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Debt Problems of Developing Countries

by Ramesh C. Garg, Poughkeepsie, N.Y.*

Much concern has been expressed in recent years over the mounting debt burden of developing countries. The increasing amounts of loans and their hardening terms have in many cases led to external debt servicing problems of alarming magnitudes. The following contribution addresses itself to evaluating these problems.

According to the World Bank's estimates, the total external public debt¹ outstanding for developing countries increased more than 15 times since the beginning of 1956 to the end of 1974 (from \$ 9.7 bn to \$ 151.4 bn, respectively). During the same period, estimated payments of interest and amortization increased by 17 times (from \$ 0.8 bn in 1956 to \$ 13.6 bn in 1974). Since 1971 the debt has been growing at a compound rate of 20 p.c.² The debt service payments, on the other hand, have been growing at a much faster rate — more than 25 p.c. since 1971³. Over the past decades, the rate of growth of both debt outstanding and debt service payments has been twice the rate of growth of export earnings for the developing countries, and more than three times that of their gross domestic products (GDP).

In assessing the debt problems of individual countries, different factors may be singled out. Differences in debt service burdens obviously depend on the degree of a nation's dependence on foreign capital and the terms at which this capital is obtained. Countries' dependence varies considerably. Globally, both the gross domestic product and the export earnings of the developing countries have continued to expand. External debt and debt service requirements have increased more rapidly, however, while during the past few years the net flow of external capital has tended to level off and the terms at which it is obtained have become somewhat harder. Several developing countries have felt it necessary to seek partial relief from existing debt service obligations in recent years. It is clear, therefore, that the debt situation of the developing countries will continue to require careful attention from the international financial community.

Historically, the increasing flow of capital from rich to poor countries has contributed greatly to

the maintenance of growth momentum in most countries and the acceleration of growth in some. Given the low level of per capita income, a considerable gap exists between national savings and the desired rate of investment. In some cases, the gap is widened by capital outflow from these countries by way of capital flight. To fill in this gap, there is a constant demand for large capital inflow from abroad. At the same time, the increasing amounts of loans and their terms have resulted in a return flow of amortization and interest payments of such magnitudes as to constitute, in many cases, an obstacle to economic growth and flexible management of the balance of payments.

The Model

Among several other things, some of the primary objectives which the proposed model is designed to serve are as follows:

- ☐ to measure a country's dependence on foreign capital;
- ☐ to provide an estimate of the transfer of real resources per unit of gross capital imported by different countries; and,
- ☐ to provide an assessment of a country's ability to service debt.

The current lending practices of international financial agencies seem to focus on a very limited aspect of the overall capacity of developing countries in evaluating their creditworthiness and eligibility for loans. One commonly used indicator

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¹ External public debt is defined as the debt incurred or guaranteed by governments.

² IBRD, World Debt Tables (Washington, D.C., October 31, 1976), p. 26.

³ Ibid., p. 26.

in the World Bank's regular country analysis is the "debt service ratio"⁴. Debt service ratio includes only two out of a number of factors associated with an evaluation of debt servicing problems of a developing country. The ratio does not provide, for example, any insight from the capital importing country's point of view but seems to be rather biased in favor of the capital exporting country or the international lending agency. With the help of this model, a capital importing country will be able to evaluate the extent of resource transfer on account of external public borrowings vis-à-vis its own foreign capital requirements.

Dependence on Foreign Capital

Capital inflow assists development in two distinguishable ways. On the one hand, it adds to the total volume of resources at the country's disposal over and above those used for consumption, which can be devoted to capital formation. On the other hand, it increases the country's ability to import goods and services of certain specific kinds which are important to development but which could not be produced domestically, or which could only be produced domestically at very high cost.

Correspondingly, the amount of capital inflow likely to be needed to achieve stated development objectives in a developing country has been estimated in two ways. In the first method, an estimate is made of the amount of gross domestic capital formation likely to be required to make possible achievement of the development objectives. Against this is set an estimate of the prospective amount of domestic saving. The difference is the gap needed to be filled by capital inflow. In the second method, an estimate is made of import requirements, and this is set against an estimate for prospective export earnings.

The need for external resources is thus determined by two separate sets of forces. Increased investment is required to support a more rapid increase in gross domestic product, and there is a limit to the amount of savings which can be generated from a given amount of income. The difference between investment needs and savings potential determines the requirement for external capital to sustain a given growth rate. Similarly, a certain level of gross domestic product calls for an indispensable minimum of imports. The minimum trade gap for this level of GDP is equal to the difference between this value of imports and the value of exports that can be sold

in a given year. Growth will be limited to the largest volume of GDP that can be sustained by the inflow of capital to fulfil both these requirements, i.e., by the larger of the two gaps as determined above.

