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Analysis of External Debt Servicing Capacity of Nepal

Guru Prasad Neupane*

INTRODUCTION

The growth oriented development approach views development primarily as a matter of economic growth and secondarily, social changes to economic growth. The basic argument of this approach is that, less developed countries (LDCs) are under-developed because they lack capital and technology. Thus LDCs are caught in a vicious circle as capital deficiency leads to low productivity and low real income and thereby causing low saving and investment. In order to attain a higher level of growth, the growth oriented development approach proposes that LDCs can break such bottlenecks by importing foreign capital via foreign assistance, external borrowing, foreign trade and foreign investment (Atthakor, 1982:5). Foreign capital can help to industrialize with foreign technology which may lead to economic growth. Foreign capital if not utilized properly in the productive purposes may put the borrowing country into debt servicing difficulties.

Nepal is one of the least developed country in the world. For a rapid economic growth, increase in the level of investment and technological know how in the country is needed. Domestic saving is the most important source of funds for economic growth but the rate of domestic saving is low in Nepal. The main reasons for slow growth of domestic saving among others is due to low per capita income, poverty, income distribution inequality, inadequate development of financial institutions. Due to low domestic saving , Nepal is heavily dependent on foreign capital for its economic growth.

The dependence of Nepalese economy on foreign capital is increasing over time. During the sixties and seventies Nepal has received foreign grants rather than loans. But during eighties the share of loans has exceeded grants. For instance during the eighth five year plan (1992-1997) 65.5 percent of the total development expenditure is expected to be financed from foreign resources of which 48.6 percent is expected to come in the form of loans and the remaining 16.9 percent in grants. Foreign loans are long-term liabilities for the country which should be repaid back with interest.

Apart from increasing foreign loans the growth performance of various sectors of the Nepalese economy is not satisfactory. Thus, it has been argued by many economists and politicians that Nepal may not be able to service its debt obligations and the country is likely to fall into debt crisis in the near future as experienced by the Latin American countries. Therefore this paper aims to examine the external debt servicing

* *Mr. Neupane is a Research Officer, Nepal Rastra Bank, Research Department, Baluwatar, Kathmandu.*

capacity of Nepal and suggest some policy actions to prevent the country from the possibility of debt servicing difficulties.

The arrangement of this paper is as follows. The external debt situation section presents a brief review of external debt servicing capacity of Nepal. Review of the literature section deals with the literature related to debt and economic growth. This section also deals with the important indicators to explain the debt servicing capacity of borrowing countries. The methodology section explains the methodology adopted in this study and sources of data. Analysis of debt servicing capacity of Nepal is presented in analysis of debt servicing section. Finally conclusion and policy recomendation section summarises the main points including policy implications.

EXTERNAL DEBT SITUATION OF NEPAL

Nepal started obtaining external loan since 1962 and over the period of 28 years (1962-90) the total outstanding Mwbt of Nepal has reached to Rs. 64,754.7 million (MOF, 1991:88). The amount of external debt and the dependence of Nepalese economy on foreign loans is increasing over time. Therefore in this section we review foreign loan accumulation, utilization and debt servicing capacity of Nepal.

Need for External Finance

Nepal started its development after releasing itself from the despotic rules of Rana in 1951. But, before her there were lack of basic economic and social infrastructures necessary for development. Following are the remarks of Dr. Ram Sharan Mahat about the infrastructural set up of the country:

"The infrastructural base was limited to a few short roads in the Kathmandu valley, about 60 miles railway track in the Terai region bordering to India, four megawatts of installed power supply and about 1,400 hectares of irrigated land. Only one or two of the industries established during the second world war has survived. There was virtually no technical manpower. The literacy rate was estimated at two percent." (Mahat, 1983:100).

In such undeveloped situation, economic development task was more difficult and challenging. Therefore Nepal started planned system of economic development effort for the overall development of the country since 1956 and has completed its seventh five year plan in 1990. The main objectives of all the economic development plans are to raise production, employment, and standard of living of the people. In order to achieve these planned objectives, beside other things, there was a need to increase the level of investment for the development of infrastructures (transportation, communication, power, health, education etc..), basic industries and modernization of the agricultural sector. Therefor the planned expenditure increased rapidly over time (see Table 1).

Table 1

Public Sector Expenditure in Various Plans Period In Nepal

(NRs. in million in current market price)

Plan Period	Total Plan Expenditures	Domestic Resources	Foreign Resources	Percentage of Foreign Resources
First Plan (1956-61)	214.4	120.0	94.4	44.03
Second Plan (1962-65)	596.8	120.9	475.9	79.74
Third Plan (1965-70)	1639.2	709.4	929.8	56.73
Fourth Plan (1970-75)	3356.9	1847.9	1509.0	45.00
Fifth Plan (1975-80)	8870.6	4629.7	4240.9	47.63
Sixth Plan (1980-85)	22092.6	11505.5	10587.1	47.92
Seventh Plan (1985-90)	48345.4	19505.9	28839.5	59.65
Eighth Plan (1992-97)	113479.0	39124.0	74355.0	65.50

Sources: Various Plan Document, National Planning Commission, HMG/N.

