Chapter VI

ON INVESTMENT CRITERIA: A CRITIQUE
Objectives

The theoretical reason for a statement of objectives is that it defines ends from which choice criteria can be derived. Decisions regarding these having been taken, the rest of the planning becomes a purely technical process of applying the criteria which help in selecting the investments serving best the stated objectives. The objectives of development are inevitably multiple and some of them are divergent. This makes it extremely difficult to deduce and apply unambiguous criteria.

As mentioned earlier, the First Plan laid down five objectives: (i) to raise the national income and standard of living; (ii) to improve the balance of payments by stepping up exports and producing import substitutes; (iii) to increase the employment opportunities; (iv) to provide social services increasingly and (v) "to increase rapidly the rate of development, especially in East Pakistan and other less developed areas." (1) As regards the Second Plan, the Board was not able to present an unambiguous statement of the objectives. The "Outline of the Second Five Year Plan" states the objectives as:

(1) The First Five Year Plan 1955-60, Government of Pakistan (Karachi, 1957) 13. Henceforth referred to as FFYP.
The overriding consideration in allocating resources amongst the various sectors has been that of ensuring the maximum rate of growth of national income. But it has also been necessary to take account of a number of other important objectives. These include providing for food self-sufficiency, reducing regional disparities, improving the balance of payments, increasing employment opportunities, providing for the continued development of the economy on a long term basis and ensuring the provision of education and training facilities without which no economy can expect to reach an advanced stage of development. (2)

It was an effort to provide an unambiguous objective but no value judgement was given concerning alternatives involving equal income but unequal contributions to employment, regional balance, balance of payments etc. Furthermore, it was realized that the maximization of income may have to be compromised at places with the other objectives. (3)

In the final Second Plan the objectives came up as: (4)

The nation aspires to a standard of living for all its people as high as can be achieved with the resources available to it, equitable distribution of wealth; education of all in accordance with their talents; victory over disease; adequate facilities for transport and communication, so that the nation may be effectively unified economically and socially and evolution of the culture in literature, art and science.

This is the nearest that can be found by way of a statement of objectives in the Second Plan. It is no longer stated that one objective is paramount over all the others as in the Outline. It


(3) Ibid., 7.

is obvious that the statements relating to the objectives subsequent to the First Plan are rather ambiguous. The statement of objectives in the First Plan was clear-cut and precise and all the latter statements can be reduced to those five objectives without any difficulty. And in fact, apart from the statement cited above, the Second Plan has stated all those objectives in the form of targets. (5)

The first, third and fifth are the three most important objectives. The first and third require an increasing quantity of capital while the fifth pertains to the location of capital formation. The most surprising thing is the inclusion of 'an improvement in the balance of payments' as an objective. No doubt an improvement in the balance of payments is desirable since it directly affects the level of national income. It has very high instrumental value but it has no end value. An improvement in the balance of payments as an end means nothing but as an instrument for the achievement of higher national income, it is really important. And even if it is accepted as an objective, a rigid view of it may distort the pattern of development because in the early stages of development it may not be possible to step up the

(5) The section entitled "Characteristics of the Second Plan" in Chapter I of the Plan contains a discussion regarding national income target from para 14 to 18 including the targets regarding agricultural and industrial production and the setting of social overheads. Para 19 contains the employment target; para 20 the balance of payments objective; para 21 refers to the rapid development of East Pakistan and under-developed areas of West Pakistan and para 2 contains the objective regarding the setting up of social services. Ibid., 4-6.
exports and produce the import substitutes. In fact a rather flexible balance of payments policy may have to be adopted and a number of balance of payment reverses may have to be accommodated. At best, therefore, an improvement in the balance of payments may be treated as a guiding instrument or a restraint for the planners.

Again 'the provision of social services' as a separate objective of planning does not make much sense since it is included in the first objective which aims at 'raising the national income and standard of living.' Social services are an integral part of the standard of living and have to be provided in order to raise it. It does not mean that a rise in the standard of living is inconceivable without an increasing provision of social services. In fact the standard of living depends broadly upon two factors namely the level of personal income and the State's contribution by way of social services. The standard of living 'can' be raised either by increasing the personal income or only by providing more social services. But when a rise in the standard of living is adopted as an objective of planning it can reasonably be expected to include both the factors. Therefore an increasing provision of social services as a separate objective is unnecessary.

