INTERNATIONAL BORROWING, DEBT AND DEVELOPMENT(*)

A. P. Thirlwall (**)

1 - Foreign borrowing in the development process

Borrowing by countries is no different in principle to borrowing by firms, and the purpose is generally the same - to finance investment and growth. Lending and borrowing are natural features of capitalist economic activity without which capital accumulation would be confined to sectors of economic activity which have a surplus of income over current requirements which would be inefficient and sub-optimal from a growth point of view. Very often the factors which cause the supply of capital to increase create its own demand. The most obvious example of this at the international level in recent years has been the increase in the price of oil which has created both large surpluses for oil exporting countries and the need to borrow by oil importing countries to maintain economic growth without curtailing imports. Going back into history, sovereign lending (and the problems associated with it) has been a feature of international economic life at least since the Medicis of Florence started making loans to the English and Spanish monarchs in the 14th century. Historically, the international lending and borrowing process has played an integral part in the development of most major industrialised countries, and continues to play a significant role in the economic transformation of today's developing countries.

Traditionally, the role of foreign borrowing was seen by countries as a supplement to domestic saving to bridge a savings-investment gap for the achievement of faster growth. The concept of dual-gap analysis, however, pioneered by Hollis Chenery and his collaborators (1), shows that foreign borrowing may also be viewed as a supplement to foreign exchange if to achieve a faster rate of growth and development the gap between foreign exchange earnings from exports and necessary imports is larger than the domestic savings-investment gap, and domestic and foreign resources are not easily substitutable for one another. Foreign borrowing must fill the largest of the two gaps if the target growth rate is to be achieved. The historical sequence of experience originally suggested by Chenery was that countries in the pre take-off stage of development would have a dominant savings-investment gap, then followed by a

^(*) Paper prepared for an International Seminar on Financing for Development, Kuala Lumpur, 10 th-13 th September 1984, jointly organized by the Faculty of Economics, Universiti Kebangsaan and Public Bank Berhad. The author is grateful for comments from participants in seminars at Coimbra University and the Instituto Universitário da Beira Interior, in Portugal.

^(**) University of Kent, at Canterbury.

⁽¹⁾ See, for example, Chenery and Bruno (1962), Chenery and Adelman (1966), Chenery and Macewan (1966), and Chenery and Strout (1966).

dominant foreign exchange gap, with the possibility of a skill constraint at any stage. Most of today's developing countries, apart from the oil producing and exporting countries, have a dominant foreign exchange gap, which manifests itself in a chronic balance of payments deficit on current account, while domestic resources lie idle. These deficits require financing not only in the interests of the countries themselves but for the sake of the growth momentum of the whole world economy. There is a mutual interdependence in the world economic system because countries are linked through trade. The alternative to the financing of deficits is adjustment which will invariably mean slower growth in the system as a whole.

If the historical experience of countries now developed is considered, in cases where borrowing took place (mainly from the United Kingdom as the major creditor) the borrowing was ultimately converted into an export surplus which enabled the country to redeem its debt and to become a net creditor. The condition for this to happen is that the marginal savings ratio should exceed the average to eliminate a savings-investment gap if that is the dominant constraint, or that the marginal propensity to export should exceed the marginal propensity to import if foreign exchange is the dominant constraint. For most developing countries today there is little evidence that they have either the desire or the ability to reduce the level of net resource inflows and indebtedness — without major disruption to their economies. The need for resources is as acute as ever, and indebtedness mounts because of a dominant foreign exchange gap to meet development requirements and to pay interest and amortization on past borrowing. The countries find it difficult to convert domestic resources into foreign exchange in adequate quantities, not only cyclically when the world economy is depressed, but also secularly owing to their economic structure which produces goods the demand for which tends to be both price and income inelastic in world trade. Writing in 1972 I predicted «unless something is done debt servicing problem arising from mounting resource flows may well become unmanageable in the not too distant future. It will certainly be a long time before these countries become net exporters of capital even in the absence of a savings-investment gap» (2). This prediction was made even before the OPEC cartel first exerted its influence on the world economy in that fateful month of December 1973.

1.1 — The balance of payments of non-oil developing countries (3)

It is instructive to examine the balance of payments deficits of the non-oil developing countries since 1973, and the methods of financing them. Naturally, all accounting figures are ex post and therefore give no measure of the

⁽²⁾ Thirlwall (1972), p. 257.

⁽³⁾ Non-oil developing countries consist of all developing countries except the oil exporting countries of Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Oman, Quator, Saudi Arabia, UAR, and Venezuela.

magnitude of the foreign exchange gap on current account had the countries been willing and able to finance larger deficits at higher levels of economic activity. Undoubtedly, the deficits would have been larger post-1973 and post-1979 had not some adjustment, as well as financing, taken place to accommodate the massive increase in oil prices in those years. Even so, the deficits have been huge by any standards reaching a peak of over \$100 billion in 1981. Had borrowing not been resorted to the adjustment required would have precipitated a world recession more severe than the great depression of the 1930s.

Table 1 shows the deficit on current account having risen from \$11.3 billion in 1973 to \$107.7 billion in 1981, and then contracting to \$67.8 billion in 1983. Notice the colossal outflow of investment income payments in the 1980s amounting to nearly \$80 billion in 1983, itself a function and reflection of past capital inflows. The net deficit on service payments and private transfers accounted for more than one-third of the total current account deficit. Of the trade deficit, over one-half is now accounted for by a deficit on the oil account.

Borrowing, which creates debt, is not the only form of balance of payments finance, but it has been increasingly resorted to since 1973. Foreign exchange reserves can be used, but as table 1 shows in most years the non--oil developing countries have actually accumulated reserves. Direct private investment does not create debt, but it gives rise to future foreign exchange outflows if profits are repatriated. The total of non-debt creating flows in 1983 was \$24.2 billion, leaving \$50.8 billion of the deficit to be financed by external borrowing. Net long term borrowing (i. e. debt with maturities of more than one year) was greater at \$64 billion owing to net short term capital outflows of \$13.2 billion. The composition of long term borrowing has switched radically in recent years from official to private sources. Over \$40 billion of commercial bank credit was extended in 1983, for the most part at a floating rate of interest with spreads of between 1-2.5 percent above the London Interbank Offer Rate (LIBOR). It is the accumulation of amortization and interest payments on private debt that has largely been responsible for the current debt difficulties of certain countries. I shall return later to the composition of international borrowing.

1.2 – The profitability of borrowing

It will pay a country to borrow, just as it is profitable for a firm to borrow, as long as the rate of return on borrowing exceeds the market rate of interest. The growth of income will be higher than that given by the savings ratio alone according to the expression (4)

$$y = \sigma S + (\sigma - r) (\Delta D/Y) \tag{1}$$

⁽⁴⁾ See appendix 1 for the derivation.

where y is the growth of income, s is the savings ratio, σ is the productivity of capital, r is the interest rate, and $\Delta D/Y$ is the new debt created by borrowing as a proportion of income (5). It is assumed here that borrowing does not weaken the domestic savings effort or reduce the overall productivity of capital. It has been argued, some (e. g. Griffin by 1970) that foreign borrowing may have the effect of discouraging saving and raising the capital-output ratio, in which case the impact on income could be negative, but I will not pursue this debate here.

