

Foreign-Aid Requirements: A Critique of Aid Projections with Special Reference to Pakistan

by

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It has become fashionable, during the past decade, to study the problem of foreign aid in terms of projection of aid requirements. Foreign aid is typically justified in the donor countries as a commitment to achieve a specific development objective having a finite cost. For the developing countries, on the other hand, the "requirements" approach helps to focus attention on the inadequacy of the existing levels of foreign aid and gives concrete shape to their demands for more assistance¹.

While projections have served a useful purpose by indicating the broad orders of magnitude of aid requirements and suggesting some criteria for aid allocation, they are, by their very nature, based on a number of simplifying assumptions about the behaviour of certain key relationships in the economy. Savings, import substitution and the choice of technology cannot really be treated as independent of the volume and form of foreign assistance. The limitations of aid projections, which generally do so, are obvious to those who make them and those who use them. Justification for the continuing interest in such estimates lies in the "ceteris paribus" assumption so commonly made in economic analysis. By the same token, one must exercise substantial caution in drawing policy conclusions from those estimates².

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¹Typically, "aid" projections include private foreign investment as part of total foreign "assistance" required by developing countries. These totals are misleading to the extent that such investment moves in response to profit or market incentives.

²For a cogent criticism of aid projections, see J. A. Pincus [18, Pp. 297-305].

It is, indeed, worth underscoring the fact that projection results vary a great deal, depending on the methodology used and on assumptions regarding the basic parameters of the economy. This article surveys the application of various methodologies of aid projection to the specific case of Pakistan. The analysis shows that long-term projections help in charting the course of development and highlights key elements in the economic situation which would maximize the "return" on aid flows from the donor's and recipient's point of view (given an identity of interests). But such projections are usually couched in terms of net inflows and so ignore the disturbing influence of debt-servicing; gross flows required are so large that projected net inflows become somewhat unreal. Moreover, recent experience in Pakistan confirms that the "aid requirements" concept has to be interpreted very flexibly with respect to policy variables which are assumed constant in most of the models. Curtailment of aid in the latter part of the 1960's has produced a Pakistan response which is not directly in accord with expectations resting on the "aid requirements" approach. The decline in aid flows has not led to a decline in the rate of growth, but rather to a change in the strategy and sectoral balance of development. Although it is by no means certain that the long-range effects of reduced investment will be entirely offset by a permanent improvement in the capital-output ratio, this opens up a whole new dimension in the discussion of foreign aid.

General Approaches to Aid Projection

The estimates of foreign-aid requirements made thus far can be classified as follows: a) global, regional or national estimates in terms of the "savings-investment gap"³; b) projections based on "absorptive capacity"⁴; and c) measures of the "trade gap"⁵. There have also been efforts to combine the different approaches in a "development stages" analysis [4], and through concentration on the "dominant gap"⁶.

More specifically, aid requirements are often projected in terms of a savings-investment gap which is related to a target growth rate corrected for special problems in the foreign-trade sector. The target growth rate is set in the light of alternative assumptions regarding "absorptive capacity". Invest-

³This is the earliest approach and can be attributed to work done for and by the United Nations; *see*, for instance, [28]. For more recent formulations, *see* [7; 23; 25].

⁴[11]. Absorptive capacity is no longer regarded as a major constraint, except in fixing the target growth rate. "Competent observers suggest that only a minority of developing countries are growing at the maximum rates which their absorptive capacity could permit" [26, Pp. 1 and 2].

⁵[1]. For obvious reasons, this approach has been of major importance in the two UNCTAD Conferences and throughout the family of UN organizations. *See also* [6; 29].

⁶The "dominant gap" has been used by U. S. AID (Summer Project). UNCTAD considers it the most desirable approach but finds it impracticable in view of the limitations of data; instead, UNCTAD aggregates the trade gaps of individual countries — producing a total which is somewhat smaller than the sum of the dominant trade and saving gaps [26]. For a recent estimate based on the dominant-gap analysis, *see* [8].

ment needs of the economy are worked out for the target growth rate on the basis of explicit or implicit assumptions about capital-output ratios. Savings are projected on the basis of historical or policy-determined behaviour of the marginal rate of savings. The amount by which projected savings fall short of projected investment indicates the gap which foreign assistance is required to fill, that is, the "aid requirements" inherent in the target growth rate. Problems of foreign exchange are assumed away, since in a simple Keynesian model there has to be an identity between the savings-investment and export-import gaps.