On the other hand, the objective of achieving a more equitable distribution of income deserved a more important place in the objectives. Some inequality is due to differences in skill etc. and may be essential to maintain the incentive for hard work. But vast inequalities in land ownership and in the ownership of
capital are socially harmful and may retard economic growth. Land reforms will remove a very important source of inequality but inequalities due to the ownership of capital will remain. If forcible methods are used to achieve greater equality, it may reduce the incentive for private entrepreneurship. There is admittedly a conflict between the objectives of raising the rate of growth and the achievement of greater equality.

**Efficiency and Consistency**

As stated earlier efficiency and consistency are the two criteria used by the Pakistan Planning Board in order to allocate resources. Efficiency refers to the choice from among a large number of alternatives of those investments which would lead to progress towards the objectives of the plans at the minimum costs. (6) To put it in another way the development programme should exclude no proposal which, if substituted for any one already included, would result in greater progress of the objectives and at a lower cost.

Obviously there is an element of the optimum about the concept of efficiency. If the objective of the development programme is to have a heavy-industry oriented economy, an efficient allocation programme would be entirely different from the case where the objective is to have an employment oriented economy. But there may be various ways of achieving a heavy industries set-up and each will have a different cost structure,

(6) FFYP, 78.
for instance, heavy industries may be set up either entirely on the basis of indigenous materials and local technicians or on the basis of imported materials and local technicians or on the basis of imported materials and foreign technicians or finally on the basis both of indigenous and imported materials and local and foreign technicians; meaning thereby that there may be various approaches to achieving the objective, each with a different cost component. And the approach which is the least costly is the most efficient.

But the concept of efficiency in the under-developed countries is not an easy one. For instance it has been suggested that since market prices are substantially different from the prices warranted by the degree of scarcity, the calculation of returns and costs should be based upon the 'accounting prices' and not the market prices. (7) Determination of the accounting prices is not a simple matter and in any way a process subject to important margins of error.

Consistency on the other hand refers to a certain inter-relationship of harmony which exists in the ordering of the various investment actions. For instance consistency demands that the achievements should certainly be according to the targets and the targets in accordance with the resources available. Any discrepancy between the targets and achievements will result in inconsistency which will express itself in terms of specific shortages and surpluses. Similarly, the ordering of investment in the plans

should also be consistent in the sense that the sequential relationship among the various planning actions is maintained.

As has been pointed out, there is an element of optimum implicit in efficiency while there is none in consistency. A programme may very well be consistent, in the sense that the investment actions bear complete harmony to each other, but it may not be efficient because the costs may be more than the minimum. It means that efficiency is not a necessary adjunct of consistency while, on the other hand, to be efficient, it is necessary for a programme to be consistent. An inconsistent programme is bound to raise the costs as a result of the waste involved.

The two—efficiency and consistency—between themselves do not present a complete theory of allocation, yet provide a more practicable approach than most of the prevalent investment criteria. It is not to say that these are free from shortcomings but it is some consolation that whatever shortcomings have been pointed out arise from the empirical difficulties faced in their application rather than their logical unsoundness. Three main limitations of the criteria are discussed here. (8)

i. The criteria do not offer a satisfactory basis for allocating resources to sectors whose returns cannot be measured.

ii. Lack of data sharply limits the extent to which these criteria could be used.

iii. In view of these two, it was not possible to achieve an objective solution to the problem of multiple objectives.