The effect of foreign borrowing on the growth of output (6) depends on the balance between the current inflow of investment funds and the loss of savings resulting from debt servicing on past loans, according to the expression (7)

 $\dot{O} = \sigma s + \sigma \left(\frac{\Delta D - srD}{O} \right)$ (2)

where O is output and O is the growth of output.

The growth of output will be higher than the rate obtainable from domestic saving alone as long as $\Delta D > srD$; that is, as long as new inflows of capital exceed the amount of outflow on past loans that would otherwise have been saved. This may be a stringent condition unless it is assumed that debt service payments are met by new borrowing so that $rD = \Delta D$. On that assumption the growth of output with capital imports will always be higher than without, assuming s < 1 (and that s and σ are not adversely affected). If the loss of saving is greater than new inflows in any particular year, the growth of output will be lower than it otherwise would be, and may have been the experience of certain Latin American countries in recent years. In Latin America as a whole since 1981, debt repayments have exceeded new loans. In 1982, for example, interest and profit outflows were \$36.8 billion, and new inflows \$16.6 billion. In 1983 the corresponding figures were \$34 billion and \$4.5 billion, representing a net «loss» or equivalent resource transfer from Latin America of \$29.5 billion. It is these sorts of conditions that provide convenient ammunition for the Marxist view that international lending from rich to poor countries is simply a pernicious device for ultimately transferring resources from the poor to the rich. There is a certain logic in the argument if the countries must pay back more in foreign exchange than the face value of the loan, but the calculus is complicated depending on the time horizon taken for evaluation and whether countries are able to borrow in perpetuity. A wider analysis of the total benefits and costs must also take account of the productivity of capital in the borrowing country; the opportunity cost of capital in the lending country, and the rate of inflation which determines the real value of debt repayments.

⁽⁵⁾ If foreign exchange is the dominant constraint, growth without borrowing would be below os.

⁽⁶⁾ The difference between national output and income is accounted for by net factor payments abroad including interest payments on debt.

⁽⁷⁾ See appendix 1 for the derivation.

The particular target of attack by the political left is direct private investment by multinational corporations. Such investment does not create debt but can cause similar problems to loan finance, and problems of its own. While a loan only creates obligations for a definite number of years, private investment may involve an unending commitment in the form of profit repatriation. It is easy to show that if a constant proportion of profits are repatriated, a constant gross inflow of private investment will ultimately lead to a net outflow of foreign exchange so that if the balance of payments consequences are not to turn adverse an *increasing* gross inflow of private foreign investiment is necessary with all its implications for the structure of production and consumption in poor countries. This was a feature of the international capitalist system that particularly worried Kalecki (1976), and rightly so.

TABLE 1

The balance of payments of the non-oil developing countries and methods of financing 1973-1983

				(\$ billion)							
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Balance on current account	— 11.3	— 37.0	— 46.3	32.6	— 28.9	— 41.3	— 61.0	— 89.0	— 107.7	— 86.8	— 67.8
Trade balance	— 10.3	— 33.3	— 40.8	27.0	— 25.3	— 36.6	— 51.3	 74.3	— 79.6	— 52.2	<u> </u>
Oil trade balance	- 3.8 - 6.5	— 13.9 — 19.4	— 13.9 — 26.9	— 17.1 — 10.0	— 18.4 — 6.8	— 18.6 — 18.0	25.2 26.1	— 38.7 — 35.6	— 37.3 — 42.3	— 30.0 — 22.2	— 25.1 — 16.4
Net services and private transfers	— 1.0	— 3.7	— 5.5	— 5.6	— 3.7	- 4.7	9.7	 14.7	— 28.1	— 34.6	— 26.4
Investment income payments Other services and private	10.5	13.6	 15.4	 17.6	20.8	 27.1	39.3	— 52.7	— 70.3	— 79.2	— 78.6
transfers, net	9.5	9.9	9.9	12.0	17.1	22.4	29.6	38.0	42.2	44.6	52.2
Methods of financing											
Use of reserves	10.4	— 2.7	1.6	— 13.0	— 12.5	<u> </u>	— 12.6	 4.5	— 2.1	7.1	— 7.2
Non-debt-creating flows, net	10.3	14.6	11.8	12.6	14.4	17.9	23.9	24.1	28.0	25.1	24.2
Official transfers	5.5	8.7	7.1	7.5	8.2	8.2	11.6	12.5	13.8	13.2	13.1
ments, and gold monetization	0.6	0.6	— 0.6	0.1	0.8	2.3	3.4	1.4	0.3	0.5	0.2
Direct investment flows, net	4.2	5.3	5.3	5.0	5.4	7.3	8.9	10.1	13.9	11.4	10.9
Net external borrowing	11.4	25.1	32.9	33.0	27.0	40.8	49.7	69.3	81.8	54.6	50.8
Long-term borrowing, net	11.7	18.1	27.1	28.0	24.6	37.2	36.5	47.2	62.7	41.0	64.0
From official sources	4.9 6.8	6.8 11.3	11.7 15.4	10.5 17.5	11.4 13.2	13.8 23.4	13.3 23.2	17.6 29.6	23.0 39.7	19.5 21.5	23.8 40.2

Source: World Economic Outlook, IMF, 1983.

1.3 - First thougts on the debt service problem

The fact that the rate of return on investment in the borrowing country exceeds the rate of interest is no indication of whether the debt can be serviced since the loan must be repaid with interest in foreign currency. Thus the questions of the profitability of borrowing and of the capacity to service debt are conceptually distinct. The ability to service debt depends on whether additional foreign exchange can be earned or saved by the borrowing. To gauge this, Little and Mirrlees (1974) recommend valuing the rate of return on investment at world prices, but this is of very little help. All commodities can be valued at world prices, but this gives no indication of whether actual foreign exchange will be forthcoming. This depends on the domestic economic policy pursued by the country concerned, and on the ability to export which depends on world economic conditions. A major part of the debt servicing difficulties that have arisen in recent years have more to do with changes in world economic conditions which have depressed foreign exchange earnings than with either the miscalculation of rates of return on investment, the misuse of investment funds, or the use of capital inflows to raise present consumption. There is a parallel today with great depression of the 1930s when the collapse of the world price of key commodities, and a general shrinkage of world trade, caused major debt defaults (which subsequently dried up the flow of private capital to developing countries for the next fourty years). World trade volume shrank by 2.5 percent in 1982, and the terms of trade for developing countries as a whole deteriorated by 12.8 percent between 1980 and 1982. Not even the most prudent borrower or cautious leader can foresee such events which may occur half way through the life of a loan commitment entered into under quite different economic circumstances. Lenders and borrowers can allow for risc — that is, the statistical probability that the expected outcome will not materialize — but what has happened in the world last few years is really a whole shift in the probability distribution of outcomes which cannot be insured against. When such unforeseen events occur, beyond the borrower's control, which makes it difficult for loans to be repaid and serviced without severe economic disruption, two questions arise: what is the optimal degree of rescheduling, and who should bear the cost? It is in the interests of private banks that loans be repaid on schedule, but it is not necessarily in the global social interest if this leads to a contraction of imports by the borrowing country which then reduces the exports of other coutries, lending to a deflationary spiral in the whole world economy. If there is a divergence between the private and social interest, this would seem to call for an international subsidy for lenders and borrowers to accept more rescheduling. At the present, debtor countries are being required to accept adjustment and rescheduling with no subsidy at all. If the international economy derives a benefit from rescheduling, however, why should the poor debtor countries bear the full cost? There is a great source of international inequality here, particularly when it is policies pursued by the lender countries which have made the servicing of debt so problematic in the first place.