It is evident from Table 1 that the total plan expenditures have been increasing over time and the contribution of domestic resources to finance the plan expenditure is low comparing to the contribution of foreign resources however, it is also increasing over time. Contribution of domestic resources has reached to Rs. 19,505.9 million in the seventh plan period from Rs. 120 million in the first five year plan. The plan expenditure has increased rapidly in comparison to the growth of domestic resources. This shows that Nepal needs to obtain foreign capital from the very beginning of its planned development. This is mainly due to the growing aspiration of the people for the development and growing contribution of the foreign nations and international organizations.

Nepal, after obtaining the membership of the United Nation in 1955, developed relations with many countries and international organization from which Nepal started obtaining grants and loans. Thus, the share of foreign capital in the total plan expenditure increased rapidly. For instance, the contribution of foreign resources increased from 44.03 percent in the first five year plan to 65.5 percent in the eighth plan period (1992-19997). The growing plan expenditure has created twin deficits (trade deficit and budget deficit) in the economy. These deficits are growing over time (see Table 3 and 4).

Planned expenditures are made through the annual budget of the government. Therefore the need for foreign resources in Nepal can be explained clearly through the government budgetary operation. Like other developing countries, the private investment alone is not enough to generate desired growth rate in the Nepalese economy. Hence, the public sector (government) has to play an important role to develop infrastructures, establish industries and modernize the agricultural sector.

Table 2

Government Budgetary Situation in Nepal

(NRs. in million)

Sources / Year	1975	1980	1985	1990	1991
Total Expenditure	**1513.7**	**3470.7**	**8394.8**	**19669.3**	**23549.8**
Regular	546.5	1162.1	2906.1	6671.8	7570.3
Development	967.2	2308.6	5488.7	12997.5	15979.5
Sources of Income					
Revenue	1291.2	1880.0	3916.6	9287.5	10729.9
Foreign Grants	1008.4	805.6	923.4	1975.4	2164.4
Budget Deficit(-)	**222.5**	**-785.1**	**-3554.8**	**-8406.4**	**-10655.2**
Sources of Finance					
Foreign Loans	104.0	534.9	1754.9	5959.6	6256.7
Domestic Loans	100.0	180.0	1799.9	2150.0	4552.7
Change in Cash Balance	18.5	70.20	-	296.8	-154.2

Sources: Ministry of Finance, *Economic Survey*, 1991/92, Table 8.1, p.56

It can be shown from the table 1 that government expenditure has a growing trend since the beginning of the planned development effort. Total government expenditure has reached to Rs. 23,549.8 million in 1991 from Rs. 1,513.7 million in 1975. The average annual growth rate of government expenditure is found to be 76.6 percent. Of the total expenditure about one third has been of regular expenditure and the remaining two third of development expenditure.

Income from tax and non-tax revenue is the main source of financing the government budget. Revenue collection has reached to Rs. 10,729.9 million in 1991 from Rs. 1291.2 million in 1975. The average annual growth rate of revenue (1975-91) is found to be 38.4 percent. This shows that the growth rate of revenue is slower than the growth rate of government expenditure and the revenue income alone is not adequate to finance the growing government expenditure, resulting increasing government budget deficit over the years.

Nepal, being one of the poorest country of the world, obtains foreign grants regularly. Therefore foreign grants is considered as one of the major source of financing the government budget deficit. The contribution of foreign grants has reached to Rs. 2,164.4 million in 1991 from Rs. 1008.4 million in 1975 (see Table 2). The average annual growth rate of foreign grants (1975-91) has remained at 6.74 percent. Inspite of increasing revenue collection and foreign grants, they are not sufficient to finance the government expenditure and hence, there is budget deficit, Nepal needs to borrow either from domestic or foreign sources to finance the budget deficit. Which has reached to Rs. 10,655.2 million in 1991 from a surplus of Rs. 222.5 million in 1975.

The share of domestic loans has reached to Rs. 4552.7 million in 1991 from Rs. 100 million in 1975. Most of the internal borrowing is made from the banking sector mainly from the Nepal Rastra Bank. Financing government budget from the resources of the commercial banks might create crowding out effect to the private sector and financing the deficit by borrowing from the Nepal Rastra Bank can create inflationary impact in the economy. Thus government cannot rely on the banking sector alone to finance its growing deficit. Financing the budget deficit from the public participation is very low in the country. Therefore the government is heavily relied on foreign loans to finance the budget deficit. The share of foreign loans to total budget deficit is increasing rapidly. for instance, the contribution of foreign loan has reached to Rs. 6256.7 million (58.7 percent of the budget deficit) in 1991 from Rs. 104.0 million in 1975. This shows that Nepal needs foreign loans to finance its growing budget deficit.

Internal Resource Gap

Internal resource gap is defined as the difference between desired level of investment and saving . When the desired level of investment is greater than domestic saving internal resource gap appears in the economy. It can be shown from Table 3 that total investment has remained always greater than gross domestic saving in Nepal. The average annual growth rate of investment (1975-91) is found to be 41.4 percent while the growth rate of saving is only 16.5 percent. This shows that domestic resource alone is not adequate to finance the investment demand in Nepal. Therefore Nepal needs to borrow from abroad to finance the growing investment demand of the country.