This "ex post" identity of the two gaps is, of course, a mere tautology. The "ex ante" difference between the gaps can be bridged by a process which frustrates the basic objective of maximum growth. Despite the equality of the two gaps in an accounting sense, therefore, it is important to distinguish between them for purposes of economic policy. In fact, there is little or no ground for believing that domestic savings are readily convertible into productive capacity either directly or through foreign trade.

Critics of the "two-gap" theory point out that an export-import gap, persistently larger than the savings-investment gap, implies permanence of domestic inflationary pressures. However, this line of argument ignores the structural problems of the balance of payments in a dynamic context, as well as the imperfections of international trading relations. Assuming a small domestic capacity for producing capital goods, savings (in terms of foregone consumption) can be converted into capital goods only through international trade and then only — for many developing countries — through less favourable terms of trade. Low demand and supply elasticities for a sizable portion of their exports render it unlikely that the required adjustment in balance of payments would be completed without restricting growth. In other words, "the equality of the two gaps is likely to be bought at the price of economic contraction. If there is an import surplus without inflation, some domestic producers are losing money and will have to cut back if the surplus persists. Therefore, . . . projections of the trade gap that diverge from the savings gap simply present a realistic view"⁷.

There is, then, considerable justification for projecting aid requirements on the basis of a trade gap which is higher than the savings gap — except, perhaps, in the case of oil-exporting countries. This is also consistent with giving a unique role to foreign aid in the process of development. If aid is to be regarded as a unique factor of production, the need for it cannot be projected merely by concentrating attention on the savings-investment gap. On the other

⁷[18, p. 301]. See also [10, Pp. 91-97]. For an interesting skeptical view of the two gaps, see [2].

hand, it is important to realize that divergence between the savings and trade gaps may be at least partly amenable to policy manipulation within the developing country. The exchange rate, the level of domestic savings, the allocation of investment to different sectors — all of these are subject to internal influence, and all can affect the degree of divergence between the two gaps. To accept the numbers emerging from fixed relationships would be to frustrate a major purpose of foreign-aid projection, namely, the encouragement of remedial policies in the developing countries.

Chenery and Strout have attempted to fit the “gap” analysis into an integrated model⁸. They distinguish between three stages of economic growth in terms of broad constraints on the development process: the stage where low levels of skill and organizational ability act as the prime constraint; the stage where a shortage of domestic savings limits growth; and the stage in which the export-import gap is the limiting factor. This model can help to guide the evolution of a developing country’s policies over time. It is especially relevant for Pakistan where the Perspective Plan appears to have been moulded by the “stages” system.

The Perspective Plan

Any discussion of aid-requirement projection for Pakistan must start from an analysis of the Perspective Plan [16, Pp. 17-37]. It represents the first authoritative national effort to fix definite long-run growth targets and to project aid requirements in terms of a “dual-gap” model.

The plan aimed at quadrupling national income over the 20-year period, 1965-85, by setting the target growth rate at 7.2 per cent per annum — a significant acceleration over the 5.4 per cent realized during the Second Five-Year Plan and the 3.5 per cent over the period 1950-65. Investment was to change only gradually in relation to GNP — from 18.4 per cent in 1965 to 22.9 per cent in 1985. The capital-output ratio was assumed virtually constant, showing only slight variations around 2.9. These parameters made sense in terms of the fact that investment in 1965 included sizable expenditures on the Indus Basin Replacement Works. After these infrastructure projects were completed, gross investment would reflect a larger advance in national production. The capital-output ratio could, therefore, be kept low — bearing in mind the self-imposed investment constraint that reliance on foreign aid be eliminated by 1985.

The savings-investment gap was to be bridged by 1985 through a high marginal rate of savings. Estimated at 22 per cent of GNP for the base period, incremental savings would climb to 28 per cent by 1980; this was construed more as a policy directive than as a simple projection. Between 1980 and 1985,

⁸[4]. For a critical review of the Chenery-Strout model, *see* [5].

the marginal savings rate would decline to 25 per cent, as the foreign-exchange constraint would operate to restrict investment.

Foreign-exchange requirements would grow in absolute terms up to 1970 and would reach a plateau at the level of 4 billion rupees (1965 prices) in the early seventies, falling sharply after 1975. As a ratio of GNP, the net inflow of foreign resources would begin declining by the end of the sixties; this would mark a reversal of the trend between 1958 and 1965, when aid inflows had risen from about 4 per cent to 8 per cent of GNP. In summary terms:

Upto the end of the Second Plan, the gap between imports and exports was increasing, necessitating an increase in the flow of foreign assistance. From the Third Plan period the gap will start narrowing and the need for foreign assistance will start diminishing. The strategy for achieving this shift will be to increase exports at a rate faster than imports. Over the Perspective Plan period, exports are expected to increase at nearly twice the rate of increase in imports with the obvious implication that Pakistan's own earnings will start financing an increasing proportion of total imports⁹.