2 — The structure and magnitude of capital inflows

The main forms of international capital flows to developing countries consist of (i) official flows from bilateral and multilateral sources on concessional and non-concessional terms; (ii) commercial bank loans, and (iii) direct private investment. Each type of flow has different repayment obligations and therefore the mix of borrowing will involve different future foreign exchange commitments. A large proportion of official bilateral and multilateral lending is on concessional terms which means that the debt has a longer maturity and lower interest rate than commercial lending. Official Development Assistance is defined as official flows with a grant element of at least 25 percent (8). Official debt may be more easily rescheduled than private debt, for a longer term and at lower cost. As we said before, direct private investment does not create debt, but it commits foreign exchange in the form of potential profit outflows for an indefinite period.

Because of future repayment obligations (including profit outflows) there is a difference between the nominal value of capital inflows and their worth in terms of the recipient's increased command over goods and services, or the transfer of real resources. It must also be remembered that the countries from which loans originate do not necessarily bear the resource cost themselves unless they run a counterpart surplus on the current account of the balance of payments. Long term loans to developing countries may be more than matched by short term borrowing so that the «donor» country in fact receives a net resource inflow, such as the United States did for a large part of the post-war period (something General de Gaulle strongly objected to when he was President of France). The ultimate lenders, or transferers of real resources, are always those countries in balance of payments surplus.

The total net flow of financial resources to the developing countries from 1970 to 1982, and their composition, is shown in table 2. The flows are net of capital repayments on past loans but not of interest payments. Since 1970, the flow has increased five-fold at current prices, and doubled at constant prices, reaching a peak of \$107.9 billion in 1981. Interest payments have also risen steadily, however, from a mere \$9.3 billion in 1974, when lending accelerated, to \$59.2 in 1982. The implied transfer of *real* resources, therefore, is much smaller than the net flow of financial resources, and since 1977 has been virtually static with the increase in interest payments matching the increased flow of financial resources.

⁽⁸⁾ The grant element of a loan is its face value minus the discounted value of future repayments (expressed as a proportion of the face value), where the discount rate should be the rate of interest prevailing in the free market (although the OECD continues to work with a rate of 10 percent).

TABLE 2

Total net resource receipts of developing countries from all sources 1970-1982

(\$ billion at current prices)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
I. Official Development Assistance	8.23	9.14	9.84	12.68	16.50	20.95	20.35	20.98	28.10	31.93	37.33	36.63	34.24
1 — Bilateral	7.16	7.84	8.46	10.72	13.68	17.11	16.49	16.15	22.09	25.69	29.54	28.70	26.79
a) DAC countries	5.66	6.31	6.61	7.08	8.23	9.79	9.50	10.08	13.12	16.33	18.11	18.28	18.53
b) OPEC countries	0.39	0.44	0.66	2.03	4.15	5.68	5.17	4.28	6.90	6.96	8.73	7.61	5.51
c) CMEA and other donors.	1.11	1.09	1.19	1.61	1.30	1.64	1.81	1.79	2.07	2.40	2.70	2.81	2.75
2 — Multilateral agencies	1.07	1.30	1.38	1.96	2.82	3.84	3.87	4.83	6.01	6.24	7.79	7.93	7.45
II. Grants by private voluntary agencies	0.86	0.91	1.04	1.37	1.22	1.34	1.35	1.49	1.65	1.95	2.31	2.02	2.31
III. Non-concessional flows	10.95	11.83	13.30	19.86	19.81	34.31	34.89	44.56	57.91	57.72	56.41	69.27	56.63
1 — Official or officially supported	3.96	4.92	3.75	4.86	7.64	10.53	12.66	15.74	19.21	18.72	22.49	22.14	22.63
a) Private export credits (DAC)	2.09	2.71	1.44	1.16	2.40	4.42	6.74	8.84	9.70	8.85	11.12	11.33	(9.00)
b) Official export credits (DAC)	0.59	0.72	0.74	1.13	0.80	1.20	1.39	1.44	2.22	1.73	2.46	2.01	(2.45)
c) Multilateral	0.71	0.92	1.01	1.31	1.81	2.53	2.54	2.69	3.09	4.16	4.85	5.68	(6.68)
 d) Other official and private flows 													
(DAC)	0.25	0.28	0.45	1.02	0.83	0.75	0.80	0.63	1.36	1.14	2.94	1.96	(3.00)
e) Other donors	0.32	0.29	0.11	0.24	1.80	1.63	1.19	2.14	2.84	2.84	1.82	1.16	(1.60)
2 — Private	6.99	6.91	9.55	15.00	12.17	23.78	22.23	28.82	38.70	39.00	33.92	47.13	34.00
a) Direct investment	3.69	3.31	4.23	4.72	1.89	11.36	8.31	9.82	11.59	13.42	។0.54	16.13	(11.00)
b) Bank sector	3.00	3.30	4.80	9.70	10.00	12.00	12.70	15.80	23.20	24.90	22.00	29.00	21.00
c) Bond lending	0.30	. 0.30	0.52	0.58	0.28	0.42	1.22	3.20	3.91	0.68	1.38	2.00	2.00
Total receipts (I + II + III)	20.04	21.88	24.18	33.91	37.53	56.60	56.59	67.03	87.66	91.60	96.05	107.92	93.18

Source: Development Cooperation Review, OECD, Paris, 1983.

We can also see from table 2, the changing composition of flows over time. While official development assistance rose four-fold from 1970 to 1982, non-concessional flows rose five-fold, and private bank sector lending rose more than seven-fold. Private lending has exceeded official development assistance virtually continuously since 1973. Direct private investment has languished, relatively speaking, since 1975, but private bank lending increased by \$17 billion between 1975 and 1981, falling back somewhat in 1982. It is now increasing again. The implications of these trends for the «debt-crisis» will become apparent later.

