The Second Five Year Plan
— Some Methodological Considerations

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For appropriate developmental planning it is necessary to pool the knowledge of economists, statisticians and other technical experts in different fields, in order to complete the work initiated so brilliantly by Prof Mahalanobis. The scientific approach in the Draft Plan Frame calls for nothing less.

The author, one of our leading econometricians, argues persuasively and convincingly for operational studies in order that policy makers may have appropriate scientific criteria for programming of activities, so that instead of purely subjective preferences, policies may be based on observation and valid inference.

The First five year plan period is coming to a close with March, 1956 and the Plan-frame for the second Five Year plan has been before the public for some time. The plan-frame has aroused keen interest even though the interest has received a temporary set-back owing to the publication of the States Reorganisation Commission’s Report. The second five year plan, however, is busily under preparation and is expected to be before the public before the end of the first plan period. At this stage it will not be out of place to make a critical appraisal of the methodological considerations useful for the finalisation of the second five year plan.

The approach of the first plan was simple and did not present any methodological problems. The accent of the plan was on agricultural development with river valley multi-purpose projects and community development projects as parts of it. Firstly the various projects were defined and their costs estimated. An estimate of the money available was made and by readjustment, the priorities and sizes of the projects have been brought into equilibrium with the money available. The evaluation of the progress of the plan was mainly on an expenditure basis. The tempo of achievement was measured by the tempo of expenditure. Even though the method of evaluation of the progress of the plan leaves much to be desired, the basic approach of the first plan was sound, considering the purpose for which it was intended, namely, agricultural development, so very necessary for the development of the other sectors. Because of the primary accent on agricultural development, problems of employment and industrial development could not be given much attention in the framing of the first plan. The first plan on the whole laid a basic and correct foundation to subsequent balanced economic development of the country.

When it came to drafting the second five year plan, attention was given to those aspects which are more important than only continued accent on agricultural development. Because of the nature of the targets that the country has chosen to place before itself for achievement during the second plan period, the method of approach adopted in the first plan is no longer sound and applicable. It seems now the appropriate time to examine whether the scientific approach adopted in the Draft Plan-frame is not severely restricted by the lack of the development of economic concepts, aiding economic decisions in the planning and programming of the development of the economy most suited to our conditions, however good they may be for economic decisions arising in the economics of other countries.

The Objectives and Approach

The objectives of the second five year plan as placed before the country from time to time by Pandit Nehru and other leaders are as follows:

(a) to increase national income,
(b) to increase employment,
(c) to usher in a socialistic pattern of society,
(d) all these to be done within the democratic frame work of the constitution.

The approach for achieving these objectives can be summarised as follows:

(a) For increasing income, use increasing tempo of investment for increasing national income by twenty five per cent over the plan period.

(b) For increasing employment, (1) restrict expansion of factory production of consumption and use labour-intensive methods and (2) encourage construction, social services, etc.

(c) For a socialistic pattern of society, enlarge the scope of the public sector.

In the execution of the plan some bottlenecks may arise. In the case of the various bottlenecks noted below the following devices have been prescribed for adoption:

(1) In case of insufficient finance, use deficit financing.

(2) In case of market mechanism going out of gear, use restrictions, controls, common production programme etc.

(3) To avoid bottlenecks of physical resources, use matrices of physical input-output structures.

For the planning and programming of investment,

(1) Use capital-output ratio as a criterion of choice between alternative investments.

(2) Conserve foreign exchange for investment in basic industries, and

(3) The increased demands for consumption goods arising out of the new investments is to be matched by the supply of the same from quickly maturing capital-light and labour-intensive hand and household industries.

The accent in the second five year plan is on investment on basic industries for the following purposes: (1) to secure economic independence and (2) to develop steel plants (a) for meeting demands for steel from various industries (b) to make machinery for setting up further steel plants and (c) to make machinery for consumption goods factories, in part to be exported and in part to be used ultimately in the production of consumption goods.

This, in short, is a summary of the Plan-frame and the basic approach to it as revealed in the plan papers. The approach for the attainment of the objectives is quite good as far as each objective and the corresponding approach are concerned but taking them as a whole, it is not clear how far they are in equilibrium or at least mutually consistent or even necessary. For example, for increasing employment a restriction is ought to be placed on the expansion of factory production of consumption goods.
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CENTRAL AND WESTERN RAILWAYS
goods. This in fact is not in the best interests of accelerated development of income and the economy as a whole. Increasing employment by itself is purely distributional in character and without a corresponding increase in the per capita production, especially wage-goods, there may not be a development of the economy so as to give rise to the planned twenty-five per cent increase of national income over the second five year period. The common production programme may not be a success as it is not necessarily in conformity with conditions of economic equilibrium. Controls and other restrictions may have to be resorted to in order to prevent the market mechanism going out of gear.