The most distinctive feature of the Perspective Plan is the constraint that dependence on aid should be eliminated over a predetermined period without any sudden or abrupt shock to the growth process. In this sense, the plan presents a blueprint for "minimum aid requirements" or "maximum austerity".

Interestingly enough, the plan has been criticised both for its emphasis on an early termination of foreign aid and for its reliance on too much aid over the 20-year period. The former line of criticism is based on welfare criteria, while the latter stems from deep concern with the problem of debt-servicing. Chenery and MacEwan — applying a modified version of the more general Chenery-Strout model to Pakistan — point out that Pakistan's planners are sacrificing economic welfare by means of a self-imposed constraint on foreign aid [3]. Rahman, on the other hand, has emphasized the debt-servicing legacy which the Perspective Plan would leave even with the self-limiting demand for foreign aid¹⁰.

The Chenery-MacEwan Model

Chenery and MacEwan approach the "optimum" pattern of aid and growth as a problem in linear programming. The objective is to maximize a social-welfare function incorporating the benefits (consumption) and costs

⁹[16, p. 23]. The growth of exports was projected at 7.9 per cent per annum, as against a 4.2-per-cent increase for imports.

¹⁰[20; 21; 22]. For a more general treatment of the debt-service implications of foreign assistance, see [12].

(capital inflow) of economic growth. The constraints are stated in terms of policy goals and of definitional, structural and behavioural relationships for each time period.

GNP (V_t) and investment (I_t) are disaggregated into "regular production" and "trade improvement" sectors. Foreign aid, defined as net inflow of external resources (F_t), is used to fill the trade gap determined by the excess of demand for "traditional imports" over the sales of "traditional exports" adjusted for the output of the trade-improvement sector. Traditional exports are assumed to grow at an exogenously determined rate and can be produced at the capital-output ratio of regular production. Production for trade improvement, however, requires a higher capital-output ratio. The requirements of traditional imports are determined by a base-year import level and marginal import rates related to income and investment levels. The savings rate is determined by base-year savings and the marginal savings ratio. While recognizing the influence of public policy on the marginal rate of savings and marginal import rates, the model assumes both as given.

The model, thus, seeks to determine the requirements of foreign assistance by maximizing the general welfare function

$$W = \sum_{t=1}^T \frac{C_t}{(1+i)^t} + \eta V_t - \gamma \sum_{t=1}^T \frac{F_t}{(1+i)^t}$$

$$\text{where } \eta = \delta (1 - \alpha) \sum_{t=1}^{\infty} \frac{(1 + \rho)^t}{(1 + r)^{T+t}}$$

and i is the discount rate during the Perspective Plan, r the discount rate after the plan, α the marginal savings rate, ρ the post-plan self-sustaining rate of growth, and γ the price of foreign capital. The first term of the function indicates the discounted sum of consumption (C) prior to the terminal year (T) of the Perspective Plan. The second term shows the discounted value of consumption in all years after the plan, with a variable weight (δ) attached. And the final term (with the minus sign) represents the discounted sum of total capital inflows weighted by the price of foreign capital.

The supply constraint is specified in a number of ways. In the "Basic Solutions", it takes the form of either the price of foreign capital or its terminal date ($T-n$) being specified. In an alternative presentation, an upper limit is fixed on the total quantity of aid to be received. Still another set of solutions is based on the constraint that capital inflow cannot exceed a given proportion of GNP (5 per cent). Subsequent discussion refers largely to the "Basic Solution".

The model projects 1962 data (averages derived from 1957-62) to 1965 for purposes of comparison with the Perspective Plan. Aid flows provide the major difference in base-year estimates: the Chenery-MacEwan figure is 1.97 billion rupees (1965 prices), as against the plan estimate of 3.69 billion rupees. There is a corresponding difference in total investment, but the other variables are quite close. The marginal propensity to import is assumed to be 0.10, as against the plan's 0.06, for 1965-85; by contrast, the assumed rate of export growth is 4.9 per cent, as against 7.9 per cent in the plan; the other parameters are not significantly different.