Immeasurable Aspects

The first limitation arises because there invariably are certain immeasurable aspects of a development programme which play an important role and cannot be avoided. This difficulty arises in two ways. One is that capital investment in many cases results only in unmarketed products — roads, schools, hospitals etc. Though Tinbergen has tried to show that in some cases it may be possible to attach a value to the output as for instance his example of a road in Netherlands, (9) yet in majority of the cases it would be well-nigh impossible to calculate monetary returns on investment in social overhead capital. (10) A second way in which the difficulty arises is that in countries like Pakistan, a sizeable portion of development expenditure cannot be called investment since it does not lead to a net addition to physical assets. (11) Almost every plan, including Pakistan's, has proposals for research, surveys etc. — providing services rather than constructing assets. These sectors cannot be ignored because, on the one hand, their importance in the under-developed countries has been established and, on the other, it has been proved historically by the experience

(9) Tinbergen has tried to attach a value to, for instance, a road by showing that the income to be derived from this project can be interpreted in terms of a saving on wages and imports. Tinbergen, n. 7, 43-5.

(10) Bell, n. 8, 87.

(11) Ibid., 87.
of the advanced countries that gains in production were as much the result of improved quality as of quantity. (12) Since there is no market price attached to the output of these sectors, it is not possible to compare the efficiency of resources used over a substantial and important segment of the plans. Though no precise estimates are possible, activities of this type may cover all the social overheads barring 'water and power' and transportation and communication (only partly) accounting for about 20% of the public investment in the First Plan and 21.8% of the Plan outlay in the Revised Estimates.

One way out of this situation would be to specify more precisely and make an effort to rationalize such immeasurable aspects. There are some ways open though they are not simple. One general way would be public opinion polls with such groups which are considered relevant in each case regarding the preference for the projects as compared with the alternatives. (13) It would not be easy to follow the correct course since most of the people do not realize the importance of certain projects and are extremely shortsighted, though in certain cases this approach may give some help.

What was done in Pakistan and is perhaps being done in all other countries facing this problem, was 'to seek bases for judgement which would be defensible by rational argument though not by

(12) Ibid., 88.

objective tests. (14) Bell has taken 'education' as an illustration and tried to show how allocations were made in this field in Pakistan's First Plan. Allocations were made by the Planning Board on the recommendations of its expert Education Section which made its recommendations after analysing the different surveys and the numerous proposals made by different agencies. The Section formulated and the Board adopted a statement of priorities in order to furnish a clear basis for decisions in individual cases and for numerous specific decisions. It was obvious that the educational planners had used extensively the concepts or criteria of efficiency and consistency. In that, they tried to allocate resources to what were 'judged' to be the most efficient and consistent uses. Hence it can be argued that the criteria used in education were the same as those used in industry, agriculture etc. Granting that these criteria are 'conceptually applicable' in a sector like education, does it help us far, so long as the criteria have to be applied by subjective judgement? Have we a variable set of standards that can be used by different persons under different circumstances to obtain verifiable results? (15) Or how could the value of the marginal allocation to education be equated with that to industry or transport or irrigation?

Similar questions could be raised about the other fields having immeasurable output such as advisory services, health,

(14) Bell, n. 8, 89.

(15) Ibid., 91-2.
housing, social services etc. Personal judgement, sometimes quite arbitrary, necessarily played an important role in allocating the resources especially among sectors.

It may well be possible to base our judgement on quantitative data by following Tinbergen's method (16) or some other plausible method but in spite of that a considerable segment may remain, particularly that which contributes to human well-being - education, health, social services - where it will not be possible to measure the output. Not only will such a sector lack a marketed output but will also be the one whose non-economic, non-measurable say the social effect is particularly important. Different investments will have different effects on population growth, human motives, values and institutions. In fact, most of the arguments regarding the social effects are based on predictions rather than facts, making more difficult the problem of weightage to sectors on account of the social effects. Such social effects are important because they influence economic success. There are however certain non-economic criteria which may be co-ordinated with the economic ones and the efficiency of different programmes must be determined after due consideration of economic and non-economic effects. One such criterion may be 'emotional stability.' (17) Supposing a pattern of development transplants persons from East Pakistan to West Pakistan, such a programme will obviously require people to live in

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(16) Tinbergen, n. 7, 43-5.

a manner which is entirely alien to them because of the differences
in the social set-ups of the two wings and as a result of which
they may turn entirely hostile. What is required therefore is
that the allocation is so made that the necessary change may be
given a sanction by some existing social values. (18) In such
cases it will be impossible to give a quantitative treatment and
equate the value of the marginal allocation in different sectors —
say health and producer goods industries.

