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EXTERNAL DEBT AND DEBT-BEARING
CAPACITY OF DEVELOPING
COUNTRIES

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INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS

PRINCETON UNIVERSITY

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EXTERNAL DEBT AND DEBT-BEARING CAPACITY OF DEVELOPING COUNTRIES

NEVER before has the problem of accelerating the economic growth of less developed countries been of such fundamental importance, both politically and economically, as today. Not without reason have the 1960's been proclaimed the "development decade." The present generation is becoming increasingly aware that the world is confronted by (1) a widening gulf between the average standards of living of two groups of countries, the industrialized countries and those still predominantly in a primitive state of economic development; (2) a growing disparity between the poverty of the countries belonging to the second group and their greater political influence on world events; and (3) the need for the countries in the first group to take better account of the special demands that are placed on sound financing of the economic-growth process in the developing countries and on increasing their creditworthiness. This paper deals with the third of these points.

FOREIGN-CAPITAL REQUIREMENTS OF DEVELOPING COUNTRIES

Acceleration of the process of economic growth and diversification of production in the developing countries is predicated among other things on increased internal capital formation and/or an increasing, or at least continued net capital inflow from the industrialized countries. In most of the developing countries the possibilities of internal capital formation are restricted by low productivity and by growing consumer demand, in both the private and the public sector, due to the rapid increase in population. Moreover, in order to accelerate their economic growth, most of them urgently need imports of capital goods, raw materials that are not available locally, technical know-how, etc., which for the time being they are not in a position to finance by stepping up their exports. The chief reasons for this are the following:

1. Balanced growth calls for substantial investments in what is known as the infrastructure—roads, ports, means of transportation, electric and other power, water supply and flood control, education, etc.—all of which are prerequisites for further expansion and usually

require considerable amounts of foreign exchange, while they do not in themselves contribute towards increasing export revenue.

2. Generally speaking, growing investments in a developing economy result in increased demand for imported raw materials, mechanical equipment, and replacement parts.

3. Acceleration of investment activity in developing countries generates incomes that tend largely to be spent on the purchase of imported goods.

4. Investment projects which may assist in raising the export capacity of developing countries frequently require a considerable period for execution and start-up and usually set these countries the difficult task of attaining a level of efficiency that will enable them to compete in world markets.

5. The traditional exports of many developing countries, consisting of agricultural produce and raw materials, afford little opportunity for raising their export earnings rapidly; changes in the production structure with a view to greater diversification call for entrepreneurial initiative and investment capital which are scarce, and the process is usually time-consuming.

6. An important factor limiting the rapid expansion of export earnings in the less developed countries is the slow rate at which demand for the traditional imports from these countries increases in the developed countries.

7. A further limiting factor is the willingness of the developed countries to increase their imports from the less developed countries, in view of their reluctance to open their markets any wider for such imports and to adapt themselves to a rational, international distribution of labor based on the comparative-cost principle.

If the increase in exports, or the substitution of imports by domestic production in the developing countries could keep pace with the rise in their external spending, which is both directly and indirectly connected with more satisfactory economic growth and with the investments that growth requires, no net capital import would be required (even though in that case no margin would be left for building up the desired foreign-exchange reserves). Analysis and experience, however, go to show that in general this is not possible. In most cases, the capacity to step up domestic production and reorient the economic structure, which is essential if the import-export ratio is to be changed to such

an extent that capital imports become superfluous or can be substantially reduced, is, in the shorter term, very restricted, while the attainment of a reasonable measure of economic growth by self-financing is a protracted business. Countries rich in raw materials that can readily be exploited and exported, such as petroleum, and with a relatively small population in relation to the wealth of their natural resources, therefore enjoy a favorable position. In most of the developing countries, however, this is not the case and the only alternative is: substantial capital imports, extending over many years—or economic stagnation.

TRADE DEFICITS OF DEVELOPING COUNTRIES: EXTERNAL FINANCING

A recent study (Loan terms, debt burden and development, Agency for International Development, Department of State, April 1965) showed that in the seven-year period from 1956 to 1963 the deficits on the goods-and-services accounts of all less developed countries combined rose from \$5 to \$7.9 billion a year. This was accompanied by an average annual increase of 4.4 per cent in the total gross national product of those countries. The table which follows presents the comparative figures for 1956 and 1963, from which these results are derived, together with a summary of the funds applied to covering the current-account deficits.