Chenery and MacEwan suggest a sharp acceleration in aid inflow upto 1975. Starting with a 1965 level of foreign assistance, about half that of the plan, they project the same ratio of aid to GNP by 1970, namely, 7 per cent; this, of course, represents a deceleration from the 1965 plan figure of 8 per cent. The model suggests a further rise to 10 per cent by 1975, while the plan projects a continued decline to 4 per cent. In the final decade, there is a sharper drop in the model than in the plan. "This pattern of rising and then falling aid is a logical consequence of the high value of early increases in investment, income and saving for future growth. [Indeed,] if the restriction of the rate of increase in investment were not imposed, the peaking of aid in the early years would be even more pronounced" [3, p. 226].

The Chenery-MacEwan and perspective-plan estimates of net capital inflow are compared in the table which follows [3, p. 241; 16, p. 19]. Total aid needs are higher in the model because it assumes that "trade improvement will require substantially more capital than is indicated by the marginal coefficient of 3.0 that has been experienced recently" [3, p. 234].

An interesting conclusion drawn from the model is that the optimal growth strategy in the first phase — that is, when investment is rising most rapidly — is not dependent on the total aid to be provided. For the specific case of Pakistan, "optimum policy until 1969 would be the same either with the aid expected in the Basic Solution or with half that much" [3, p. 234].

Thus, the main task in the first phase is to ensure that an economy expands at the rate permitted by its absorptive capacity. This condition for optimization is independent of the total availability of aid. Growth strategy in the early years, therefore, should stress short-term criteria rather than those of a long-run nature. It is in subsequent years that total aid becomes crucial; and it should depend on "performance", as reflected heavily in the marginal rate of savings. Chenery and MacEwan criticise Pakistan not only for imposing a terminal date on aid inflow, but also (implicitly) for seeking an earlier deceleration of aid than would be warranted by economic criteria.

Year	Chenery-MacEwan basic solution	Perspective Plan
<i>(in billions of rupees at 1965 prices)</i>		
1963	1.41	—
1964	1.67	—
1965	1.97	3.69
1966	2.30	—
1967	2.68	—
1968	3.11	—
1969	3.59	—
1970	4.15	4.19
1971	4.77	—
1972	5.48	—
1973	6.28	—
1974	7.18	—
1975	8.21	4.00
1976	9.37	—
1977	9.44	—
1978	7.55	—
1979	5.67	—
1980	3.78	2.50
1981	1.89	—
1982	—	—
1985	—	2.00

Rahman and the Cost of Foreign Aid

Rahman has examined the aid implications of both the Chenery-MacEwan model and the Perspective Plan¹¹. The two major issues that emerge from his analysis are the impact of aid availability on domestic savings and the debt-servicing legacy left by foreign assistance.

In the models discussed earlier, it is assumed that aid-receiving countries will make maximum use of domestic savings. Rahman questions this assumption. Given the availability of foreign assistance at an interest rate below the economic rate in the recipient country, demand for foreign aid will, he argues,

¹¹He has elaborated his argument in the series of articles listed in footnote 10 above. These are treated here as a joint product. See also [19].

far exceed minimum requirements. Under such conditions, aid will be used not only to speed up economic growth, but also directly to increase consumption; hence the lack of proper emphasis on savings effort in domestic policies. One must recognize this as a distinct possibility, even though foreign assistance is often provided under institutional arrangements which link the aid flow with domestic savings effort; and despite the fact that most of the aid models have been developed with a view to establishing the basic need for relating foreign assistance to domestic performance¹². Rahman uses the argument about savings to emphasize an alternative strategy: once the costs of foreign aid are deemed too high (and it is to be relied upon less than the optimum solution of Chenery-MacEwan or the more restrained Perspective Plan suggests), the only way out for the developing country is to make a more concerted effort to increase domestic savings.

Debt-servicing is implicitly included in the earlier models since aid inflows are treated there on a net basis. But as already noted, the result is a distorted picture of aid requirements. The need to service foreign debt is a cost of aid flows which is considered explicitly in Rahman's model. In part, this is motivated by a noneconomic concern with national pride and with the power that dependence on foreign aid places in the hands of donor countries.

Retaining the Perspective Plan's assumption that net aid inflows would cease by 1985, Rahman derives an estimate of gross aid inflow required at that time merely to service the accumulated debt. Assuming further that foreign loans will be available throughout the plan period at the concessional interest rate of 3 per cent per annum, he projects total external indebtedness in 1985 at 103.9 billion rupees. Gross capital inflows would have to rise from 4 billion rupees in 1965 to about 8 billion rupees in 1985, mainly to allow continued debt-servicing. If the terms of assistance prove less favourable during the plan period, the required gross inflow in 1985 would be even larger.