Table 3

Internal Resource Gap in Nepal

(NRs. in million)

Year	Gross Domestic Saving	Total Investment	Internal Resource Gap	GDP	Gap as the percentage of GDP
1975	1662	2402	740	16571	4.5
1980	2591	4270	1679	23351	7.2
1985	6239	10184	3945	44417	8.9
1990	5560	16476	10916	90825	12.0
1991	6864	21163	14299	105300	13.6

Source: Ministry of Finance, *Economic Survey*, 1991/92, Table 8.1. p. 56.

External Resource Gap in Nepal

The need for Foreign capital in Nepal can also be explained from the external account. External resource gap is defined as difference between exports and imports of goods and services. when the volume of imports is greater than exports the country will have external resource gap.

It can be shown from Table 4 that there is growing external resource gap in Nepal. External resource gap reached Rs. 13,916.1 million in 1991 from only Rs. 13.22 million in 1975. External resource gap as the percent age of GDP has reached to 13.22 percent in 1991 from only 3.91 percent in 1975. This is due to growing demand for construction materials, industrial materials and consumable items on the one hand

and slow growth of exports on the other. The growing external gap need to be financed from foreign exchange for which Nepal needs more foreign capital.

Table 4

External Resource Gap in Nepal

(NRs. in million)

Year	Exports (XGS)	Imports (MGS)	External Gap	GDP	Gap as the percentage of GDP
1975	1582.9	2230.1	647.2	16571	3.91
1980	2885.3	4415.1	1,529.8	23351	6.55
1985	5464.8	9407.5	3,942.7	44417	8.88
1990	11537.5	22110.5	10,573.0	90825	11.64
1991	15298.5	29214.6	13,916.1	105300	13.22

Source: Ministry of Finance, *Economic Survey*, 1991/92, Table 8.1, p. 56

External Debt Situation of Nepal

Nepal Started borrowing from abroad since 1962 mainly because internal resources were not enough to meet the growing investment demand as desired by various economic development plans in the country. From 1962 to 1966 external borrowing was limited to NIDC (Nepal Industrial Development Corporation) for industrial development. Since 1967 external loan has been used to finance government budget deficit as IDA (International Development Association) started providing loans to Nepal for different development projects in the public sector. (M.O.F., 1990:55 in Nepali).

Table 5

Total Outstanding External Debt of Nepal

(NRs. in million)

Head / year	1975	1980	1985	1990	1991
Direct Loans	294.4	1784.6	9184.9	36726.2	58353.1
Percentage	86.2	98.7	99.8	99.8	99.8
Indirect Loans	51.7	22.7	18.3	74.6	107.8
Total	341.6	1807.3	9203.2	36800.9	58460.9

Sources: Ministry of Finance, *Economic Survey*, 1991/92, HMG, Nepal, Table 8.10, pp. 88-89.

International organizations such as; EEC (European Economic Community), IFAD (International Fund for Agricultural Development), OPEC (Organization of Petroleum Exporting Countries), etc., and USA (United States of America), former USSR (Union of Soviet Socialistic Republic), Japan, France, Kuwait, and other countries as well as Asian Development Bank started to provide loan to His Majesty's government for various development projects since 1970s and 1969 respectively.

Total outstanding external debt of Nepal has reached to Rs. 58,460.9 million in 1991 from Rs. 341.6 in 1975. External debt as percent of GDP has reached to 55.5 percent in 1991 from 2.1 percent in 1975. Of the total outstanding external debt Rs. 58,353.1 million (99.8 percent) has been provided in the form of direct loan and the rest as indirect loan. It can be shown from Table 5 that the amount of external borrowing has increased rapidly during the 1980s.

Table 6

Utilization of External Debt in Nepal

(NRs. in million)

Sector/Year	1975	1980	1985	1990
Agriculture	16.6	55.0	542.3	547.2
Irrigation	22.7	106.8	473.9	414.9
Forest	0.3	10.4	51.4	150.0
Transport	56.5	75.9	116.5	670.3
Electricity	8.5	358.3	703.4	806.9
Communication	3.0	4.0	25.3	54.6
Industry & Commerce	26.1	40.9	232.6	1270.7
Education	-	3.2	74.1	445.4
Health	-	-	4.0	91.4
Drinking Water	5.7	31.4	122.4	121.5
Miscellaneous	6.5	7.5	2.52	167.2
Total	145.9	693.4	2371.1	4360.0

Source: Ministry of Finance, *Economic survey*, 1991/92, HMG, Nepal, Table 8.9, pp. 86-87.

It can be shown from Table 6 that in earlier stage a large percent of the external loan has been spent in developing economic and social infrastructures such as transportation, communication, irrigation, hydro-electricity power, drinking water etc. In 1975 Rs. 56.5 million (38.7 percent), Rs. 22.7 million (15.6 percent), 8.5 million (5.8 percent) was spent for the development of transportation, irrigation and hydro-electricity power development respectively. Similarly, Rs. 16.6 million (11.4 percent) and Rs. 26.1 million was invested for the development of agriculture, industries & trade respectively. Coming to the year 1990 shift of resources is distinct, as in 1990 Rs. 1270.7 million (29.1 percent), and Rs. 547.2 million (12.6 percent) was invested in the industry & commerce and agricultural sectors respectively. This shows the shift of resources from developing infrastructures to productive sectors where government has allocated 41.7 percent of its external loans and in the infrastructure prioritie has been given for the development of hydro-electricity power, transport and irrigation. Besides these sectors, some portion of the borrowed capital has been diverted towards the development of education, drinking water and health which do not provide return in the short-run.