The existence of such non-economic and intangible effects
and criteria rule out the possibility of using quantitative data
for determining the efficiency and consistency of different
investments. In view of this it may be imperative to leave a
certain segment of the development programme to a set of well
informed and objective persons who can strive for efficiency and
consistency in such sectors. This may not give us a 'transferable
set of standards that can be used by different persons under
different circumstances to obtain verifiable results' and the
judgements may be highly subjective, and for sometime to come this
situation may continue.

Lack of Data

Though a large part of the development programme generally
consists of investments with marketable products and it is much
easier to deal with this part of the programme, yet the inadequacy
of data presents a rather formidable limitation. It does not offer
any theoretical challenge but it does make it difficult to allocate

(18) Ibid., 64.
the resources rationally according to an objective standard.

Two main categories of data are considered here in relation to Pakistan: (i) market and cost data and (ii) general data on the economic system as a whole.

In Pakistan market and cost data were available in relatively few cases for the First Plan. For the great bulk of investment in agriculture, in small and medium scale industry and in small scale irrigation projects the data were absolutely insufficient (19) to serve as a basis for quantitative estimates of expected returns from different projects. Not only this, but whatever data were available did not include the estimates of comparative costs of alternative technologies. Nor was the data sufficient to arrive at an estimate of the secondary costs and benefits of a project. (20) And lastly no estimates, howsoever rough could be made regarding the phenomenon usually described as 'external economies and diseconomies' representing some almost invisible influence exerted on other industries.

It was only in a very limited number of cases, primarily large-scale industries that some data were available and comparative returns on alternative investments could be calculated. But even in these cases the data were of doubtful reliability because of incomplete reporting. (21) As a result of incomplete data relative priorities could be established in a rather limited number of cases.

(19) FFYP, 124.
(20) Bell, n. 8, 96.
(21) FFYP, 124.
and these also were not absolutely certain. Relative priorities among a few projects gave hardly any help to the Planning Board in allocating the resources among the sectors. (22) In many cases — the whole of Agriculture sector, for instance — it was not possible to measure the prospective returns on investment.

Alternative basis for decisions were found. For example, the so-called high priority attached to agricultural expenditure during the First Plan was based on general considerations like 'the large opportunities for increased agricultural output in view of Pakistan's low per acre yield, the importance of increasing Pakistan's food production to eliminate the need for imports and the fact that increased production of export crops provided the only chance in the short run for increased foreign exchange earnings.' (23) Such factors undoubtedly are important and powerful but hardly enough to provide an evaluation of a particular sector project. Because of a lack of data, decisions in agriculture were based on subjective judgements as to whether or not the proposed investment would make a higher contribution to the development objectives than its alternative would. The same was done in small and medium industry, small scale irrigation, etc. The precise calculations required by the allocation theory were not possible. (24)

General information about the country was also rather scarce. Data on the flow of income to consumption and saving, the foreign

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(22) Bell, n. 8, 98.
(23) Ibid., 98.
(24) Ibid., 98.
balance of payments, the money supply, prices and other types of general information are essential for making investment allocations which will fit in with the flow of products, incomes and factors in the economy. In Pakistan, data on banking system, money supply and the balance of payments were satisfactory whereas in other fields such as employment and wages, consumption, saving and capital formation, prices etc. it was particularly scarce. (25) With data so scarce and inadequate, the actual allocation of resources in Pakistan was left with numerous drawbacks which could be eliminated only by a vigorous and broad scale programme of investigation and surveys.

The First Plan laid much stress on the importance of statistics as a basis for sound planning, administration and evaluation. It allocated Rs. 3.5 million for the development programme of statistics (26), and came out with a number of recommendations. Some progress however was made in that. A National Sample Survey Unit was established in 1956, a Provincial Statistical Bureau was started in West Pakistan and certain other departments were expanded to include statistical units but the Central Statistical Office remained much the same in spite of the recommendation that it should be strengthened and its activities be enlarged as the co-ordinating statistical agency for both Central and Provincial Governments. (27) In spite of all this,

(26) Ibid., 127.
the Second Plan faced much the same difficulties of data as the First Plan did. (28) The Second Plan also realized the importance of reliable data and made a number of recommendations for organizing the country's statistics in a better manner.