Rahman finds such capital inflows particularly objectionable in the light of the noneconomic costs of foreign aid.

Assuming the United States will continue to be, as it is today, the major supplier of foreign assistance for a significant period after the present Perspective Plan terminates, it is important to understand that a continuous dependence on United States foreign assistance should be expected to require from the recipient country pursuance of national and international economic and political

¹²There seems little doubt that the the quantum of total aid per capita, or as a proportion of GNP, in the receiving country has generally been determined more by political relations between donor and recipient than by the recipient's economic performance. On the other hand, Pakistan's experience in the 1960's points to a close positive correlation between domestic savings and foreign-aid inflows, *see* [17, p. 314].

policies that agree with the United States *official* views on *United States* social interest. This may or may not agree with the social interests of the recipient country. For Pakistan in particular a commitment of its future indefinitely to aid from the United States or for that matter from any great power may mean the surrender of significant areas of economic and political policy in which it might want to retain its autonomy. Even if the present society considered such price worth paying, it should be debated whether it is ethical to bind, by the bequest of a liability of the magnitude in question, future societies to the same set of values as ruling today [20, p. 5].

Accordingly, the Rahman view is that from the recipient country's standpoint, it is better to plan for Self-Assured Growth (SAG) than for Self-Sustaining Growth (SSG).

He constructs a linear two-sector model, similar to Chenery-MacEwan, in order to derive the terminal (consistency) conditions which must be satisfied if an economy is to reach the state of Self-Assured Growth at the end of a "Perspective Plan" of T years. SAG differs from SSG mainly in terms of the total absence of debt-servicing liability at the termination of the plan. While there is no net inflow of foreign resources in SSG, the country would require considerable borrowing to repay the debt in the years following termination of the plan. SAG, by contrast, requires a country to emerge as a net exporter of capital before the termination of the plan; that is to say, the net inflow of foreign assistance has to be terminated earlier than for SSG.

Rahman notes that SAG does not necessarily mean complete stoppage in the flow of foreign capital. While concessional foreign finance would be discontinued, "there is no reason why a continuous further flow of foreign finance at prevailing market rates should not be considered as a purely business proposition" [20, p. 17]. Such financing would be appropriate as long as it was offered at a rate of return not exceeding the marginal output-capital ratio in import substitution; and provided that an appropriate proportion of the additional investment was allocated to the import-substitution sector.

In fact, import substitution plays a crucial role in the Rahman model. It is desirable to use foreign assistance beyond a certain stage only if opportunities for profitable import substitution exist; and the need for such opportunities arises earlier than in the other models. By the same token, this model is highly restrictive in cases where the size of the market limits profitable investment in import substitution.

Be that as it may, Rahman is questioning the entire approach of projecting aid requirements on the basis of welfare maximization through discounted consumption flows. Borrowing early is very productive in the Chenery-MacEwan

model; but to Rahman it has a large legacy of financial indebtedness and social cost.

In these terms, substantial constraints on "aid requirements" are necessary for Pakistan if the debt burden is to be kept within tolerable limits at the end of the 20-year perspective-plan period. And the plan's more modest aid projections are to be preferred to those of the Chenery-MacEwan model.

Pakistani planners have never made their reasons for self-restraint explicit. There must be a subjective element which Rahman associates with the "psychic disutility" of aid, or national pride; probably, there is also a concern for "inter-generational equity" [22, Pp. 142 and 147]. But the most compelling reason for restraint may well be a sense of realism.

Rahman argues that the gross flow of assistance required to smooth out the net flow in T 21 — the year after the Perspective Plan is completed — will be too large to be easily available. However, the gross flow needed in that year would not be much larger than in year T 20 or T 19. If the gross aid flow during the plan period is sufficient to meet the net aid requirements of the plan, then post-plan requirements of assistance are also likely to be met. The real question is whether aid of the magnitude projected in the plan and in the other models is "realistic". None of them faces directly up to this issue.

Nevertheless, there appears to be a growing desire, in Pakistan's planning circles, for a self-imposed constraint in the form of maximum debt-servicing liability — that is, a growing readiness to cut the demand for aid if its "price" is not reduced. This is a stronger constraint than that imposed in the Perspective Plan. While the plan assumed a perfectly elastic supply of foreign aid, this no longer seems to be the prevailing view in Pakistan¹³.