External Debt Servicing Problems of Nepal

By the end of 1991, total outstanding external debt of Nepal has reached to Rs. 58,460.9 million from Rs. 346.1 million in 1975. During the period of 21 years (1975-91), the outstanding external debt increased about 169 fold. Per capita debt burden has reached to Rs. 3,096.45 in 1991 from Rs. 26.95 in 1975. This growing volume of external debt has increased the long-term debt liability of Nepal.

The average annual growth rate of GDP (1975-1991) has remained at 5.5 percent. The population growth rate has remained at 2.66 percent which shows that during this period the average annual growth rate of per capita GDP has remained at 2.84 percent which is lower in comparison to other developing countries. This indicates that the growth rate of debt is much more higher than that of GDP.

Export of goods and services is the principal source of foreign exchange earnings which can be utilized for amortization and interest payment. The average annual growth rate of export of goods and services (1975-1991) has remained at about 10 percent. The ratio of export of goods and services to debt outstanding has reached to 382.1 percent in 1991 from 21.9 percent in 1975. This ratio indicates that the growth performance of the export sector is slower than external debt. This is one of the common indicator used in the World Bank's analysis on debt servicing capacity of borrowing countries. On the basis of this indicator, Nepal can be classified as moderately indebted country.

Debt service ratio (DSR) of Nepal has reached to 9.6 percent in 1990 from 0.7 percent in 1975. This indicator implies that, Nepal needs to allocate about 10 percent of its foreign exchange earnings for the purpose of debt service payments. The amount of debt service payments comes to be around 15 percent (1991) of the regular budget of the government. This has created additional burden to the government which is increasing over time.

Because of growing external debt, import demand has increased significantly. For example, in 1991 total export of goods and services financed only 52.4 percent of total import and the remaining has been financed by external borrowing. This has increased the dependency of the Nepalese economy on foreign loans for its development and daily needs. The indicators explained above show the growing difficulties for the nation to service its growing external debt obligation.

REVIEW OF LITERATURE

External Debt and Economic Growth

There are mainly two approaches, conventional and unconventional, that present different theoretical views and arguments on the impact of external debt on the economies of developing countries. The conventional approach assumes that foreign capital is complementary to domestic capital and hence, foreign capital will help to increase production, technological progress and productive capacity which lead to economic growth.

The non-conventional approach, on the other hand, argues that foreign capital may work as substitute for domestic saving and hence, it may not help to promote economic growth as expected by the conventional approach. It also argues that additional foreign capital may help to increase import and consumption rather than increase in investment.

Empirical studies based on cross-country as well time series data on the impact of foreign capital on domestic saving and on the rate of economic growth show contradictory results. Studies by Griffen (1970), Griffen and Enos (1970), Weiskopf (1972b and 1973) covering different groups of countries and different time periods, found a negative relationship between the inflow of foreign capital and domestic saving. This implies that there was not significant relationship between foreign capital and economic growth.

The study by Papanek (1972) has found a positive relationship between foreign capital inflow and domestic saving. The empirical result has shown a strong relationship between foreign capital inflow and economic growth in Asia and Mediterranean countries and thus supports the view that foreign capital is a crucial factor for growth in a number of Asian countries. Contrary to this finding, Poul Mosley (1980) has found a negative relationship between foreign aid, saving and economic growth in developing countries. There are several other studies about the impact of foreign capital on economic growth and saving showing contradictory results. These findings suggest that there still exists a great controversy on the role of foreign capital in economic growth. Therefore to identify these relationships specific analysis of the foreign capital's impact on domestic saving of the referred county is required.

External Debt and Economic Growth in Nepal

In order to examine the impact of foreign capital on gross domestic product (GDP) and domestic saving in Nepal, Dr. S.R. Poudyal (1988) has attempted to examine the relationship quantitatively. Ordinary Least Square (OLS) method of regression analysis has been used for this purpose. Time series data on Gross Domestic Product, Domestic Saving and Foreign Aid have been used for the period 1975 to 1990. The regression result thus obtained has shown a positive relationship between foreign capital inflow and GDP growth. But the relationship between foreign capital inflow and domestic saving was found to be negative or inconclusive. This indicates that foreign capital inflow has helped to increase GDP but discouraged to mobilize additional saving in the country.

Debt Servicing Problem of Developing Countries

When the foreign exchange required by a country due to external or internal resource gap cannot be met through new loan, the result is arrears on interest or principal due. In other words when the net transfer of loan becomes negative or debt service payment increases, debt servicing problem may arise. A loan is said to be defaulted whenever the borrower does not make the payments as specified in the loan contract. In such a situation negotiation must take place between borrowers and creditors; rescheduling of the debt is one of the possible solution. The main idea of rescheduling is to allow debtor country more time to service and repay their debt by spreading out their existing obligations. (Bird, 1989:10)

There are many factors for the emergence of debt servicing problem. First, there may be factors that are exogenous to the debtors, such as falling export demand resulting from the worldwide economic recession, or raising real global interest rates or unfavourable changes in exchange rates between other currencies. Second, debt mayhave been poorly managed, with the borrower borrowing too much, given the capacity of the economy to repay, failing to choose most appropriate source of finance, and failing to collect adequate information about the debt position. Third, and in addition to poor debt management, the economy itself may have been poorly managed. Failure of government to undertake measure to increase domestic saving, over value the exchange rate of the national currency. (Bird, 1987:247). It is after the debt crisis of 1982 when Latin American countries could not service their debt obligation, the analysis of debt servicing problem received much attention. (Silber, 1987:21)