In any actual situation (ex-post identity), the savings-investment and export-import gap will necessarily be the same, for the gap, on each of these two views, is the excess of the amount of resources used over the amount of resources produced by the economy. There is only one gap to be filled by capital inflow; however, this necessary identity of the savings-investment and export-import gap is brought about by a process of adjustment. The underlying strains, determining the amount of capital inflow needed to make possible a given pace of development, may be predominantly on the export-import side.

Therefore, a model of two gaps will be used for each of the countries under investigation in order to determine the country's external capital inflow requirements⁵. Analysis of the gaps makes it possible to determine capital requirements which must be met in order to attain the growth rate established⁶. Analysis of two gaps assumes that the amounts of required capital may be estimated either through the savings gap or through the trade gap.

It should be noted that if available external financing is not sufficient to cover the predominant gap, the planned objective may be attained only if policies are implemented either to increase exports or reduce imports when the trade gap predominates, or through increases in capital productivity or in the tendency to save when the saving gap predominates. The following equations explain the relationships among the different variables.

A. Gap Determination

1. Variables:

- (I)_t = Basic Investment Requirements in time period t
- (S)_t = Potential Savings in time period t
- (Fs)_t = Prospective Savings Gap in time period t
- (M)_t = Required Imports of Goods and Services in time period t

⁵ The method of two gaps has been utilized since it is already well known in developing countries through the application of similar procedures in recent years by UNCTAD, ISPES, ECLA, AID, and Professor Hollis B. Chenery. In addition to calculations made by national experts or foreign consultants in individual countries.

⁶ The requirements "must be met" in the sense that the dominating gap must be covered if there is a desire to obtain the established growth rate. Nevertheless, such requirements may be "insufficient" since they must be considered in addition to the other movements in the balance of payments.

⁴ Debt Service Ratio signifies the service payments, including both amortization of principal and payment of interest, on external public debt as a percentage of exports of goods and services. It should be noted, however, that exports constitute only a minor segment of the gross national product for a number of developing countries.

$(X)_t$ = Export of Goods and Services in time period t
 $(Fx)_t$ = Prospective Trade (or Export) Gap in time period t

2. Relationships:

$$(Fs)_t = (I)_t - (S)_t \quad (1)$$

$$(Fx)_t = (M)_t - (X)_t \quad (2)$$

B. Capital Inflow Requirements

F_t = the larger of the $(Fs)_t$ or $(Fx)_t$

Resource Transfer Determination

The resource transfer analysis provides a suitable mechanism to ascertain the extent of resource transfer that a country has realized over a period of time. Literature pertaining to the field of international capital movements generally discusses the concepts of resource flows. Three variations of capital flows are involved: gross capital inflow, net capital inflow, and resource transfer. The first two concepts are familiar from balance of payment accounting. It is the third concept – resource transfer – which is relatively new. Let us examine the definition of each of these concepts.

Gross capital inflow is defined as all receipts on capital account, without any offsets. Net capital inflow is defined as gross inflow less amortization of loans in case of external debt. Resource transfer on account of external public debt is defined as net capital inflow less interest charges on such borrowings. The resource transfer concept essentially indicates how much of the gross capital inflow is left over to the borrowing country after it pays for the service items.

In the final analysis, it is the transfer of real resources that matters to the capital importing countries. Only such transfers serve to increase

the domestically generated savings and thus enable a higher rate of investment and output growth. While most of the discussion on development finance and its statistical presentation is still based on the conceptual framework of the net capital inflow rather than of the gross capital inflow, there is a growing awareness that it is the concept of resource transfer which has operational significance⁷. The following equations explain the various relationships among the different variables concerning external public debt.

1. Variables:

$(DO)_t$ = Total Debt Outstanding at the beginning of time period t

$(Ad)_t$ = Amortization of Public Debt in time period t

$(Df)_t$ = External Public Debt Commitment during time period t

$(If)_t$ = Interest Payments on Public Debt in time period t

$(Ir)_t$ = Interest Received on Public Debt in time period t

$(Sd)_t$ = Service Payments on External Public Debt in time period t

$(Nd)_t$ = Net Flow of Capital in time period t

$(RT)_t$ = Net Resource Transfer on account of External Public Debt in time period t

2. Relationships:

$$(Df)_t = (DO)_{t+1} - (DO)_t + (Ad)_t \quad (1)$$

$$(Nd)_t = (Df)_t - (Ad)_t \quad (2)$$

$$(Sd)_t = (Ad)_t + (If)_t - (Ir)_t \quad (3)$$

$$(RT)_t = (Nd)_t - (If)_t + (Ir)_t \quad (4)$$

$$\text{Resource Transfer per unit of External Debt, } (RT)_t / (Df)_t \quad (5)$$

⁷ For a detailed discussion of the concept of resource transfer, see Dragoslav Avromovic, "Latin American External Debt: A Study in Capital Flows and in Terms of Borrowing", Journal of World Trade Law, Vol. 4, No. 2 (Graduate School of International Studies, Geneva, March-April 1970), pp. 134-136.