The Tims Model

The projection of aid requirements by Tims differs in important respects from the other attempts discussed in this paper [9 ; 24]. In fact, Tims is not specifically measuring aid requirements in his model. This is only part of a more comprehensive planning exercise which allows him to vary the composition of investment and growth, and to manipulate aid requirements accordingly. Foreign-aid needs are projected on the basis of a more concrete approach than is possible in global studies. The time-horizon, however, is limited to five years; Tims could not go beyond that period and still derive meaningful results within the comprehensive structural and policy framework he adopted.

Tims' estimates reflect many of the key assumptions and policy variables which have influenced Pakistan's own projections of its aid requirements. These

¹³For a grim recent assessment of the international climate for foreign assistance, see [15, Pp. 14 and 15].

estimates also point up significant questions that are not considered in long-term aid projections. Use is made of the "dual-gap" analysis, but the "ex ante" gaps are not accepted as final; policy measures are suggested for bridging the difference between them.

The national product is disaggregated into seven groups of commodities and services, and Tims specifies a set of consistent interindustry relations among production, consumption and trade in each of the sectors. He also determines the levels of GNP, gross investment, exports, imports, and external assistance corresponding to each solution. Then, given the aggregate and detailed figures for 1964/65, he poses the question as to what changes must occur in Pakistan by 1969/70 if the targets of the Third Five-Year Plan are to be achieved.

On the assumption that GNP increases as projected in the plan and that a known fraction of this income is saved, an estimate of gross domestic savings is obtained. The savings-investment gap is calculated by measuring the difference between the resources needed and those available domestically. Assuming that the plan's targets for agricultural production will be realized, Tims deducts the domestic absorption of these goods from total production to derive the exportable farm surplus; total export earnings are obtained by adding the plan's estimate of exports for the other sectors. Total imports are calculated as the sum of import requirements for consumption, intermediate and capital goods. The foreign exchange or trade gap measures the difference between earnings and requirements of foreign exchange.

By solving the simultaneous equations of the model, Tims obtains a savings-investment gap of 3.7 billion rupees and a trade gap of 5.3 billion rupees in 1969/70. He then works out the amount of extra import substitution which must be undertaken to equalize the two gaps.

Tims treats the question of import substitution in considerable depth.

The third-plan model itself does not provide any help in this respect, as its only outcome is a total import-substitution requirement to be realized by 1970. Since the feasibility of the development plan as a whole depends to such a large extent on the degree to which it can be demonstrated that a sufficient level of import substitution can be achieved, it was considered necessary to study this problem in much greater detail [24, p. 141].

A modified version of Tinbergen's semi-input-output method is used to determine the feasibility and cost of the required import substitution. This implies, as a first step, the determination of all final demand autonomously. Production requirements in all sectors are then determined. No selection of sectors for import substitution is made at this stage; they all expand in parallel fashion

without it. The choice of sectors is carried out as the next step on the basis of the composition of intermediate-goods imports projected for 1970.

Through a process of elimination in terms of technical possibilities and the time span and scale of operation required for constructing domestic production units, Tims comes to the conclusion that there are three major industries with sizable import-substitution potential, namely, cement, oil refining and iron and steel. He is able to demonstrate that the needed substitution is feasible without creating extra demand for investment. "This is, however, to a considerable extent the result of a specific composition of the import bill, where a small number of commodities have a large share in the total foreign-exchange costs" [24, p. 165]. Import substitution after 1970 might not present the same economic possibilities. Priority would then have to be given to the development of industries which provide substantial economies of scale.

The UNCTAD II Projections

For its 1968 New Delhi Conference, UNCTAD projected global aid requirements on the basis of a series of individual-country studies including Pakistan [26 ; 26, Annex IV, p. 24 ; 27, Pp. 356-365]. The estimates focus on the trade gap, although it is acknowledged that in a number of developing countries (notably in Africa) the savings gap is more important at the present stage of development.

The period of projection extends to 1975, and the basic relations are derived from trends up to 1963. The low assumption for the target growth rate is 5.2 per cent per annum and the high assumption 6.1 per cent; these growth rates determine the level of imports required over the period. For the export projections, growth rates in the developed countries are assumed to be between 4.2 and 4.7 per cent.

The trade gap of the developing countries (measured in 1960 prices) is projected at between 17 billion dollars and 26 billion dollars in 1975, depending upon the various combinations of high and low assumed growth rates in the developed and developing countries. The gap arises largely from payments on account of investment income; net payments of the developing countries are projected to reach 12-14 billion dollars by 1975, or roughly between half and three-quarters of the total gap.