Studies on Debt Servicing Capacity

There are different indicators developed by economists to assess the debt servicing capacity of borrowing countries and analysts attaching different degrees of importance to these indicators. These indicators, to explain the debt servicing capacity of the borrowing countries, are mainly classified into indicators of financial variables and indicators of structural variables. Financial indicators are those indicators which affect the balance of payment position show, the symptom of debt servicing capacity. The indicators of structural variables show the characteristics or types of policy action adopted by the borrowing countries that led the debtor countries into debt servicing difficulties.

Various literatures have been developed to examine the external debt servicing of borrowing nations. Different debt indicators have been devised to assess the debt servicing capacity of a country and analysts attached different degrees of importance to each of these indicators. DSR (Debt Service Ratio) is one of the common indicator used by various authors to evaluate the debt servicing capacity. This ratio is obtained from principal plus interest payments on medium and long-term loan divided by the export of goods and services. This indicator shows the portion of foreign exchange earnings that will be absorbed by debt service payment.

Beside the DSR there is a common indicator approach to evaluate the debt servicing capacity developed by Avramovic and others. According to this approach the analysis of debt servicing capacity of the borrowing country can be based on two set of indicators, namely short-run and long-run indicators. The factors which affect the balance of payment and hence, country's capacity to service debt are classified into short and medium term indicators. These indicators can be defined as:

- Fluctuating Variables (export, capital flow, import induced by foreign shock).
- Offsetting Variables (reserve, compensatory finance, compressible import).
- Rigid Variables (interest payment, amortization and essential import).

For the long-run analysis debt servicing capacity of the borrowing country must be based on the basis of cost and benefit of foreign capital or in terms of macro economic magnitude. Variables such as growth rate of GDP, Growth rate of Export of goods and services, growth of import, external debt outstanding, debt service payment, domestic saving etc., are the important indicators to be examined.

Empirical Studies on Debt Servicing Capacity

Discriminant Analysis approach has been used to evaluate quantitatively the debt servicing capacity of borrowing countries by C.R. Frank and W.R. Cline (1971). They used polled time series and cross country data from 24 countries for 9 years (1960-68). Debt service ratio, the growth rate of export, export fluctuation index, non-compressible import, per capita income, the ratio of debt amortization to debt outstanding, import to GNP ratio, and import to reserve ratio were used as important variables to examine the debt servicing capacity of developing countries. The empirical results suggest that debt service ratio, the ratio of amortization to debt, and import to reserve ratio were found statistically significant variables to explain the debt servicing capacity. One problem with this method of analysis is the assumption that the variables used to characterize the countries into two groups are multivariate and normally distributive. Violation of this assumption implies that the estimated errors are biased and the statistics so generated cannot be confidently used to reduce the original numbers of variables to a smaller set.

Logit analysis method has been used by Feder and Just (1977) to determine the important variables that explain the debt servicing capacity. The empirical result of the logit function using the 1965-72 data for 55 countries has found that import to reserve ratio, amortization to debt ratio, debt service ratio, per capita income, growth rate of export, and the ratio of capital inflow to debt service payment were found as important and statistically significant variables to explain the debt servicing capacity of borrowing countries.

Andrew Berg and Jeffery Sachs (1988) has used logit analysis approach to identify the important structural variables to explain the debt servicing capacity. Trade policy, political stability, population structure, growth rate of per capita income, growth rate of domestic saving are some of the important variables to explain the debt servicing capacity of borrowing countries. Empirical study has found that trade policy, income distribution inequality, political stability and per capita GDP were found as important structural variables to explain the debt servicing capacity of borrowing countries.

There is lack of quantitative method that can be applied to estimate the debt servicing capacity of an individual country. Few studies are done in this subject using pooled cross country and time series data which may not truly reflect the debt servicing capacity of Nepal because of its unique nature of indebtedness.

METHODOLOGY

The technique used in this study is the analysis of principal debt indicators developed and used in different studies by various authors. These indicators are classified into two groups: Indicators of financial variables, and Indicators of structural variables.

Indicators that directly affect the balance of payment position and hence, debt servicing capacity are considered as financial indicators. Besides financial indicators, there are fundamental reasons or characteristics of borrowing countries which led slowly into debt servicing problem. Among various indicators of financial and structural variables, the following indicators are examined in this study mainly due to the availability of time series data.

Indicators of Financial Variables

Debt service Ratio (DSR)

This indicator is the ratio of principal plus interest payments on external debt divided by export of goods and services. This ratio indicates the proportion of foreign exchange earning on current account that would be absorbed by debt service payment and thus can be interpreted as increasing of country's debt at an faster rate than the country's ability to pay which implies increased vulnerability to foreign exchange crisis, hence, the possibility of debt servicing difficulty to be higher in countries with growing DSR.

Ratio of Foreign Exchange reserve to imports (RM)

This indicators is the ratio of foreign exchange reserve to import of goods and services. Reserve includes gold, SDR's and foreign exchange holding. The main purpose of holding foreign exchange reserve is to safeguard the short-term import capacity of the economy in the face of fluctuation in foreign exchange receipt. If the amount of foreign exchange reserve is high, the country is less likely to fall under debt servicing difficulties.