TABLE I
GROWTH, CURRENT-ACCOUNT DEFICIT AND FINANCING OF ALL
DEVELOPING COUNTRIES—1956-1963
(in billions of dollars)

	1956	1963
Gross national product	148.0	200.0
Imports of goods and services (excl. from developing countries)	28.1	39.7
Exports of goods and services (excl. to developing countries)	23.1	31.8
Balance on current account	5.0	7.9
Loans payable in convertible currency, gross	1.8	5.4
Interest and amortization	0.8	2.9
Loans payable in convertible currency, net	1.0	2.5
Other sources (grants, "loans" to be repaid in the currency of the recipient country, direct private investments etc.)	4.0	5.4
Total financial resources	5.0	7.9

The most interesting conclusions regarding financing that can be drawn from the above figures are that in the space of those seven years (a) there has been a considerable increase in the amount of loan funds used to cover the current-account deficits of the developing countries and a corresponding decrease in the contribution from other sources; (b) the contribution from net loans has risen from one-fifth to more than one-third; and (c) gross loans have risen by 200 per cent, interest and amortization by 263 per cent, and net loans by 150 per cent.

The 1963 figures for financial resources received by the developing countries, which were used in the above study, are to a large extent borne out by another recent study (The flow of financial resources to less-developed countries, 1956-63, Organization for Economic Cooperation and Development, Paris, 1964), which was based on the financial resources made available by the industrial countries. The latter study concludes that of the net transfers from the developed to the less developed countries in 1963, more than one-third were in the form of loans repayable in the currencies of the creditor countries. Somewhat less than half were in the form of grants and transfers repayable in the currencies of the debtor countries. The remainder (approximately one-fifth) were accounted for by direct private investments. The total amount of the transfers analyzed in this (OECD) study is, however, higher, namely not \$7.9 but approximately \$9 billion, owing to the inclusion by the lending countries of approximately \$1 billion in the form of technical assistance.

Growth of External Debt

A study recently published by the World Bank (Economic growth and external debt, Dragoslav Avramovic and Associates, IBRD, 1964), shows that the external debt of all developing countries, comprising public indebtedness and government-guaranteed private debt, but excluding loans to be repaid in the currencies of the recipient country, repayment obligations to the International Monetary Fund, and debts with maturities of less than one year, rose from \$8 billion in 1956 to \$22.5 billion by the end of 1962. This corresponds to an average annual growth of somewhat more than 15 per cent (compared with an average annual growth of 4.4 per cent in the gross national product). If the payment obligations to the IMF, private debt not guaranteed by the government, outstanding commercial debts, and other similar obligations (excluding debts with maturities of less than one year) are included, then the figure for the end of 1962 must be increased by an estimated \$5 billion to \$27.5 billion.

The geographical distribution of the debt burden of all developing countries combined at the end of 1962 is shown in the following table.

TABLE II

EXTERNAL DEBT OF ALL DEVELOPING COUNTRIES AT END OF 1962
(in billions of dollars)

	Public debt according to narrow World Bank definition	Other	Total
Latin America	8.9	2.5 ^a	11.4
South Asia and Middle East	6.7	0.5	7.2
East Asia	1.0	1.7 ^b	2.7
Africa	3.5	0.1	3.6
Southern Europe	2.4	0.2	2.6
	22.5	5.0	27.5

^a owed principally by Brazil and Argentina.

^b for the most part a rough estimate for Indonesia.

According to the latest available figures, the external debt of the developing countries rose in 1963 and 1964 by 17 per cent in each case (whereas the growth in the GNP declined to 4 per cent per annum) and stood at the end of 1964, according to the narrow definition, at an estimated \$33 billion and, according to the broader definition, at more than \$38 billion. Expressed as a percentage of the GNP, external debt rose, according to the narrow definition, from 5.9 per cent in 1956 to 11.3 per cent at the end of 1962, and to 15.3 per cent at the end of 1964. According to the broader definition, the last two figures had risen to 13.8 per cent and 17.8 per cent.