2.1 — The growth-sustaining role of net capital inflows

In my own research in recent years I have been attempting to develop and apply models of balance of payments constrained growth to both developed and developing coutries alike (9). If countries must maintain balance of payments equilibrium on current account, the growth rate consistent with equilibrium can be expressed as

$$\dot{y} = \frac{(1 + \psi + \eta) \ (\dot{p}_{dt} - \dot{p}_{ft} - \dot{e}_{t}) + \epsilon(\dot{z}_{t})}{\pi}$$
 (3)

Where \dot{p}_{dt} is growth of export prices in domestic currency, \dot{p}_{tt} is the growth of foreing prices, \dot{e}_t is the rate of change of the exchange rate, \dot{z}_t is the growth of world income, ψ is the price elasticity of demand for imports (< 0), η is the price elasticity of demand for exports (< 0), ϵ is the income elasticity of demand for exports, and π is the income elasticity of demand for imports.

If countries are allowed to run current deficits financed by net capital inflows, the expression for the growth rate consistent with overall balance of payments equilibrium is

$$\dot{\mathbf{y}} = \frac{(1 + \psi + \frac{E}{R} \eta) (\dot{p}_{dl} - \dot{p}_{fl} - \dot{e}_{l}) + \frac{E}{R} \epsilon (\dot{z}_{l}) + \frac{C}{R} (\dot{c}_{l} - \dot{p}_{dl})}{\pi}$$
(4)

were $(\dot{c}_t - \dot{p}_{at})$ is the rate of growth of real capital inflows, and E/R and C/R represent the proportions of the total import bill on current account financed by export earnings and capital inflows, respectively. In effect, any country's rate can be disaggregated into four component parts:

- i) A pure term of trade effect $(\dot{p}_{dt} \dot{p}_{ft} \dot{e}_t)$;
- ii) The volume effect of relative price changes on balance of payments constrained real income growth $[\psi + (E/R) \ \eta] \ (\dot{p}_{dt} \dot{p}_{ft} \dot{e}_{t});$

⁽⁹⁾ See Thirlwall (1979, 1982, 1983), and Thirlwall and Hussain (1982).

- iii) The effect of exogenous changes in income growth abroad (E/R) ϵ (Z_t);
- iv) The effect of the rate of growth of real capital inflows (C/R) $(\dot{c}_t \dot{p}_{dt})$ all deflated by π .

The model illustrates nicely the mutual interdependence of the world economy, or the interaction between the growth of one country and the growth of others, through the income elasticity of demand for exports (ϵ). It also illustrates how a deceleration of growth is one set of countries, which would ordinarily affect growth elsewhere as exports fall, can be mitigated by compensating increases in foreign borrowing and a faster growth of real capital inflows. This is exactly what happened in the aggregate (and in individual developing countries) during the decade 1970-1980. Despite oil shocks, and recession in the developed countries borrowing allowed at least the middle-income countries to grow at almost the same rate as in the previous decade — at 5.6 percent per annum, compared with 6.2 percent from 1960-1970. I have tried to estimate the contribution of foreign borrowing to growth within the framework outlined above for a selection of developing countries relating to different time periods. The results are shown in table 3 by estimating the value of the last term in equation (4).

TABLE 3

The contribution of net capital inflows to growth in a sample of developing countries

	Average share of capital inflows as proportion of import payments (C/R)	Average (%) growth of real capital inflows p.a. (c. $-\dot{p}_{er}$)	Income elasticity of demand for imports	Contribution of capital inflows to growth (percentage points)	
Pakistan (1951-1969)	0.21	20	1.02	4.1	
Tunisia (1960-1975)	0.20	9	0.91	2.0	
Portugal (1951-1966)	0.24	4	1.39	0.7	
Jamaica (1961-1975)	0.15	2	0.70	0.4	
Thailand (1953-1972)	0.11	12	0.93	1.4	
Brazil (1968-1976)	0.40	35	2.05	6.8	
Turkey (1960-1973)	0.29	9	0.92	2.8	
Kenya (1958-1973)	0.43	2	0.99	0.9	
India (1951-1968)	0.15	13	1.43	1.4	

Brazil is perhaps the most dramatic example of a developing country in the post-war years that has financed growth through borrowing. Between 1968 and 1976 over one-half of its average growth rate of 10 percent per annum was sustained through capital inflows (see Thirlwall, Fernandes and Siquiera, 1983). Other countries have also borrowed heavily and prospered.

Without the sustaining role of foreign borrowing and capital flows, the world economy (and individual countries) can become caught in a nasty vicious cir-

cle of retrenchment and stagnation when exogenous shocks affect adversely the balance of payments of developing countries. Otherwise, developing countries would either have to curtail imports or be forced to promote traditional exports which are generally price inelastic in demand. If the former course is taken, a combination of deflation and protection inflicts depression on the whole system. In 1982, developing countries cut their imports by 7.7 percent. If the latter course is taken, the balance of payments of the developing countries taken as a whole may actually worsen which either triggers further deflation or increases the level of borrowing required to sustain growth in the future. This then lends to higher levels of debt, higher interest rates and more financial difficulties. (10) When disruptions in the world economy occur, therefore, it is of the utmost importance for world welfare that the international financial system should be immediately responsive to the needs of the situation, particularly international financial institutions in the public domain. They require above all much greater financial flexibility than hitherto with the ability to raise, and even to create, money for collectively agreed purposes which was Keynes' vision of the International Clearing Union. I am thinking here of an enhanced role for the International Monetary Fund and Special Drawing Rights (SDRs). The world has international institutions to deal with financial crises, but fails to use them imaginatively. In the 1970s it was the private banking system that gave support to developing countries when it was needed, but the terms of assistance sowed the seeds of its own destruction. If the same support had been forthcoming from a sensibly organised international monetary system, many of the debt service difficulties now being experienced need not have arisen.

2.2 — Can a country borrow too much?

The benefits of borrowing to individual countries, and to the world economy at large, are clear. But how far should borrowing go? Is it possible that after a certain point, even though a developing country still requires resources for development, the disadvantages of further borrowing outweigh the advantages? As far as I can see there are no precise objective criteria that can be laid down to answer this question. If a country has an intertemporal budget constraint, so that no creditoris to be left unpaid over time, clearly trade surpluses and deficits must balance over the long run, and the question is not whether to borrow but when. The optimal timing of deficits will depend on current and future conditions in the economy. As far as borrowing for consumption is concerned, to smooth out consumption over time, the relation between the market rate of interest and the rate of time preference is important. As

⁽¹⁰⁾ For a model of this nature see A. Abrahamian (1984).

far as borrowing for investment is concerned, the relation between the rate of interest and the productivity of investment is important. But suppose there is not an intertemporal constraint, that countries can borrow in perpetuity, how then should the problem be formulated? And what about the fact that countries must repay in foreign currency?