86 Developing Countries: Capital Inflow, Service Payments, and Resource Transfer Analysis

(US \$ mn)

Year	Debt Commitment during the year $(Df)_t$	Debt Service			Net Flow $(Nd)_t$	Net Transfer $(RT)_t$	In p.c. of $(Df)_t$	
		Amortization $(Ad)_t$	Interest $(If)_t$	Total $(Sd)_t$			Net Flow	Net Transfer
1967	10,775.1	2,827.9	1,073.6	3,901.5	7,947.2	6,873.6	74	64
1968	11,339.2	3,320.0	1,269.7	4,589.7	8,019.2	6,749.5	71	60
1969	12,087.1	3,645.6	1,505.5	5,151.1	8,441.5	6,936.0	70	57
1970	13,677.3	4,304.4	1,861.7	6,166.0	9,327.9	7,511.2	69	55
1971	15,092.7	4,781.5	2,150.1	6,931.6	10,311.2	8,161.1	68	54
1972	18,869.2	5,989.6	2,534.6	8,524.2	12,879.6	10,345.0	68	55
1973	24,148.6	7,953.4	3,417.0	11,370.5	16,195.2	12,778.1	67	53
1974	30,215.3	9,041.4	4,515.0	13,556.5	21,173.9	16,658.9	70	55

Source: IBRD, External Public Debt of LDCs (Washington, D.C.), Report Number EC-167/76.

A country's ability to service debt is now measured in terms of its achieving the level of resource transfer from external capital to fill in the resource gap commensurating with the capital requirements for sustaining its development efforts. The extent of resource transfer, as derived from above equations, can further be compared with the average level of resource transfer for a group of countries in a region. Based on the experience of individual countries, certain policy recommendations can be made in order to maintain an increasing level of resource transfer from external borrowings.

Resource Transfer Analysis for 86 Countries

The table provides the summary data for 86 developing countries regarding their most recent debt servicing experience. The data are being compiled by the World Bank based on the reporting made to it by individual countries. The calculations for the net capital flow and resource transfer per unit of external debt have been made by this author. The data cover the latest available statistics for a period of eight years beginning

1967 through 1974. It may be observed that both the net flow of capital and the net resource transfer as a percentage of external debt committed for the year have been declining since 1967. The extent of net flow of capital has dropped from 74 p.c. in 1967 to 70 p.c. in 1974; whereas the drop in resource transfer has been from 64 p.c. to 55 p.c. during the same period. It is, therefore, significant to note that the percentage of resource transfer has been declining at a faster rate than that of net flow of capital. It leads to the only one obvious conclusion, i.e., the burden of interest payment for developing countries, as a whole, has been mounting at a faster rate which is absorbing the net transfer of resources at a growing pace. As it stands now, it almost takes two dollars of fresh borrowings to materialize one dollar of net transfer of real resources. A situation like this leads to an important area of investigation requiring a better management of external debt by the authorities in developing countries. The scope of this article does not permit incorporating the various policy issues relating to international debt management.

The Role of Capital Markets in Developing Countries

by Bruce Lloyd, London *

Capital markets in developing countries are under increasing political pressure. What solutions are likely to the conflicts and problems that arise over the need to integrate them into exploiting the resources, and fulfilling the needs, of a developing economy as a whole?

This paper is primarily concerned with the problems and prospects of equity investment; that is the issue and market in shares (rather than bonds or debentures) using the generic terms "stock market" or "capital market" in that context. However many of the points mentioned apply with equal validity to wider definitions of a capital market. Such a discussion inevitably involves some consideration of the appropriate place for private and foreign risk capital in the investment programme of developing countries (LDCs).

The final section of the paper examines the areas where the policy of governments can influence the role and effectiveness of a capital market or stock exchange in an LDC.

At the outset it should be emphasised that it is misleading to talk about LDCs as if they are all alike. While they have much in common, there are also significant differences which should become more apparent as this paper progresses. It should also become apparent that many of the points considered bear a remarkable similarity to those experienced in the industrialised world.

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