TABLE III

GROWTH OF EXTERNAL PUBLIC DEBT OF 37 DEVELOPING COUNTRIES
FROM THE END OF 1956 TO THE END OF 1964

(in billions of dollars)

	1956	1958	1960	1962	1964
Latin America	4.3	5.7	6.6	8.9	10.6
South Asia and Middle East	1.4	2.5	3.3	5.1	8.6
East Asia	0.3	0.6	0.7	0.8	1.1
Africa	0.9	1.0	1.2	1.4	1.9
Southern Europe	1.1	1.3	1.5	2.0	2.6
	8.0	11.1	13.3	18.2	24.8

Source: 1965 Annual Report, International Monetary Fund.

The data on external debt collected by the World Bank made it possible to compile a survey of the annual growth in the external debt of 37 developing countries, according to the narrow definition, between the end of 1956 and the end of 1964 (the preceding figures related to 74 countries). Between them, these countries represent 73 per cent of the total population of the developing countries. The foregoing is summarized in the following table, which is also drawn up on a geographical basis.

A large proportion of the "other" debt (cf. Table II), which in the meantime has also risen, is accounted for by these 37 countries and about half of it was contracted by the Latin American countries. It would not be unreasonable to estimate the total external debt (public and "other") of the 37 developing countries at the end of 1964 at between \$28 and \$29 billion.

Servicing External Debt

Table I has already indicated the combined amounts in respect of the service of interest and amortization that the balance of payments of all developing countries had to bear in 1956 and 1963, namely \$0.8 and \$2.9 (0.7 interest and 2.2 amortization) billion, respectively. Expressed as a percentage of the exports (of goods and services) of those countries, the servicing of their public external debt in 1963 amounted to 9.1 per cent of their export revenue, as against 3.7 per cent in 1956. The 1964 figure was probably 10 or 11 per cent. If the service of "other" debt (estimated at \$1.5 billion) is also taken into account, an even higher percentage results.

The table below presents data on the external-public-debt service of the 37 developing countries covered by Table III.

TABLE IV
GROWTH IN EXTERNAL-PUBLIC-DEBT SERVICE OF 37 DEVELOPING
COUNTRIES—1956-1964
(in millions of dollars)

	1956	1958	1960	1962	1964
Latin America	455	779	1,049	1,280	1,442
South Asia and Middle East	95	186	284	378	485
East Asia	22	26	56	62	99
Africa	37	49	63	104	131
Southern Europe	71	60	253	174	341
	680	1,100	1,705	1,998	2,498

Source: 1965 *Annual Report*, International Monetary Fund.

If these public-debt-service figures are expressed as percentages of the exports of the different geographical groupings of countries, the following result is obtained. In Latin America this percentage rose from 6 per cent in 1956 to 15 per cent in 1964; in South Asia and the Middle East from 4 per cent in 1956 to 13 per cent in 1964; in East Asia from 1 per cent in 1956 to 3 per cent in 1964; in Africa from 3 per cent in 1956 to 9 per cent in 1964; and in Southern Europe from 7 per cent in 1956 to 15 per cent in 1964. For all 37 countries together, the percentage rose from 4 per cent in 1956 to 12 per cent in 1964. It must again be pointed out that this still takes no account of the service on the short-term "other" debt (estimated for these 37 countries at \$1 billion).

Structure of External Debt

The external-debt figures of the developing countries, stated above, relate to the loans obtained by these countries. This does not necessarily mean that the funds were transferred in the same year in which the loans were recorded, or that payment of interest and amortization has begun on those loans. Of the external public debt of 37 countries recorded by the World Bank, which amounted to approximately \$21 billion at the end of 1963, more than 1/5 was still unused on that date. The amount paid in 1964 in interest and amortization, namely somewhat more than \$2.4 billion, must therefore be referred to a transferred debt of \$16.5 to \$17 billion. Since the ratio between interest and amortization was approximately 1:3, which corresponds to more than \$600 million in interest and \$1800 million in amortization, it can be deduced that the average weighted rate of interest was in the region of 3.6 per cent and the average amortization period a little over 9 years. If the obligations arising out of "other" debts, whose maturities can be estimated at an average of 2 to 3 years, are included, the percentage of interest becomes somewhat higher and the average amortization period must be considerably shortened.

