings is greater than the critical MRS. An excess of marginal rate of savings over the critical marginal rate of savings in the long-run suggests that excess of savings over investment requirements would be increasingly used to meet interest payments and amortization of debt. In this sense, marginal rate of savings becomes an index of country’s willingness and capacity to repay its external debt.

The formula for critical rate of interest suggests that lower the marginal rate of savings, higher the ICOR and target growth rate as well as average interest rates lower would be capacity to repay.

A developing country borrowing on long term basis may find that at some point of time, the debt service obligations assume a large size. If the same country also starts borrowing on commercial terms as well as on short-term basis then the total debt servicing obligations in relation to export earnings would start mounting up and potential creditors may stop further lending. The country concerned will face a crisis as it cannot pay for necessary imports and meet the debt servicing charges. This is liquidity crisis. In real life liquidity crisis takes the form of crisis in balance of payments. The balance of payments problem is derived basically from the structural weaknesses of the debtor country. The short term liquidity problem may undermine the long term debt servicing capacity if it results in pressure on the country’s foreign exchange position.
SHORT TERM DEBT SERVICING CAPACITY

The short-term debt servicing capacity of a country can be discussed with respect to debt servicing problems of borrowing countries. In real life, a debt crisis in short period takes the form of liquidity crisis in balance of payments. The initiating factor in the occurrence of liquidity crisis is disequilibrium in balance of payments. The first sign of difficulties might be traced to some exogenous shock such as change in the price of a vital import item or in the market for a particular export or exchange rate fluctuations. A developing country in order to meet its debt service obligations and import payments starts borrowing on commercial terms as well as on short-term basis. The total debt servicing obligations as proportion of export earnings rise so high that potential creditors become skeptical about country’s capacity to repay. Therefore, the country concerned faces a liquidity crisis. The success of a debtor country to withstand this crisis depends on the relative strengths of elements of balance of payments rigidity (i.e. the contractually fixed external debt obligations, minimum tolerable level of imports) and elements of adjustment (adequacy of the supply of foreign exchange reserves, availability of compensatory finance, proportion of inessential items in respect of total imports. However, a developing country can adopt policy measures to minimize fluctuations in export earnings and to minimize import payments. Similarly, a favorable debt structure from the standpoint of rigidities in the BOP could be of considerable help to a developing country in tiding over a liquidity crisis. These are important aspects of short term debt servicing capacity which are discussed as under.
(A) Fluctuations in Export Earnings

A debtor country’s ability to export is the main determinant of its capacity to successfully service debt and also import the capital goods needed to support domestic growth and development.\textsuperscript{48} Sharp drops in export earnings and resulting balance of payments deficits frequently lead to difficulties in financing import requirements and repaying accumulated debt. The fall in export earnings could arise from either decline in volume of exports or drop in export price level. A developing country generally exporting primary goods is affected by price fluctuations. Secular declines in the ratio of export prices to import prices are quite clearly intolerable if sufficient foreign exchange reserves are to be maintained for the successful debt servicing of external debt. Since export earnings must provide for the external debt servicing as well as for import requirement the inability or the unwillingness to reduce imports during periods of foreign exchange shortage may readily lead to default.

A developing country’s success in attaining an adequate flow of export earnings depends to a great extent on the structure for exports. The structure should be flexible with minimum degree of export diversification and a minimum degree of commodity concentration.\textsuperscript{49}

The developing countries with least diversified export structure are hit hardest when some exogenous shock lead to disequilibrium in balance of payments.

A debtor country’s diversification in its export structure should show a rise in the proportion of manufactured goods to total exports. International demand for many primary products increases at a slower rate than imports of materials and equipments. Equipments are required to sustain a satisfactory growth in exports.\textsuperscript{50} Consequently, a developing country has to develop exports of manufactured products and of services activities for which international demand rises relatively rapidly.\textsuperscript{51}
At times, the economic policies followed by the debtor country may adversely affect the incentive to produce or export or sell in the international market. Pursuance of prudent policies would make foreign trade sector predominant for growth. The volume of growth is by no means under the exclusive control of government policy. It depends to a great extent on the world market conditions on which an individual country has little influence. Increasing the total value of exports is virtually impossible in a period when the world market prices of major exports are falling.\textsuperscript{52}

A developing country running high current account deficit, which is financed by volatile flows like portfolio investment and short-term borrowings becomes vulnerable to external shocks when there is a sudden fall in the export earnings. The debt service ratio (debt service payments as proportion of export earnings) is also affected. A high debt service ratio reflects the import compression effect. The growth of export earnings is essential to provide foreign exchange both for service payments and for import needs, efforts should be made to minimize fluctuations in export earnings. In the face of export stagnation, import requirements if satisfied at the expense of debt service obligations might result into loss of credit worthiness If, on the other hand, external debt service obligations are met as a result, insufficient resources would be available to satisfy the growing import requirements. A developing country where imports are related to growth in output, it will be difficult to take strenuous measures to curb imports or else it may cause unemployment and affect the momentum of growth. Thus, the export earnings must rise as it is necessary for a successful debt servicing program.
(B) Rigidity In Import Structure

Irregular increases of imports may destabilize the balance of payments if enough foreign exchange reserves are not available to meet the increase in imports. An exogenous shock such as change in the price of a vital import item, may raise the import bill of debtor country. In a developing country where the ratio of exports to total income is very high, import levels may adjust automatically to a periodic liquidity crisis through internal income and price effects. This, of course, assumes that counter-cyclical public policy is not applied.53 Sharp increases in imports may be emergency induced. Crop failures and bad harvest may lead to significant increases in the import of food and other agricultural commodities.