UNCTAD notes that part of the gap could possibly be reduced by policy adjustments, within the developing countries, to accelerate import substitution and export expansion. However, given the strong constraints on both export growth and import substitution, not more than 8 billion dollars can be expected to be available through such measures. The required inflow of foreign capital is, therefore, placed at 18 billion dollars, of which 5 billion dollars can be expected

from private investment; this leaves 13 billion dollars as the level of foreign assistance needed by 1975.

For Pakistan, the UNCTAD projections are made in terms of a low growth rate of 5.0 per cent and a high rate of 5.7 per cent; these derive from historical coefficients based on the country's experience from 1957 to 1963. By contrast, the growth assumptions of the Perspective Plan and other Pakistan projections take into account the experience of 1960-65. Those second-plan years were different enough from the earlier period to lend support to the belief of some observers that an upward break in the trend occurred at the end of the 1950's. However, it is difficult to judge, on the basis of such limited experience, whether a higher or lower growth rate is more realistic. Suffice it to note that the UNCTAD projections assume no acceleration over the growth rates already attained in Pakistan.

With the low growth rate of 5 per cent, the savings-investment gap turns out to be quite small — 91 million dollars. Even on the higher growth assumptions, the savings gap would be only 422 million dollars, indicating the possibility of reduced Pakistani dependence on foreign aid as against the levels prevailing in the mid-sixties. But the import-export gap would be much larger: import requirements are projected on the basis of a marginal propensity to import of 0.21, and the export growth rate is assumed to be 7.1 per cent per annum; the resulting import surplus is 1.2 billion dollars to 1.5 billion dollars (5.8 billion rupees to 7.0 billion rupees).

The UNCTAD trade gap excludes net factor-income payments (like debt-servicing). The aid-requirement figures are thus in terms of net inflow and are comparable with the projections discussed earlier (except Rahman's). Adjusting the figures to 1965 prices, the higher estimate is close to the Chenery-MacEwan projection for 1975, and much higher than Pakistan's own estimates¹⁴.

Concluding Comments

To sum up, Pakistan's requirements of foreign assistance have been projected in a variety of ways. Most of the estimates are surprisingly close, ranging from 1.2 billion dollars to 1.7 billion dollars for 1975. Pakistan itself has proposed to restrict its need for aid to about half that level. This lower estimate is based partly on an assumed improvement in basic parameters as suggested by the behaviour of the economy in 1960-65; the other estimates rely on earlier experience. However, to a large extent, the difference lies in the rather heroic

¹⁴The Institute of Asian Economic Affairs projects the same level of aid requirements as UNCTAD, namely, 1.2-1.5 billion dollars for 1975. Target growth rates assumed by the Institute are higher (5.40 per cent and 6.73 per cent per annum), while the marginal propensity to import is lower (0.18) [8, Pp. 149 and 150].

assumptions made in the Perspective Plan about import substitution and export growth. The truth probably lies somewhere in between these two sets of projections¹⁵.

In any event, recent developments in international aid relations have diverted the attention of Pakistan's planners from the rather abstract aid-requirement projections to a more practical programming of available assistance. The requirements approach, it is argued, is no longer realistic in view of the pressures developing in major aid-giving countries to reduce aid commitments irrespective of needs. Since the amounts which can be justified on requirements criteria are not forthcoming and since the aid actually available does not have to be justified in terms of specific need, the real problem of aid management is to make the maximum use of available resources. A certain degree of fatalism about the future of foreign assistance is combined with a determination to protect the growth of the economy from the adverse effects of declining aid flows.

Even year-to-year projections are made for the Consortium with a "tongue-in-cheek" approach. Needs are first presented on the basis of commodity-aid requirements as determined by input-output relationships and an assumed growth rate; fertilizer for agriculture figures prominently at this stage; projects are then listed, and this typically pushes total aid requirements above 600 million dollars. However, in the final presentation, the request is scaled down to a level which is considered realistic and which leaves some margin for aid diplomacy. In this context, while shortfalls in fresh aid pledges are shown against plan needs, longer-term aid requirements are seldom even mentioned.

Prime emphasis now appears to be placed on projections of debt-servicing liability. This may be only a reflection of the current mood of despondency regarding prospects for foreign assistance. However, the belief seems to be developing that continued borrowing on present average terms could force Pakistan into a position where default on debt service became inevitable. Hence, if aid terms are not improved, there should be greater self-restraint in seeking fresh loans from abroad. In any case, after two or three years of seeking to replace concessional assistance from the Consortium by export-credit-type loans from Eastern Europe, there appears to be a growing concern with aid content rather than with the volume of aid flows.