The table below gives an idea of the percentages of the external public debt of the 37 countries at the end of 1962, which had to be repaid in the 3-year period 1963-1965 and in the 5-year period 1963-1967, respectively.

Since virtually all the "other" debt matured within 3 years, the percentages indicated would have been considerably higher if this "other" debt had been included in the calculations. In the case of Latin America, it would have meant that 50 per cent of the total external debt (longer than 1 year) had to be repaid within three years and 65 per cent within five years.

TABLE V
 PERCENTAGES OF EXTERNAL PUBLIC DEBT AT END OF 1962
 MATURING IN 1963-65 AND IN 1963-67
 (37 countries)

	3 years	5 years
Latin America	36	55
South Asia and Middle East	19	32
East Asia	31	52
Africa	13	50
Southern Europe	41	65

Source: *Economic Growth and External Debt*, Dragoslav Avramovic and Associates, IBRD, 1964

The conclusion to be drawn from these data is that far and away the greatest proportion of the external-debt service of the developing countries consists of amortization obligations maturing at relatively short term. This is in marked contrast to the traditional structure of external government debt, as it existed in the prewar years, when external government loans were commonly floated on the international bond markets in the form of long-term securities. Furthermore, the rate of interest was substantially higher, because the risk was borne by private individuals. Nowadays, the external debt of the developing countries is a combination of long-term, usually low-interest, inter-governmental loans, long and medium-term credits furnished by international institutions at widely divergent interest rates, government-guaranteed medium and short-term private credits, and other short-term debt. This debt structure with its associated payment obligations is little suited to the great and continued need of most of the developing countries for net long-term capital imports. If debt continues to rise further within the present structure, interest payments will become an increasingly heavy burden; even now many countries are faced with the problem of heavy amortization obligations at short term.

Debt and Debt-Service Projections to 1970 and 1975

The Agency for International Development has made a number of informative projections regarding the future financing requirements, the increase in the external debt, and the resulting interest and amortization obligations of the developing countries, by extrapolating their record of growth during the seven-year period 1956-63 (GNP plus 4.4 per cent, imports plus 4.4 per cent, and exports plus 3.8 per cent per annum), on the assumption that the amount of net loans would be

maintained at the 1963 level (cf. Table I). These projections were prepared on the basis of three alternative types of loan terms: (a) terms in line with the average conditions applicable in 1963 to all bilateral public loans made by OECD countries (amortization over 20 years, including a 7-year period of grace, and an average rate of interest of 3.5 per cent); (b) softer terms in line with those which were regarded as standard conditions in 1963 for loans furnished by the members of the India Consortium (amortization over 30 years, including a 7-year grace period, and an average interest rate of 3 per cent); and (c) harder terms, which in 1963 were regarded as standard for loans by OECD countries, excluding the United States (amortization over 16 years, including a 3-year grace period, and an average interest rate of 4.8 per cent). The results of these projections are reproduced in Table VI.

Although the assumptions underlying these projections are hypothetical, important conclusions can be drawn from them.

1. Even if the modest record of growth in their gross national product by 4.4 per cent is maintained (in point of fact this growth rate was only 4 per cent in 1963 and 1964), the current-account deficit of the developing countries will have risen by 87 per cent in 1975, unless there is an improvement in their import-export ratio.
2. If the amount of net loans is maintained at the 1963 level, "other" sources will have to play a proportionately greater part than loans in covering the deficit (in contrast to the historical trend).
3. To keep net loans at the same level, gross loans will have to increase at a rate dependent upon the average loan terms; in the case of type-1 terms by 43 per cent in 1970 and 72 per cent in 1975, in the case of type-3 terms by 88 per cent in 1970 and 150 per cent in 1975.
4. If net loans are maintained at the 1963 level, the cumulative loan debt will rise from \$22.5 billion in 1963 to more than \$60 billion in 1970 and to some \$80 to \$90 billion in 1975, depending on the terms on which loans are made available.
5. Under the conditions assumed under (4), the servicing of interest and amortization will impose increasingly heavy demands, not only in absolute terms, but also when expressed as percentages of exports; if type-3 loan terms are applicable, this debt service will claim \$7.3 billion in 1970 and no less than \$11 billion in 1975, corresponding to 17.8 per cent and 22 per cent, respectively, of assumed exports. Assuming the third type of loan conditions is applicable, of the gross loans of \$9.8 billion in 1970 and \$13.5 billion in 1975, some 75 per