The Ratio of Amortization to debt (AMOR)

This ratio is obtained from dividing amortization (principal repayment) by total debt outstanding. A higher ratio for this variable indicates that the borrowing country is repaying its debt liability at a faster rate and such countries are less likely to have debt servicing difficulties.

The Ratio of Capital Inflow to Debt Service (INF)

This ratio is obtained from capital inflow divided by debt service payment. Capital inflow consists of net medium and long-term loan transfer, grant, foreign direct investment and portfolio investment. A growing amount of capital inflow may prevent the borrowing country from debt servicing difficulties because the growing capital inflow will help to increase the level of foreign exchange reserve of the country which can used for debt service payment if needed.

Ratio of Current Account Deficit to GDP (BOP)

The current account deficit in the balance of payment account is another important indicator to examine the debt servicing capacity of borrowing countries. If a country has a large and growing current account deficit, it needs either direct foreign investment nor portfolio investment and foreign loan to fill the deficit. A country with low level of direct foreign investment and portfolio investment needs to rely on external borrowing to fill this deficit in the current account. With the growing deficit and borrowing to finance it, the amount of debt service payment also increases and hence the country may face debt servicing difficulties in the future.

Indicators of Structural Variables

According to the available literature, political stability, trade policy, growth of domestic saving, growth rate of GDP, income distribution inequality, growth rate of population etc., are some of the important structural indicators affecting debt servicing capacity of the borrowing country. The logic lying behind these indicators and debt servicing difficulties is explained as follows. If there is political stability, for example, the government may be strong and stable. The prospect of economic growth may be higher with such government than a government with political instability. The stable government can adopt more effective policy actions which may attract foreign investment and increase the level of industrial production. This will help to increase export and foreign exchange earning which will prevent the country from the possibility of debt servicing difficulties. Due to lack of adequate time series data the following indicators have been included to examined the structural causes of debt servicing difficulties in Nepal.

Gross Domestic Saving (GDS)

Countries with higher domestic saving can help to provide resources for investment and hence such countries may need less foreign capital. In other words, domestic saving can substitute for foreign capital. The higher rate of domestic saving can help to finance a large percent of investment and reduce the requirement of foreign loans. With lower level of external loan there is less possibility of debt servicing difficulties.

Growth Rate of Per Capita GDP

Countries with growing per capita GDP also increases the level of consumption which generates demand in the country and helps to industrialize. This helps the country to increase export and foreign exchange earning. such countries can also reduce the level of import by reducing consumption (comforts and luxurious goods) during debt servicing difficulties. Hence, there is less probability of debt servicing difficulties in countries with higher per capita GDP.

Income Distribution Inequality

In countries with higher income distribution inequalities there will be a large percentage of population under poverty who does not have enough to eat. The level of education, health etc., will be very poor. Such countries could not produce quality manpower. There is also possibility of political unrest. When income will be concentrated on few hands there is also the possibility of capital-flight. Those countries can not develop at a rapid pace. Therefore such countries are more likely to fall under debt servicing difficulties.

Sources of Data

This study is based on published secondary sources of data. Various issues of the World Debt Table of World Bank, International Financial Statistics Year Book 1991, IMF and various issues of Economic Survey, published by the Ministry of Finance, HMG have been utilized in this study. This study is based on data from 1975 to 1991 for which complete time series data are available.

ANALYSIS OF DEBT SERVICING CAPACITY OF NEPAL

In this section we present the analysis of debt servicing capacity of Nepal based on the financial and structural indicators as identified earlier.

Examination of the Financial Variables

Debt Service Ratio (DSR)

Debt Service Ratio of Nepal is increasing over time. DSR has reached to 7.1 percent in 1991 from only 0.76 percent in 1975. It can be shown from Table 7 that DSR of Nepal had increased rapidly during the 1980s. This is mainly due to the maturation of loans obtained during the 1970s which are now in maturation phase. Ironically, the performance of exports of goods and services has not come up to the expectation. This indicates that Nepal needs to spend about 7 percent of its foreign exchange earnings for the purpose of debt service payment. Internationally, DSR of 20 percent and above is assumed to be dangerous. Therefore while comparing this ratio internationally, we can say that DSR of Nepal has not reached the dangerous level. On the basis of this indicator we can assume that Nepal can service its debt obligations without much difficulties.

Table 7

Debt Service Ratio of Nepal

(NRs. in million)

Mid July	Debt Outstanding	Amortization	Interest payment	Export of Goods and Services	Debt Service Ratio
1975	346.1	11.2	0.0	1582.9	0.71
1980	1807.3	23.0	0.0	3.4	0.80
1985	9302.3	69.2	120.3	5646.8	3.36
1990	36800.9	701.8	421.8	11537.5	9.74
1991	58460.9	589.0	497.5	15298.5	7.10

Source: Ministry of Finance, *Economic Survey* 1989/90, Table 6.8 and 8.10

Ratio of Foreign Exchange Reserve to Import (RM)

It can be shown from Table 8 That foreign exchange reserve of Nepal is increasing over time. Foreign exchange reserve has reached Rs. 19270.0 million in 1991 (which is enough to finance the import of goods and services for 7.9 months) from only Rs. 1411.9 million in 1975. It is mainly because of the increase of foreign loan and grant to the government from bi-lateral and multi-lateral sources. Table 7 shows the growing amount of external borrowing in Nepal. Despite the growing amount of foreign loan the absorptive capacity of the government has not increased, hence, government could not spend the borrowed capital therefore, reserve has been increased. The growing amount of foreign exchange reserve indicates that Nepal will not have difficulties to service its debt.