¹⁵The implications of alternative Pakistan projections have been discussed in detail by an Expert Group on the Uses of Analytical Techniques, established in December 1964 by the Development Assistance Committee of OECD. Much of the discussion has apparently focussed on the Third Five-Year Plan and on the Tims and Chenery-MacEwan models in particular, their methodology and their significance for governmental decision-making on foreign-assistance policy *vis-a-vis* Pakistan. The Expert Group does not seem to have made any independent projections on aid requirements. Its deliberations are unpublished and have had a restricted circulation. See [13].

An alternative solution to the debt-servicing problem is, of course, an acceleration of gross flows of assistance. While such an approach has not been considered seriously for some time, the McNamara Plan for a World Bank initiative seems to attempt just that [30, p. 58]¹⁶. A massive increase in IBRD lending at interest rates determined by borrowing rates in the developed countries' markets would tantamount to shelving the debt-service problem in favour of maintaining the volume of assistance. That is to say, the problem of debt service would be postponed to a later stage. Pakistan may have to reconsider its thinking on net aid flows and debt-servicing in the light of such developments.

In the meantime, changes in domestic policies have been initiated which confirm the view that the parameters on which aid requirements are based are also variable within a range. The new priority for agriculture and a much greater emphasis on better utilization of industrial capacity are manifestations of this new strategy. As a result, the capital-output ratio is no longer regarded as fixed; it becomes a variable function of domestic policy and growth strategy. The Planning Commission is quite explicit on the new approach: "the main focus of these revisions in the [Third] Plan priorities is to secure the desired acceleration in the growth of the economy with a lower level of total investment" [14, Pp. 2 and 3].

To be fair, it cannot be uncritically assumed that Pakistan would not have given added weight to agriculture in a more favourable aid climate. Emphasis had, in fact, been shifting towards agriculture since the early 1960's, when the discovery of sweet sub-soil water opened up possibilities of rapid growth in West Pakistan based on tubewell irrigation. The discovery of "miracle seeds" for wheat and rice extended this opportunity of spreading growth impulses from cash crops to foodgrains. While the rate of advance of the new food technology may have been influenced at the margin by the aid squeeze, there is every reason to believe that its adoption was not chiefly a response to the availability of less foreign assistance. At the same time, it must be pointed out that a short-term decline in the capital-output ratio is not a guarantee that long-term functional relationships between foreign aid, domestic investment and economic growth have changed. There is, indeed, evidence to suggest that certain sectors of Pakistan's economy have been denied needed resources in the process of adjustment to restricted aid flows; and that capital-output ratios may well rise in the next phase of development.

Much of the adjustment has been healthy, to be sure. While the official (overvalued) exchange rate has not been altered, the pricing of foreign currency has been made more realistic. In fact, the weighted average of exchange rates

¹⁶See also [17].

in use under the multiple exchange-rate system has changed significantly in recent years. The combined effect of additional taxes on imports, remissions on exports, and improvements in the bonus-voucher system has been a substantial correction of the Pakistan rupee's external value.

Where the applicable exchange rate is still high (as in the import of capital goods), arbitrary "shadow pricing" is used to economise in imports and to encourage import substitution. During the second-plan period, the private sector had been allowed to set up industrial capacity to the extent determined by private profitability; and both profitability and excess capacity were induced by an overvalued rate of exchange. During the Third Plan, sanctions for setting up additional capacity in the private sector have been more selectively linked with export and agricultural growth targets; industries are ranked in terms of their impact on the balance of payments, and priorities are redefined in accordance with this objective.

But the increasing emphasis on import substitution may involve considerable cost. In the short run, as Tims has pointed out, there is wide scope for relatively efficient displacement of imports; large concentrations of demand are available in cement and petrochemicals, for example. However, in the long run, the burden of forced import substitution is likely to be heavy in terms of both the cost of actual development and the growth potential remaining unutilized. This would be especially so to the degree that such substitution is carried out at the expense of relatively more efficient production for export.

Nor is this all. A large number of pressing current problems are bound to persist well into the future — wide regional economic disparities, inadequate human-resource development, a highly unequal distribution of income, to name only a few. Coping with such problems will be no less difficult than urgent.

It seems reasonable, nonetheless, to conclude that with the "house cleaning" carried out during the period of foreign-aid restriction, Pakistan is better equipped today to make efficient use of aid than ever before. Aid requirements can probably be projected on the assumption of more favourable parameters. A given volume of assistance can now be more productive. But continued growth of aid and better terms appear vital if the pace of advance is to be maintained and its economic cost to be minimized.

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