cent would be repatriated to the creditor countries in the form of interest and amortization in 1970 and about 80 per cent in 1975. This may well be an overestimate, because there is always a time lag in the use of loans obtained, but still no allowance has been made for the servicing of "other" short-term indebtedness.

TABLE VI
PROJECTION OF GROWTH, CURRENT-ACCOUNT DEFICIT AND
FINANCING, FOR ALL DEVELOPING COUNTRIES
(in billions of dollars)

	1963	1970	1975
Gross national product	200	268.2	333.4
Imports of goods and services (excl. from developing countries)	39.7	52.2	64.8
Exports of goods and services (excl. to developing countries)	31.8	41.0	50.0
Deficit on current account	7.9	11.2	14.8
<hr/>			
Loans payable in convertible currency, gross	5.4 type 1	7.7	9.3
	type 2	7.1	8.2
	type 3	9.8	13.5
Interest and amortization	2.9 type 1	5.2	6.8
	type 2	4.6	5.7
	type 3	7.3	11.0
Loans payable in convertible currency, net	2.5	2.5	2.5
Other sources (grants, "loans" to be repaid in the currency of the recipient country, direct private investments)	5.4	8.7	12.3
Total financial resources	7.9	11.2	14.8
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Cumulative loan debt	22.5 type 1	61.4	86.8
	type 2	60.4	83.9
	type 3	63.5	93.1
Loan debt as percentage of GNP	11.3 type 1	22.9	26.0
	type 2	22.5	25.2
	type 3	23.7	27.9
Loan service as percentage of exports of goods and services	9.1 type 1	12.7	13.6
	type 2	11.2	11.4
	type 3	17.8	22.0

If the projected debt-service figures are broken down into interest and amortization for the various types of loan terms, the following picture is obtained.

TABLE VII
PROJECTIONS OF INTEREST AND AMORTIZATION,
ALL DEVELOPING COUNTRIES
(in billions of dollars)

	1963	1970	1975
Interest and amortization	2.9	5.2	6.8
	type 1	4.6	5.7
	type 2	7.3	11.0
	type 3		
Interest	0.7	1.9	2.5
	type 1	1.6	2.1
	type 2	2.4	3.6
	type 3		
Amortization	2.2	3.3	4.3
	type 1	3.0	3.6
	type 2	4.9	7.4
	type 3		

It is evident from this breakdown that for each of the alternative loan terms the ratio of interest to amortization tends to become 1:2 or 1 to less than 2 (compared with 1:3 in 1963). In the case of the projections based on the type-3 loan terms, it is the relatively high rate of interest that influences the ratio between interest and amortization.

Further Note on Structure of External Debt

The conditions on which public loans are actually made available to the developing countries today are not confined to the three types mentioned above, but show a wide range of variation. Quite apart from the government-guaranteed private credits (predominantly medium-term supplier credits with a term of 5 to 10 years and an interest rate of 6 per cent and more), the soft end of this range includes the development credits of the International Development Association (IDA), an affiliate of the World Bank, the standard terms of which are: term 50 years, including a 10-year grace period, and a nominal interest rate of 0.75 per cent. Loans under the American bilateral AID program fall into two categories, the softer type with a term of 40 years, including a 10-year grace period, and an interest rate of 2.5 per cent (1 per cent during the grace period), and the harder type with a term of 20 years, including a 3-year grace period, and an interest rate of 3.5 per cent. The average terms of all bilateral public loans by the OECD countries