Table 8

Foreign Exchange Reserve to Import Ratio of Nepal

(NRs. in million)

Mid July	Foreign Exchange Reserve	Imports of Goods and Services	Reserve/Import Ratio
1975	1411.9	2227.1	63.4
1980	2805.6	4415.1	64.8
1985	3743.3	9407.5	39.9
1990	12014.4	22110.5	69.2
1991	19270.0	29214.6	66.0

Source: Ministry of Finance, *Economic Survey*, 1989/90, Table 6.7 and 6.8, p. 60 and 62.

The ratio of Amortization to Debt (AMOR)

This indicator shows the speed of repayment of external debt. It can be shown from Table 9 that amortization to debt ratio of Nepal has remained very low. In 1991 the amortization to debt ratio has remain at 1.0 percent which was 3.2 percent in 1975. The main reason for slow speed of repayment is mainly because Nepal has obtained long-term loan with concessional terms. The slow speed of repayment indicates that in the long-run the country need to allocate a large proportion of its foreign exchange earnings for debt service payment because debt service payment of new loan and maturity of old loan will increase. Therefore one can expect additional pressure on debt servicing in the future.

Table 9

Amortization to Debt Outstanding Ratio of Nepal

(NRs. in million)

Mid July	Amortization	Debt Outstanding	Amortization to Debt Outstanding Ratio
1975	11.2	346.1	3.2
1980	23.0	1807.3	1.3
1985	69.2	9302.3	0.7
1990	701.8	36800.0	1.9
1991	589.0	58460.9	1.0

Source: Ministry of Finance, *Economic Survey*, 1989/90, Table 6.7, p. 60

The Ratio of Capital Inflow to Debt service (INF)

Nepal is obtaining foreign grant and concessional loan because it is one of the poorest countries in the world. Foreign grants are unrequited transfers which need not require quid-pro-quo. Foreign loan is our external liability which need to be repaid with interest. The amount of foreign capital inflow is increasing overtime. Foreign capital inflow has reached Rs. 8421.4 million in 1991 from a mere amount of Rs. 386.8 million in 1975 (Table 10). This is mainly because of increasing amount of loan from the International Development Association (IDA) and the Asian Development Bank (ADB). While analyzing capital inflow to debt service ratio, Nepal need to allocate about 13 percent of its total capital inflow for debt service payment. Which was only 2.9 percent in 1975. This growing capital inflow to debt service ratio indicates that Nepal has to pay back about 13 percent of its foreign capital inflow. This reduces the amount of capital available for investment. If this ratio continues to increase, Nepal need to obtain foreign capital just for the purpose of repayment which can create debt servicing difficulties to the nation.

Table 10

Capital Inflow to Debt service Ratio

(NRs. in million)

Mid July	Capital	Debt Service Payment	Capital Inflow to Debt Service Ratio (percent)
1975	386.8	11.2	2.90
1980	1340.5	23.0	1.72
1985	2678.3	189.5	7.08
1990	7935.0	1023.6	12.89
1991	8421.4	1086.5	12.90

Source: Ministry of Finance, *Economic Survey*, 1989/90.

Ratio of Current Account Deficit to GDP

One of the major problem faced by the Nepalese economy is the consecutive deficit in the current account in the balance of payment account. Current account deficit to GDP ratio has reached 9.74 percent in 1991 (Table 11) from 0.72 percent in 1975. The slow growth of export of goods and services and rapidly increasing import have caused this deficit to increase. Foreign loan has been utilized to pay the deficit. Since Nepal needs to allocate a huge proportion of its foreign loans for the import payment which can not be reduced in the short-run, the country needs to depend on foreign loan which will reinforce the demand for additional loan. Therefore the widening current account deficit shows a growing possibility of debt servicing difficulties in Nepal.

Table 11

Current Account Deficit to GDP Ratio in Nepal

(NRs. in million)

Year	Current Account Deficit	GDP	Current Account Deficit to GDP Ratio
1975	120.3	16,571	0.72
1980	341.6	23,351	1.46
1985	1,849.0	44,417	4.16
1990	7,754.1	90,825	8.53
1991	10,254.9	105,300	9.74

Source: Ministry of Finance, *Economic Survey,* 1989/90.

Analysis of Debt Servicing Capacity of Nepal Based on the Structural Variables

In this section we present the analysis of debt servicing capacity of Nepal based on the indicators of structural factors as identified in outgoing section.

Gross Domestic Saving

Growth rate of domestic saving is low in Nepal. The average annual growth rate of domestic saving has been found to be 3.4 percent (1970-90). Gross domestic saving to GDP ratio has remained only at 6.34 percent (Table 12). Low per capita income, poor financial development, income distribution inequality are some of the principal reasons for the lower level of domestic saving in the country. Very little efforts were made to generate additional saving due to easier availability of foreign capital. With low level of domestic saving the nation needs to depend on foreign loan to finance its investment demand. This will increase the volume of external debt and debt servicing difficulties.