Most of the criteria for the evaluation of optimal borrowing relate to the proneness to default which may impair future borrowing capacity. This makes sense, since if it wasn't for the possibility of mortgaging the future, default would be the optimal strategy from the borrower's point of view: borrow as much as possible and delay repayment indefinitely! Debt as a proportion of national income is sometimes taken as a criterion. It can be shown (Hayes, 1964) that there is a critical rate of interest which if exceeded will mean that the ratio of debt to national income will rise. There has been a progressive rise in the ratio of debt to the GDP of developing countries from 22.4 percent in 1973 to 34.7 percent in 1983, but it is not clear what economic significance should be attached to this ratio as a measure of the ability to service debt and therefore as a measure of the possibility of default. It is true that to service the debt export earnings as a proportion of national income should rise, but this suggests a more direct measure of the proneness to default relating debti service payments to exports. Indeed, by far the most widely used criterion for assessing the desirability of future borrowing and proneness to default is the debt service ratio which measures the ratio of amortization and interest payments to export earnings. While it is not possible to fix a limit to the debt service ratio that should not be exceeded (because other factors also matter), a progressively rising ratio means a greater fixed claim on export receipts and therefore the greater the proneness to default if these receipts fluctuate and foreign exchange requirements for other purposes cannot easily be curtailed.

The determinants of changes in the debt service ratio are the rate of growth of debt, the rate of growth of export earnings, the rate of interest, and the rate of amortization. The debt service ratio may be written as

$$R/E$$
 (5)

where R is total debt service repayments and E is export earnings. This ratio will rise if

$$\dot{R} > \dot{E}$$
 (6)

where dot denotes time rate of change. Now

$$R = (rD + A) \tag{7}$$

where r is the interest rate, D is outstanding debt, and A is amortization payments. Hence

$$dR = drD + dDr + dA \tag{8}$$

263

where d is the difference operator. Now

$$A = \alpha D \tag{9}$$

where α is the amortization rate. Hence

$$dA = d \alpha D + dD \alpha \tag{10}$$

substituting (10) into (8) and dividing by R gives

$$\dot{R} = \frac{(dr + d\alpha)D + (r + \alpha)dD}{(r + \alpha)D}$$
 (11)

If the rate of interest and amortization are unchanged, then $\hat{R} > \hat{E}$ if $\hat{D} > \hat{E}$; that is, if debt grows faster than export earnings. If the rates of interest and amortization are not constant, the change in the debt service ratio depends on

$$\left[\frac{dr+d\alpha}{(r+\alpha)}\right]+\dot{D}\lesssim\dot{E}\tag{12}$$

For a given growth of debt and export earnings, the required fall in the rate of interest and amortization can be calculated for the debt service ratio to fall. Alternatively, for a given rise in interest rates, the growth of debt to keep the debt service ratio from rising can be calculated. The formulations are useful in thinking about schemes for rescheduling, and compensation for countries where the debt service ratio rises above a certain level.

For borrowers and lenders alike, the problem is knowing what export earnings, and borrowing requirements to pay for imports, are likely to be in the future when loan commitments, at fixed or floating rates of interest, are entered into in the present. This is one reason why the Institute of International Finance for Information has recently been established in Washington by the private banks to improve surveillance of borrowing countries.

Notwithstanding the attention paid to the debt service ratio, it is not necessarily a good indicator of a country's ability to repay debts, nor is the debt-service ratio in practice the only good predictor of default. The ability to repay depends also on the ability to attract capital and on the relation between foreign exchange earnings and necessary import requirements. Historically, countries such as Bolivia, Brazil, Colombia, Cuba, Peru and Uruguay defaulted between 1931 and 1933 with ratios between 16 and 28 percent, while Australia with a ratio of 45 percent did not default. Proneness to default depends on a complex of factors, of which the debt-service ratio is just one. Feder and Just (1977) have identified six variables significantly affecting the probability of default: the debt service ratio (+); per capita income (—); the ratio of net foreign capital inflows to debt service payments (—); the growth of GDP per capita (—); export growth (—), and the ratio of imports to international reserve holdings (+). Frank and Cline (1969) in an early study of «defaults» in the 1960s (which included 13 debt reschedulings in eight countries over 9 years) chose

eight indicators that they thought might be of importance, (11) but found only three to be statistically significant: the debt-service ratio; the rate of amortization of outstanding debt (the inverse of the average maturity of debt), and the ratio of imports to international reserves. The discriminant analysis used distinguished rescheduling and non-rescheduling of debt in all but 18 of the 145 "Country-years" taken. (12) They then ventured to predict into the future the countries and years in which debt rescheduling is likely on different export growth assumptions. At that time, India, Indonesia, Pakistan and Tunisia were forecast to have perpetual difficulties, while another fourteen countries were forecast to have periodic problems — depending on the growth of export earnings and whether net or gross capital inflows were assumed to be constant — including Argentina, Brazil, Mexico and Nigeria, some of today's difficult cases.

3 - The current debt «crisis»

The origin of the current debt difficulties of certain countries is no mystery. Massive balance of payments surpluses arose in the early 1970s in the oil exporting countries with counterpart deficits elsewhere. The factors which caused the supply of capital to increase created its own demand. Private banks were anxious to on-lend and there was no shortage of demand. Demand was particularly strong because commodity prices were generally high, exports were buoyant, and inflation had reduced the real rate of interest on loans to virtually zero. Credit looked cheap and borrowers looked good risks from the lender's point of view. Suddenly there was a change. Depression in the developed countries, mainly selfinflicted to reduce the rate of inflation, caused commodity prices to tumble, exports to languish, and real interest rates to rise. On top of this nominal interest rates floated upwards and the dollar appreciated.

A summary of outstanding debt and debt service payments of the non-oil developing countries 1973 to 1983 is given in table 4. The total outstanding debt was \$664.3 billion in 1983, of which long term debt (of more than one year maturity) comprised \$571.6 billion. This compares with long term debt of \$111.8 billion in 1973 (before the oil crisis), and as little as \$10 billion in 1956. The ratio of current external debt to export earnings is 144 %, and the ratio of debt to GDP is 35 %. Of the total long term debt, \$250 billion is owed to private financial institutions; \$130 billion consists of export credits with public guarantee, and approximately \$200 billion represents official development assistance and debt to multilateral institutions. By region, over 40 % of the debt is held by Latin America with roughly equal proportions shared between

⁽¹¹⁾ The eight indicators were the debt service ratio, export growth, the variability of export earnings, the ratio of unnecessary to necessary imports, the amortization rate, the import ratio, the ratio of imports to reserves, and per capita income.

⁽¹²⁾ I.e. using pooled time series and cross section data.

Southern Africa, North Africa and the Middle East, East Asia and the Pacific, South Asia, and the Mediterranean countries. The twenty largest debtor countries, listed in table 5, account for 65% of total long term debt and for nearly 90% of debt owed to the private banking system. Many of today's big debtors are the same as those of the 1960s when there was also talk of a growing debt crisis, with debt service ratios rising above 15% in several countries—the figure then regarded as the critical ratio (13)— e. g. Brazil, Mexico, Argentina, Turkey, Indonesia and India. The fact that crisis has been avoided so far, and North Korea is the only country to have repudiated debt in the post-war years, is some testimony to the mutual profitability of debt and to the resilience of the international financial system to accommodate the liquidity problems of particular countries, albeit at a heavy price.