It follows that the organization and improvement of research, survey and investigation units, is an important part of any development programme. To improve or rationalize the resource allocation one has to launch a greatly improved investigation into alternative investment opportunities in the different sectors but in Pakistan many possible lines of investment have not been explored at all or have been explored partly. (29) Though it presents a tremendous problem, it can be hoped that as the programmes in the Plans are completed, relatively more data will become available in future.

**Problem of Multiple Objectives**

The problem of multiple objectives can be solved. First, by applying, 'shadow or accounting' prices because some of the objectives tend to merge into each other when mathematical programming methods are used. For instance the objectives of maximizing national income and employment tend to come together. (30) Second, some of these objectives can be considered as restrictions on the choices available. (31) Now, these methods could not be

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(28) SFYP, 121.

(29) Bell, n. 8, 100.

(30) Ibid., 101-2.

(31) Ibid., 101-2 and H. B. Chenery, "Development Policies and Programmes" in *Economic Bulletin for Latin America*, March 1958, 54. It has already been discussed in details in Sec. 1 of this Chapter.
used in Pakistan to reconcile the various objectives and find the most efficient and consistent allocation because of the two limitations already discussed i.e. the unsatisfactory treatment of the expenditure on non-marketable activities and the paucity of data.

The Planning Board was not able to reconcile the first three objectives through the use of accounting prices in the First Plan. But the Board did act according to certain priorities. There were very few cases in which the national income objective came in conflict with the balance of payments objective, but whenever it did, the Board's inclination was to give priority to the latter. Similarly it was in a very few cases that national income objective conflicted with the employment objective but wherever it did, the national income was given priority. (32) One of the major factors contributing to the ease with which these three objectives were reconciled was the lack of data on alternative investments and technology.

The fourth objective, the increase of social services, was put as a separate objective because the Board realized the difficulty of treating these in a national income framework and wished to stress the point that such services 'have an ultimate as well as an instrumental value.' (33) Since the allocation to social services was made strictly on a subjective level, it is impossible to find out if there was a conflict between this and the other


(33) Bell, n. 8, 103. Sec. I of this Chapter.
objectives and how the pattern of allocation was affected by keeping this as one of the objectives.

The fifth was both a political and an economic objective. The explosive political situation in East Pakistan during the early 1950's was primarily the outcome of the economic disparity existing between the two wings. This forced the Government to adopt geographical parity as a clear policy and to adopt equality between the two wings as an important objective of planning. But such an objective is not attainable during the short period of five years. One thing necessary to achieve this equality was a more rapid rate of growth in East Pakistan than in West Pakistan. And, as Mr. Bell points out, to achieve this the Board did include some projects in East Pakistan with lower returns than some others with higher returns in West Pakistan. (34) In so far as the Board did this, it sacrificed a certain increase in income in order to achieve a better distribution of income. In future the Board might have to decide to what extent less income is justified by a gain in equality.

As has been pointed out, the Second Plan also stated the five objectives in terms of targets to be achieved. So the difficulties of reconciling them during the Second Plan remained much the same as the ones experienced during the First Plan.

To the extent the different objectives conflict with each other and no unambiguous statement regarding a paramount objective exists, it becomes impossible to find the most efficient

(34) Ibid., 104.
allocation. On the contrary, an unambiguous objective, for instance, increase of income potential, may suggest emphasis on heavy industries. In case of employment being the objective, cottage industries would demand special attention. But the formulation of such unambiguous objectives in the absence of sufficient experience with planning and in a society where no precise consensus of national purposes has yet developed, is impossible. Moreover, development process by its very nature is such that it is impossible to reduce the multiple objectives to a single paramount one which should be given priority over the others. It is indeed possible to visualize a pattern of economic development which makes for a simultaneous achievement of the various objectives and the pattern which does so the best, will be the efficient one. As has been mentioned, the Board can adopt one out of the five objectives as a paramount one and treat the others as restrictions on it. Undoubtedly, the Planning Board will have to strike some such compromise among the various objectives, although a major conflict may in particular emerge between the income objective and the 'regional distribution.' Where and what kind of compromise to strike are matters on which hardly any direction can be given on theoretical grounds. These are matters which the Board has to decide guided by its instinct, intuition and social sense. (35)

Thus the difficulties in the application of efficiency and consistency as criteria are in no way such as cannot be removed.