The ability to compress imports at the time of crisis cannot be over-emphasized a developing country attempting to sustain a rate of growth beyond. its domestic resource capabilities will introduce rigidity in the import structure.54 When a BOP crisis occurs the imports of capital goods and the consumer goods are the most likely categories of import curtailment.55 which is likely to hamper long run developmental aspirations, in the absence of availability of compensatory financing facility the debtor country suffering from rigidities in its import structure might attempt to channel scare foreign exchange reserves from the payment of required imports.

The inability of a debtor country to compress its imports during periods of BOP crisis may readily lead to default. Since a default raises questions about the creditworthiness of a debtor country it would be advisable to introduce appropriate policy measures which will reduce inflexibility in the import structure.
(C) Rigidity In Structure of External Debt

In a debtor country where debt service charges increases at a faster rate than export earnings, swings in capital inflows may leave the country vulnerable to external shock. A country borrowing on short term may face difficulties with swings in capital inflows.\textsuperscript{56} Expanding developmental needs require an increasingly heavy inflows of long term capital as they are not sensitive to short-run functions in the balance of payments.

The concentration of maturities in relatively short period of time can become a source of acute liquidity crisis in a debtor country. This mainly refers to commercial borrowings. A near sighted policy to borrow on short term basis in order to meet debt service charges would increase the rigidity in the medium term. If this borrowings increase rapidly and concentration of maturity coincides with the fall in exports or exports stagnation, unfavorable shift in term of trade, speculative outflow of short term capital the debtor country cannot escape the pressures of liquidity crisis and that of debt default.\textsuperscript{57}

Interest payments on external loans are recurring charges on the debtor country’s and cause rigidity in balance of payments. These obligations must be met, regardless of the productivity of the capital in the debtor country.

The amortization payments also become elements of rigidity in the balance of payments position of a debtor country if they cannot be regularly turned over or refunded.

It is quite obvious therefore, the variables causing the balance of payments crisis in a debtor country are numerous and variation in a single variable by itself need not cause liquidity crisis the balance of payments.
(D) External Debt Management In Short Run

A borrowing country can avoid liquidity crisis by introducing debt management in the short run as a major policy concern. The debt crisis some of the developing countries in the recent past has forced them to think in terms of management of external debt with a view to avoid liquidity crisis. Inappropriate and excessive borrowings generate debt service obligations which constrain future policy and hence growth. A debtor country cannot expect a continuous inflow of capital. Thus, a debtor country unable to borrow in international capital market generally face a liquidity constraint in terms of meeting short falls in domestic budgetary financing and foreign exchange earnings. Though financing may be available from bilateral and multilateral sources, such credit is generally not quick disbursing and usually comes at substantial cost in terms of policy conditionality. Therefore, the objectives of debt management policy are to achieve the benefits of external finance without creating difficult problems of macroeconomic and balance of payments stability. In debt management, the policy makers are guided by the level of contractual debt, its maturity structure, debt service pattern, growth performance, growth of imports and exports, country’s ability to generate domestic savings level of reserves etc. A proper utilization of certain indicators that are used as standard measures to warn off the potentially building up of crisis may help a debtor country to adjust its balance of payments.

They are as follows:

1. **Debt service ratio**: The debt service ratio signifies the proportion of foreign exchange earnings absorbed by debt service (interest payments + amortisation payments). The higher the debt service ratio greater will be the pressure of debt service on a debtor
country. It also means the capacity to import goods and services is reduced as higher proportion of foreign exchange earnings is utilised for meeting debt service obligations. However, debt service ratio is a incomplete measure of the liquidity problem. The basic inadequacy of the ratio involves the difficulty in pinpointing that critical level beyond which a debtor country will find the debt burden unmanageable.60

2. **Short-term Debt**: As the proportion of short term debt in total debt outstanding increases, the maturity period is shortened. Thus, a debtor country having higher component of short term and of commercial borrowings as proportion to external debt obligations are necessarily vulnerable to liquidity squeeze. The liquidity crisis is likely to become acute if a debtor country has to pay a large proportion of its debt within few years and no foreign exchange reserves cushion is available and at the same time potential creditors are unwilling to undertake roll over. Therefore, a lower ratio of reserves to short term debt as well as high short term debt to total external debt are associated with greater incidence of debt crisis on a borrowing country. The ratio of reserves to short term debt also helps to gauge risks associated with adverse developments in international capital market. This is particularly so because developing countries have uncertain access to capital markets.