TABLE 5

The twenty largest country debtors
(Ranked by average debt service payments 1981-1982)

(\$ billion)

	Disbursed debt (End 1982)	Owing to banks	Debt service payments 1983
Brazil	72.5	44.5	12.6
Mexico	60.5	40.4	10.6
Argentina	27.1	15.5	7.6
Venezuela	16.7	12.9	4.0
Algeria	17.6	3.8	4.8
Korea, Rep	22.0	8.7	4.3
Iran	4.8	0.2	2.2
Yuguslavia	14.2	4.5	2.4
Chile	13.4	8.5	2.4
Indonesia	19.9	3.9	3.1
Egypt	17.5	0.5	2.3
Saudi Arabia	2.7	0.8	1.8
Nigeria	8.0	3.5	2.2
Greece	8.8	5.7	1.9
Iraq	2.2	0.1	0.4
Peru	8.7	2.7	2.1
Turkey	14.9	3.3	3.3
Phillipines	12.2	3.9	1.9
Portugal	8.6	5.2	2.0
India	20.8	0.5	1.9
Total 20 countries	373.0	168.7	73.8

Source: Development Cooperation Review, OECD, 1983.

⁽¹³⁾ Pearson Report (1969).

Of the borrowing that has taken place since 1975, the overall terms of borrowing have hardened considerably reflecting the change in the composition of borrowing from official to private sources. The grant element of all loans has fallen from 26 %. The average nominal rate of interest has risen from 6.8 % to 11.7 %; the maturity of loans has fallen from 15.9 years to 13.8 years, and the grace period from 4.8 years to 4.3 years.

The increase in the volume of debt and higher rates of interest have led to an increase in debt service payments from \$17.9 billion in 1973 to \$93.2 billion in 1983. Interest payments absorb over one-half of net financial resource flows to developing countries. Despite the increase in the debt service burden, however, the ratio of payments to export earnings, taking all countries together, has not increased as dramatically as might have been expected. The ratio was 15.9 % in 1973 and 19.3 % in 1983. It rose suddenly during the period 1980 to 1982 from 17.6 % to 23.9 %, largely due to the stagnation of export earnings, but then fell back. In 1982, export volume of the non-oil developing countries increased by only 0.8 % while the terms of trade deteriorated by 2.7 %. The debt «crises» is basically a liquidity crisis for particular individual countries with debt-service ratios generally above the average and also suffering export difficulties — particularly, of course, Brazil, Mexico and Argentina, with debt service ratios of 32 %, 28 % and 40 % respectively. Other countries with debt service ratios over 20 % (which now may be the critical magnitude?) are Peru (44.9 %); Morocco (30 %); Bolivia (27 %); Chile (27 %); Malawi (24.5 %); Sierra Leone (24.4 %); Zambia (24 %); Egypt (22.7 %); Jamaica (22.5 %); Guyana (21.6 %), and Burma (22.1 %).

3.1 - In what sense a crisis?

There are basically two types of «problem» countries: first, a small number of poor commodity dependent countries, particularly in Africa but also elsewhere, where private banks are not involved. It would be a crisis for these countries if they had to cut back essential imports, but not if they default. The absolute sums of money involved are relatively small and their future entitlement to official assistance ought not to be jeopardised. Rescheduling has already been undertaken in many cases. The second set of countries comprises a few advanced developing countries who borrowed from the commercial banking system at floating rates of interest whose export markets became depressed. The present debt crisis — if it must be called such — is primarily a crisis for the private banking system which in retrospect clearly overextended itself. It becomes a crisis for individual countries if the threat of default dries up the current flow of capital. There would be a crisis for the world economy if there was a major default which led to a massive contraction of lending throughout the system; but this is unlikely to happen. Lending did contract in 1982, but it is now expanding again as difficulties have been resolved (at least temporarily) by international co-operation.

Most observers agree that the debt problem is a liquidity problem, not one of insolvency. When debt servicing difficulties began to emerge, the private banks increased the proportion of short to long term loans which exacerbated cash flow problems with large amounts of short term borrowing falling due for repayment within a year. It credits is further shortened or withheld entirely, a crisis then ensues. Such situations always pose a dilemma for the banks. If they do withhold futher credit they contribute to default; if they continue to lend they expose themselves even more. Understandably there has been greater paranoia in the United States than in Europe over the possibility of default since the US banks have much more exposed. Thirty percent of international lending by US banks is to developing countries compared with only 20% in Europe. In 1980, the nine largest US banks had an exposure to Brazil equal to 40% of shareholders' capital; to Mexico 38 % and to Korea 19 %. If these debts were written off, a major part of the capital and reserves of the banking system would be wiped out. With the intricate net-work of interbank lending that exists, there would be the possibility of a chain of bank collapses. There is no lender of last resort in the United States as in the United Kingdom. Moreover, private lending by US banks does not have the same degree of official guarantees as in Europe, where at least 30 % of lending is for export credits. It is not conceivable, however, that a major US bank would be allowed to collapse simply for want of a debt rescheduling agreement. Indeed, to date there have been no cases of default, and only a few cases of interest arrears. Up to October 1983, 29 rescheduling arrangements had been satisfactorily concluded, with the help of international consortia and the IMF, involving 22 countries and amounting to \$60 billion. At the international level emergency financing is now available under the auspices of the Bank for International Settlements, and in January 1983 the IMF established a SDR 17 billion emergency fund under the General Agreement to Borrow (GAB). It remains to be seen whether theses facilities will be adequate. If not, new mechanisms must be found to take the «crisis» out of borrowing, and deflationary bias out of the world economy, simultaneously. If there is a crisis, donors have been as much responsible as borrowers. The developed countries bear a major responsibility for the world recession; at the same time governments of developed countries have encouraged and promoted export credit, and private banks over-extended themselves. Shared blame requires shared solutions.

TABLE 4
Summary of outstanding debt and debt service payments of non-oil developing countries 1973-1983

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Total debt (\$ bill)	130.1	160.8	190.8 27.3	228.0 33.2	278.5 42.5	336.3 49.7	396.9 58.8	474.0 85.5	555.0 102.2	612.4 112.7	664.3 92.4
Long term (\$ bill)	111.8	138.1	163.5	194.9	235.9	286.6	338.1	388.5	452.8	499.6	571.6
Debt-export ratio (%)	115.4	104.6	122.4	125.5	126.4	130.2	119.2	112.9	124.9	143.3	144.4
Debt-GDP ratio (%)	22.4	21.8	23.8	25.7	27.4	28.5	27.5	27.6	31.0	34.7	34.7
Debt service payments (\$ bill)	17.9	22.1	25.1	27.8	34.7 13.6	50.3 19.4	65.0 28.0	76.2 40.4	94.7	107.1 59.2	93.2 55.1
Interest (\$ bill)	6.9 11.1	9.3	10.5 14.6	16.8	21.1	30.9	36.9	35.8	39.7	47.9	38.1
Debt service ratio (%)	15.9	14.4	16.1	15.3	15.4	19.0	19.0	17.6	20.4	23.9	19.3
Interest payments (%)	6.1 9.8	6.1 8.3	6.7 9.4	6.0 9.3	6.0 9.4	7.3 11.7	8.2 10.8	9.3 8.3	11.9 8.6	13.2 10.7	11.4 7.9

Source: World Economic Outlook, IMF, 1983.