(35) A. K. Das Gupta, "Note on Objectives etc. of the Second Five Year Plan" in Papers relating to the Formulation of the Second Plan, Government of India (New Delhi, 1955) 43.
The first limitation regarding incommensurable returns is not in fact a limitation in the sense that it is almost universal, the difference being that of degree only. Even in the most developed countries it is present, though to a smaller degree, because certain results by their very nature are not measurable and hence cannot be subjected to quantitative evaluation. In such cases naturally, the decisions have to be based on the subjective judgement or intuition of the planners. But this should not alarm us because not only here but in a number of cases the intuition of the planner has to be relied upon. (36) In fact it may prove to be a virtue because first: of necessity it has to be used in certain fields and second: it may lend a more realistic touch to the allocation process; since, even in fields where objective tests can be applied, certain of the influences have to be assumed away. But when the role of subjective judgement in the allocation process is accepted, all measurable and immeasurable influences can be taken care of. The second difficulty is removable without much difficulty. It requires investigations, surveys and research programmes to make more data available and as more data become available it should be possible to select the most efficient investments. The third limitation may present some difficulty but the moment we accept the role of the planner’s intuition in planning, it becomes easier to reconcile the various objectives with the help of the planners' subjective judgement.

(36) For instance, the very selection of particular 'investment criteria' is based upon the subjective judgement of the planners of a country.
It is doubtful if the twin criteria of consistency and efficiency were always kept in the forefront while deciding upon the pattern of allocation in the two Plans. In fact the Pakistan planners were confronted with various such situations where one or the other criterion had to be sacrificed. For instance a shortage of time in formulating the Second Plan resulted in an inconsistency between the micro and macro aspects of the Plan. Efficiency had to be sacrificed because of the desirability of 'Food self-sufficiency' as a political slogan. Huge amounts were invested in irrigation works and other overheads in both the Plans very much in line with the predilection that, 'social overheads must precede industrial growth.'

The search for a suitable pattern of allocation during the Second Plan proceeded both on the macro and micro levels simultaneously. On the macro level the broad physical targets and their costs were worked out unrelated to the detailed projects and programmes which these targets would require for their implementation. Similarly on the micro level also individual projects and programmes were drawn up without reference to the targets they were supposed to achieve. As a result the consistency between these two vital aspects of the Plan is very much in doubt. (37) Such consistency could only have been ensured, had the planners worked out the physical targets in all the sectors of the Plan, asked the sponsoring agencies to draw up their programmes in the

light of these targets and checked up whether the physical content of the Plan and the physical targets perfectly matched. (38)

Similarly it is also uncertain if efficiency consideration was always adhered to. This consideration seems to have been ignored in the choice of 'food self-sufficiency target.' It was known to the planners that large quantities of foodgrains under PL 480 aid would be freely available to Pakistan. In fact an agreement was drawn up to import $722 million worth of these supplies during the Plan period. In view of this a better approach would have been to push vigorously the cash crops rather than emphasize the food crops. Had the priorities been reordered on these lines, the country could have obtained its marginal requirements of food at zero cost from abroad. (39) This would have permitted the diversion of land, irrigation water, fertilizers and capital equipment to cash crops; especially export crops, thereby increasing the supply of scarce foreign exchange. As it is the imported PL 480 supplies were lying unsold in Pakistan's godowns whereas the production of cash crops was lagging behind and hampering the export effort of the economy. (40)

(38) Ibid., 184.
(39) Ibid., 184.
(40) Ibid., 184.