3. **Reserves to Import**: The ratio of reserves to imports as a current account based measure is useful for a debtor country with no or limited access to capital market. The reserves / import ratio for specific number of months can be interpreted as the number of months a country can continue to support its current level of imports assuming all other inflows and outflows cease.
4. **Accrued Interest Payments as Proportion of Exports of Goods and Services Ratio**: The ratio signifies the sufficiency of export earnings to meet interest payments assuming that a debtor country is able to roll over the commitments.

5. **Total External Debt Stock to export of goods & Services (EDT / XGS)**: Certain indicators have become standard measures of sustainability of debt in a debtor country. The ratio of EDT/XGS and external debt stock to GDP are amongst them. The EDT/XGS ratio measures the size of total external debt in relation to export earnings of a debtor country. A high indicates a greater burden of servicing the debt. An ever growing share of external debt in exports of goods and services especially in a case where the level of debt is high may suggest that the debtor country is on an unsustainable path. It may be useful to analyse the average interest rate on debt alongside the debt to exports ratio as it would indicate concessional element of debt and also help to analyze the impact of changing interest rates on the real burden.

6. **External Debt to GDP Ratio (TED / GDP)**: This ratio measures the total debt in terms of economic size of the country and hence its debt sustainability. A high external debt to GDP ratio implies that large amount of resources will not be available for financing development. In a situation where a debtor country finds that the debt has become so large relative to export earnings and economic size that it would imply the repayment will be impossible without imposing an unbearable burden on the economy.

All the indicators considered together help a debtor country to effectively manage debt.
Conclusion

An underdeveloped country borrows abroad to facilitate the growth process in the economy. Any borrowing on conventional terms result in return flow of interest and amortization payment in future. As far as borrowing country is concerned, the successful external debt service requires productive utilisation of borrowed capital. From the long-run point of view, the borrowed capital must be able to induce growth in national income and domestic savings. This is consistent with both the achievement of developmental goals and the successful servicing of external debt. At some point of time, aggregate domestic savings must exceed aggregate domestic investment by a margin that is sufficient to meet at least interest charges on previously incurred debt. If this point is never reached, funds would have to be continuously borrowed and indebtedness would increase continuously. Though the borrowed capital may be ultimately productive in the long-run, the short-run point of view, there may be serious drain on the country’s foreign exchange resources requiring the imposition of stringent adjustment measures. If exports are high, growth will not lead to balance of payment pressures and may actually be accompanied by export surplus. If, on the other hand, the possibility of rapid growth is confined to those activities whose output is characterized by low exportability then the development process may be hampered by recurrent tendencies towards an imports surplus and repayment difficulties. In essence, the problem of servicing external debt is two fold (i) in the long run the benefits of external borrowing in the terms of increased output exceed the cost of borrowing. (ii) in the short run the foreign exchange resources at the disposal of the debtor country should be enough to enhance the country’s capacity to withstand liquidity crisis. If the country is unsuccessful in withstanding periodic liquidity pressures the long run debt servicing capacity would be undermined.
Hence, a developing country who has been borrowing to finance the development programs should attempt to resolve both simultaneously by pursuing appropriate policy measures.
Notes and References

1. For a brief review on International Debt Crisis, See


3. Ibid. pp. 11


8. a) Ibid Nurkse, Ragnar., pp. 2


10. Rosenstein, Rodan., Ibid pp. 61


13. a) OECD Quantitative Models As An Aid to Development Assistance Policy, p.21.


15. a) Professor Rosenstein-Rodan., posited a rate at which a country was inherently capable of growing. This was a reflection of his judgment of its absorptive capacity. Based on the absorptive capacity one assumes ICOR. These together determine a required ratio of net investment to national income. An initial domestic savings are estimated and a desirable or reasonable MRS posited. These together with an estimate of the initial national income yields estimates of needed investment and domestic savings over period of years. Foreign capital required is the difference.

   b) Also, see Little IMD and J.M. Clifford.


24. a) Avramovic D. pp. 52-53. b) Sarkar prabhjit


30. The Developing countries repayment Problems are analysed
In terms of liquidity or debt crisis faced by them.

31. In Developing Countries since a large part of investment tends to be in the spheres where the quantification of benefit is well-nigh impossible like in education, health, administration or say very difficult in road building and agriculture. See Little I.M.D. and J.M. Clifford, p. 132.


33. Little, Ian, scitiovsky and Maurice Opcit pp. 56
34. See
   a) Kidron estimated that India was normally paying from 6% to 15% and sometimes 20% to 30% above the ruling prices for aid support imports. Kidron Micheal, “Foreign Investment in India,” Oxford University Press, 1966.
37. a) Prasad A., external debt
38. Prasad A., ibid pp. 19


b) Avramovic D., opcit pp. 167.


44. Originally, the framework for analyzing the short-term debt servicing capacity for developing countries was prepared by D. Avramovic, et;al. 1964, A Doctoral Dissertation was also successfully attempted on Brazil c.f. by J.M. Casey.