4 — Policies for maintaining the flow of financial resources and reducing debt service

In the wake of current events, there are several major issues that need addressing, but three are particularly important. The first relates to the future supply of finance to developing countries to sustain growth, and to its composition and distribution. The second is how to reduce long term debt payments, and how to reduce the short-term liquidity problems that can temporarily undermine confidence in the lending and borrowing process. The third is the question of support for primary product prices, fluctuations in which are a major source of economic difficulty for countries, and a major source of instability for the world economy.

4.1 - The future supply of finance

As far as the future supply of finance is concerned, a number of proposals can be made. First, there is a strong case for countries raising the volume of official development assistance. If the Development Assistance Committee countries of the OECD were to meet the UN target for official assistance of 0.7 percent of their national income, the flow of official assistance would be doubled to \$70 billion per annum. This would have a number of advantages. It would reduce dependence on commercial bank borrowing. Its terms are generally softer, thereby aiding the debt-service problem, and it can be more easily directed to countries most in need.

Secondly, there is a need to extend and improve international mechanisms to assist countries in balance of payments and debt service difficulties. For example, the principle of the IMF's Compensatory Financing Facility might be applied to debt-service payments, if the debt-service ratio rises above a specified level.

Thirdly, on a longer-term basis, much greater use should be made of international money (SDRs) as a selective means of transferring (idle) resources to developing countries. One possibility, suggested by Scitovsky (1966) a long time ago, is that SDRs might be issued to deficit developed countries with unemployed resources who would then relinquish domestic currency in exchange to be lent to developing countries for spending in the issuing countries. The developing countries' command over real resources would increase at no opportunity cost to the developed countries, and the balance of payments of the developed countries would improve at the same time. Alternatively, SDRs could be distributed directly to developing countries who could either add to their reserves, which would improve their ability to attract private capital, or spend a portion in designated countries with unemployed resources. This would represent the sensile use of international money to help poor countries, and take deflationary bias out of the economic system at the same time. There is such a thing as a free lunch! This is exactly what Keynes had in mind with

his proposal for an International Clearing Union which would have operated like a World Central Bank issuing money for collectively agreed purposes as the need arose — in this case to activate the use of idle resources in a mutually profitable way.

Fourthly, to reduce the risks of private lending, there could be syndicated borrowing by groups of developing countries. This would not only help to maintain the flow of resources, but also contribute to a lowering of interest rate spreads.

Finally, countries might rely on a greater flow of direct private investment — but this has its own drawbacks as outlined earlier.

In the last resort, the combination of financial support that a country seeks must be at its own discretion. The obligation of the *international* community is to widen and extend access to resource flows in a constructive and sensible way.

4.2 - Reducing debt service payments and liquidity problems

To reduce the debt service burden, there are a number of possibilities. First, official development assistance might be given as grants rather than loans. The grant element of official assistance is already high, and this further step would not only give extra marginal help but would also avoid haggling over debt renegotiations if the need for rescheduling arose.

Secondly, official debt might be converted into an instrument for trade promotion between countries on lines suggested by Khatkhate (1966). Instead of borrowing countries repaying interest and amortization to the lender in *foreign* currency, repayment would be made to Regional Development Banks in *local* currency, which would then on-lend to other countries for the purchase of exports from the original debtor country. The proposal amounts to postponement of the retirement of debt to some indefinite date. It would be one means for the developed countries to increase the transfer of real resources without raising the level of *gross* assistance, while promoting trade at the same time.

Thirdly, developed countries might set up machinery to guarantee loans from private sources (in addition to export credit guarantees) and establish a fund from which commercial interest rates might be subsidised. Such a scheme would mean that private lenders would not be deterred from lending through fear of default; developing countries would receive cheaper credit, and the donor's contribution in the form of payments to private lenders would not burden the balance of payments (if this was regarded as an obstacle to a higher level of official assistance).

To avoid debt service difficulties, and liquidity problems, a number of suggestions can be made.

First, zero coupon bonds might be offered which delay interest payments until the loan has matured. This would reduce the present value of interest payments, but more important it would allow investment to be fully productive

before there was any commitment of foreign exchange. It does not ensure, however, against the bunching of repayment commitments when foreign exchange earnings are low.

To cope with this difficulty, a second suggestion is that securities might be given certain equity features so that the return and repayments are related to the performance of the economy.

Thirdly, automatic rescheduling schemes might be devised if debt service ratios rise above some critical level. These might apply to both official and private debt.

Fourthly, variable maturity loans might be issued so that debt service payments remain unaltered as interest rates float upwards on private debt (rather like mortgage lives are variable in the housing market). Or maturities could be varied automatically to keep the *debt-service ratio* unchanged [according to equation (12)]. This would accommodate export fluctuations as well. These schemes are equivalent to capitalizing interest payments above a certain specified level.

In the last resort, for countries in deep trouble and unable to repay, there should always exist the fall-back of a Central Bank (or some international institution) standing ready to repurchase debt from the creditors at a discount.

4.3 - Primary product price stabilization

There can be no doubt that there exists a long run downward trend in the barter terms of trade for primary commodities, as originally argued by Prebisch (1950) and Singer (1950). This has been confirmed by Spraos (1980) up to the 2nd World War, and I can confirm that the trend has continued since 1954 for all major commodities except oil (Thirlwall and Bergevin, 1984). This is one sense in which the balance of payments difficulties of developing countries must be regarded as secular as well as cyclical. It is the violent swings in commodity prices, however, which provoke crises, and there is urgent need for institutional mechanisms to stabilize them. It is not difficult to demonstrate how a disequilibrium terms of trade can slow down the growth of the whole world economy (see Thirlwall 1984). If primary product prices are «too high» (above equilibrium), growth in developed countries becomes both supply and demand constrained which repercusses adversely on the economies of developing countries. If primary product prices are «too low» (below equilibrium), developing countries lack the purchasing power to buy industrial goods, and growth is again impaired. Keynes saw this problem with great clarity as long ago as 1942, which led to his proposal for a Commodities Control Scheme (see Moggridge, 1980): «Assuredly nothing can be more inefficient than the present system under which the price (the terms of trade) is always too high or too low [. . .]» (14)

⁽¹⁴⁾ Ibid, pp. 113-114.

To stabilize the terms of trade, indexation may be appropriate for some commodities e. g. oil. For other primary commodities, credit creation to finance merchants' stocks would assist. SDRs might play a useful role here for buying up surplus stocks of primary commodities that are storable or for income compensation for commodities that are not. It seems incredible that over forty years on form Keynes' war-time plan for an international agency for stabilizing commodity prices, the world still lacks the requisite international agreement and institutional structures for greater stability and a fairer deal for developing countries that live by exporting primary commodities.