Table 12

Gross Domestic Saving to GDP Ratio in Nepal

(NRs. in million)

Mid July	Gross Domestic Saving	Gross Domestic Product (GDP)	Gross Domestic Saving to GDP Ratio
1975	1,662	16,571	10.03
1980	2,591	23,351	14.05
1985	6,239	44,417	5.56
1990	5,560	90,825	6.12
1991	6,864	105,300	6.34

Source: Ministry of Finance, *Economic Survey,* 1989/90, Table 1.3.

Growth Rate of Percapita GDP

Growth rate of GDP has remained sluggish and unstable in the country, lagging behind with the population growth rate. The average annual growth rate of per capita GDP (1975-91) has remained at 1.79 percent (Table 13). On the one hand the amount of external borrowing has increased very rapidly while on the other the growth rate of per capita GDP has remained low. Because of faulty development strategy income distribution inequality has increased considerably. With low per capita income the gross domestic saving has also remain low and the people need to spend almost all of their income for the purpose of consumption. Therefore, it is difficult for Nepal to service its debt liability with such low level of per capita income.

Table 13

Growth Rate of Percapita GDP

(NRs. in million)

Mid July	GDP	Population	Per capita GDP in NRs.	Percentage
1975	16571	12.84	1291	-7.26
1980	18606	15.02	1239	5.05
1985	23630	16.66	1418	2.03
1990	90825	18.49	1642	3.92
1991	105300	18.88	1698	3.38
Average (1975-1991).	4.26percent			1.79percent

Source: Ministry of Finance, *Economic Survey*, 1989/90.

Income Distribution Inequality

Time series data on income distribution inequality are not available in Nepal. The study by National Panning Commission (1985) has shown that 42.35 percent of the total population of the country are living below the poverty line. Sixty one percent of the total population are illiterate. The annual population growth rate has remained above 2 percent while the growth rate of GDP has remained low. These signify that very little efforts have been made to alleviate poverty and continuation of this type of poor growth performance of the economy and growing disparities in income distribution, country may face debt servicing problem in future.

CONCLUSION AND POLICY RECOMMENDATION

Conclusion

From the above discussion we found that the amount of external debt is growing rapidly over time. The dependence of government budget on foreign loan is increasing. Bulk of the foreign loan is coming from multi-lateral organizations and bi-lateral governments at concessional rate of interest involving long repayment period, hence, debt service ratio of Nepal has remained low. But as growth rate of per capita GDP has remained at low level, current account deficit (BOP) to GDP ratio, outstanding debt to GDP ratio, export of goods and services to GDP ratio have crossed the critical level.

Bulk of the borrowed capital has been invested in developing infrastructures such as communication, irrigation, road, health, hydroelectricity etc. Despite growing foreign loan, the growth rate of export has remained low in comparison to import and the country experienced growing trade deficit which was financed from external borrowing. Due to easily available foreign capital the growth rate of domestic saving is found to be low. Similarly efforts made to generate additional revenue in the country remained quite inadequate.

Policy Recommendations

On the basis of above findings we can recommend some policy actions to be adopted for the utilization of external debt in Nepal. Since debt service ratio has remained low, Nepal can borrow more and increase the level of investment. Nepal should not only depend on international organizations for soft loan because they impose different terms and conditions and the area of interest. The amount of capital may not also cope with the national requirement. Hence, in addition to the existing sources, borrowing from the international capital markets to finance hydro-electricity, fertilizers, papers, cotton textile, cement, food processing, projects may be viable source. Such industries will help to increase export or reduce import enabling the country to increase foreign exchange earning which will develop capabilities of the country for additional debt servicing.

Foreign exchange reserve of Nepal has remained high which has helped to increase money supply and thereby, inflation in the country. Therefore, efforts should be made to invest the excess reserve in productive sectors.

Since current account deficit is growing at an accelerated pace, government has to increase its investment on strategically important industries namely cement, fertilizer, writing and printing papers, iron and steel, food processing etc., in which private sector is shy to come forward which will help to curb import. Similarly Nepal needs to give emphasis on increasing services export, tourism, labour income etc.

Nepal needs to identify the priority sector that needs foreign capital investment. Also, Nepal has to make long-term and medium term plans for the utilization of foreign capital. The bulk of the borrowed capital so far, has been invested for the development of infrastructures. Foreign loan must be diverted towards productive sectors with relatively short gestation period which will yield higher rate of return and foreign exchange.

Monitoring and evaluation of foreign loan financed projects should be strengthened. Similarly, continuous follow up of loan projects is required.

Nepal needs to invest the borrowed capital in export promoting and import substituting sectors in order to increase the amount of foreign exchange earning which will enable the country to service its debt in the future. Similarly export promoting industries will help to generate additional employment opportunities in the country.

It is found from the above analysis that Nepal is over dependent on foreign loan rather than domestic source. In the long run it will have dangerous impact on the economy. In order to reduce the excess dependence on foreign loan, government has to make efforts to generate additional revenue. Efforts should be made to increase the productivity and efficient utilization of already constructed projects.

The growth rate of domestic saving has remained very low, efforts should be made to generate additional saving in the country in order to increase the share of domestic capital to finance the growing investment demand in the country.

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