APPENDIX I

The relation between capital inflows and the growth of output and income

Let
$$Y = O - rD$$
 (A1)

where Y is income, O is output, r is the interest rate and D is debt.

$$\therefore \Delta Y = \Delta O - r \Delta D \tag{A2}$$

now $\Delta O = \sigma I$

(A3)

where o is the productivity of investment (/) and

$$I = sY + \Delta D \tag{A4}$$

where s is the propensity to save.

Substituting (A4) into (A3), and the result into (A2) gives

$$\Delta Y = \sigma s Y + (\sigma - r) \Delta D \tag{A5}$$

$$\therefore \frac{\Delta Y}{Y} = \sigma s + (\sigma - r) \frac{\Delta D}{Y} \tag{A6}$$

(i.e.) borrowing will raise the growth rate of income above os as long as the productivity of investment exceeds the rate of interest.

Also
$$\Delta O = \Delta Y + r \Delta D \tag{A7}$$

substituting equation (A5) for ΔY (and remembering Y = O - rD) gives

$$\Delta O = os (O - rD) o\Delta D \tag{A8}$$

Dividing through by O and rearranging gives

$$\frac{\Delta O}{O} = os + o\left(\frac{\Delta D - srD}{O}\right) \tag{A9}$$

⁽ e) Borrowing will raise the growth of output above os as long as new borrowing exceeds the loss of saving from outflows on past borrowing. If interest payments are met by creating new debt (rD - \Delta D), the growth rate will always be higher with

References

- ABRAHAMIAN, S., (1984), The Transmission Process, International Economic Instability and the «Amplifier»: Contradictions in the Present System of the World Economy, UNCTAD, mimeo.
- CHENERY, H. Bruno, M., (1962), Development Alternatives, in an Open Economy: The Case of Israel, *Economic Journal*, March.
- CHENERY, H. and Adelman, I., (1966), Foreign Aid and Economic Development: The Case of Greece, Review of Economics and Statistics, February.
- CHENERY, H. and Macewan, A., (1966), Optimal Patterns of Growth and Aid: The Case of Pakistan, Pakistan Development Review, Summer.
- CHENERY, H. and Strout, A., (1966), Foreign Assistance and Economic Development, *American Economic Review*, September.
- FEDER, G. and Just, R., (1977), A Study of Debt Servicing Capacity Applying Logit Analysis, *Journal of Development Economics*, n.° 4.
- FRANK, C. and Cline, W., (1969), Debt Servicing and Foreign Assistance: An Analysis of Problems and Prospects in Less Developed Countries, AID Discussion Paper, n.º 19.
- GRIFFIN, K., (1970), Foreign Capital, Domestic Savings and Economic Development, Bulletin of the Oxford Institute of Economics and Statistics, May.
- HAYES, J. P., (1964), «Long Run Growth and Debt Servicing Problems», in Avramovic, D., (ed), Economic Growth and External Debt, John Hopkins Press.
- KALECKI, M., (1976), Essays on Developing Economies, Harvester Press, chapter 6 entitled «Forms of foreign Aid: An Economic Analysis» (first published 1966, in Social Science Information, n.º 1).
- KHATKHATE, D. R., (1966), Debt Servicing as an Aid to Promotion of Trade of Developing Countries, Oxford Economic Papers, July.
- LITTLE, I. M. D., and Mirrlees J., (1974), *Project Appraisal and Planning for Developing Countries*, Heinemann.
- MOGGRIDGE, D. (ed), (1980), The Collected Writings of John Maynard Keynes, Vol. 27: Activities 1940-1946 Shaping the Post-War World: Employment and Commodities, Macmillan.
- PEARSON Report, (1966), Partners in Development, Pall Mall Press.
- PREBISCH, R., (1950), The Economic Development of Latin America and its Principal Problems, ECLA, UN, Dept. of Economic Affairs.
- SCITOVSKY, T., (1966), A New Approach to International Liquidity, American Economic Review, December.
- SINGER, H., (1950), The Distribution of Gains Between Investing and Borrowing Countries, American Economic Review Papers and Proceedings, May.
- SPRAOS, J., (1980), The Statistical Debate on the Net Barter Terms of Trade between Primary Commodities and Manufactures, *Economic Journal*, March.
- THIRLWALL, A. P., (1972), Growth and Development: with Special Reference to Developing Countries, First edition, Macmillan.
- THIRLMALL, A. P., (1979), The Balance of Payments Constraint as an Explanation of International Growth Rate Differences, *Banca Nazionale del Lavoro Quarterly Review*, March.
- THIRLWALL, A. P., (1972), Harrod's Trade Multiplier and the Importance of Export-Led Growth, Pakistan Journal of Applied Economics, March.
- THIRLWALL, A. P., (1983), Foreign Trade Elasticities in Centre-Periphery Models of Growth and Development, Banca Nazionale del Lavoro Quarterly Review, September.
- THIRLWALL, A. P. and Hussain, M., (1982), The Balance of Payments Constraint Capital Flows and Growth Rate Differences between Developing Countries, *Oxford Economic Papers*, November.
- THIRLWALL, A. P., Fernandes, C. L. and Siqueira, M. P., (1983), Endividamento externo, balança de pagamentos e crescimento económico no Brasil 1965-1978, *Análise e Conjuntura*, January/February.
- THIRLWALL, A. P., and Bergevin, J., (1984), Trends, Cycles and Asymmetries in the Terms of Trade of Primary Commodities from Developed and Less Developed Countries, *mimeo*.
- THIRLWALL, A. P., (1984), A General Model of Growth and Development on Kaldorian Lines, mimeo.

THIRLWALL, A. P. — Empréstimos internacionais, dívida e desenvolvimento

RESUMO:

Este artigo está dividido em quatro secções. A primeira secção discute na generalidade o papel dos empréstimos externos no processo de desenvolvimento e a dívida a que dá lugar.

A segunda trata do montante normal de fluxo de capital para os países em desenvolvimento e de um modelo simples para avaliar a sua influência constante no processo de crescimento, quando o crescimento é constrangido pelas disponibilidades em divisas. É também analisada a difícil questão de um país poder pedir grandes empréstimos.

Na terceira parte são discutidas as dificuldades da dívida corrente dos países em desenvolvimento e a questão do que significa haver uma crise da dívida

Finalmente referem-se algumas das maneiras pelas quais o peso do serviço da dívida pode ser aliviado e os problemas de liquidez evitados no futuro.

THIRLWALL, A. P. — International borrowing, debt and development

ABSTRACT:

The paper is divided into 4 sections. The first section discusses in general terms the role of foreign borrowing in the development process and the debt to which it gives rise. Secondly, the current magnitude of capital inflows to developing countries is outlined and a simple formal model is developed for evaluating their sustaining influence in the growth process when growth is constrained by foreign exchange. The difficult question to answer is also posed of whether a country can borrow too much. Thirdly, the current debt difficulties of developing countries are discussed and the question is posed of in what sense is there a debt crisis. Finally, there is a discussion of some of the ways in which the debt service burden may be ameliorated and liquidity problems avoided in the future.