Also, the methodological approach is in part financial and in part one of physical resource budgeting. The physical resources budgeting method is quite necessary for avoiding bottlenecks but by itself it cannot be operationally smooth under conditions of democracy. On the other hand, the traditional concepts of macro-economics such as national income, total output investment etc., which are the common tools of industrially developed democracies like the United Kingdom and IX 8. A, are not necessarily the best concepts for facilitating decisions of developmental planning under the aegis of a democratic type of constitution in an underdeveloped country like India.

Western Economic Concepts not Enough for Proper Planning

Aggregates like investment capital-output ratio for an industry do not give any indication of priorities in planning even though they do provide measures of evaluation of the progress and success of the execution of the plan. Concepts like the capital-output ratio and employment generated are concepts which serve the purpose of an individual entrepreneur for deciding between priorities. But they do not necessarily serve the purpose of planning on an entire economy basis to be streamlined with the working of the economic forces in a democratic set-up.

The economic concepts used in the preparation of the second five year plan are concepts which have been developed in the West or in Russia to meet the requirements of their economic thinking suitable to their socio-political institutions and the state of development of their economies. They are not necessarily convenient for all purposes and cannot provide scientific criteria for the planning, programming, and execution of investment.

A Social Engineering Approach Needed

The problem of planning in an underdeveloped country like India must be approached as an engineering problem from the point of view of society as a whole and must be defined in operationally convenient and feasible concepts. For an optimum allocation of the limited resources of the country for an accelerated development of the economy, it is necessary to have criteria of determining the appropriate technique, size and number of firms within an industry and between the various industries. As it is, the aggregates cannot give any guidance in the matter and the planning has to proceed on a guess-work basis as far as the operational details are concerned. Suppose, for example, the country decides to have ten factories of a particular size and technique for manufacturing cement and five textile mills. How are we to set up a criterion of choice between, say, the fifth unit in the cement production and say, the third in textile manufacture? At present there are no criteria. The Planning Commission do not seem to have investigated this problem nor is there any indication given by them so far that they are studying it.

Demand alone cannot be the sole criterion in the determination of the priorities between specified units of one industry and another for programming of resource-utilisation in development planning. Demand and supply no doubt play an important part for the economic existence and viability of a particular unit but it is essentially an individual entrepreneurial view for planning whether to get the particular unit into existence or not. The Western concepts are all woven round this particular view. The individual entrepreneurial view is not at all concerned with the accelerated development of the economy as a whole, for which the criteria are rapid growth of incomes, employment and more even distribution of incomes in tune with the structure of the economy working under democratic conditions with the minimum of interference with individual drive and initiative. From this point of view, it is necessary to investigate the ramifications of bringing into existence a unit of particular size and technology in an industry at a certain level of development of the economy as a whole. Any particular factory generates incomes and employment not only locally but also throughout the various sectors of the economy. The factory draws its materials in a raw end semi-manufactured state from various sectors, thus generating income and employment throughout. The cumulative multiplier effects on income and employment generation as also on prices and other related economic variables relevant for economic planning have to be investigated. The multipliers of income and employment of a particular unit provide the necessary criteria of preference, indifference or rejection of one item with respect to another in planning and programming of economic development. The multiplier effect of income and employment generation in the economy occasioned by bringing into existence one individual unit is akin to a chain reaction set up by the fission of the atom. One new activity gives rise to supporting activities and those in turn, to other supporting activities and so on. A survey conducted shows that a factory going up in the area even though it would employ only 150 people directly would give rise to business activity enough to employ 1,100 persons at the level of incomes obtaining in the USA. The purchasing power created would go to buy produce from 6000 acres of farm land in the locality. On the whole the increased economic activity would lead to state and federal taxes of nearly 2.5 million dollars, receipts of nearly half a million dollars by the local truck owners, constructional activity to house 300 homes and business for 30 grocery and other shops etc.

It is indeed very regrettable that no attempt is made to conduct micro-economic surveys of the above kind in India which are so very essential for proper planning. We talk in terms of aggregate borrowed from Western economic theories. When we do not know how best to break up the aggregate which any way will have to be done in the execution of the plan, the mistakes can aggregate and make the scientific character of the plan illusory.

Reorganisation of Technological

The common production programme advocated in the Plan-frame is viewed only from the point of employment and does not take the inevitable condition of economic equili-
brium between units of unequal economic efficiency within the same industries. It will be a great strain on the economy to force it to bear the burden of inefficient units retarding the pace of economic development. A better plan would be to disintegrate the technical side of the production of any particular commodity into various intermediate stages and determine, for the largest possible multiplier effects of income and employment generation, the appropriate nature of the size and organisation of the manufacture of the commodity at each stage. Spinning, for example, has necessarily to be done in a large scale unit, as economies of scale lead to a cheaper product. When it comes to weaving, a large size unit, as it has been noted by the Kanungo Committee Report, does not necessarily have an advantage over a smaller unit. In the match industry, too, it has been found by the Khadi and Village Industries Board that the operation can be carried on as a household industry.

In the manufacture of machinery for the production of various commodities it is worthwhile to investigate the possibility of simplification and standardisation of the various components parts. If this is done, after determining the appropriate technology and organisation suitable for an integrated development of the country as a whole, machine parts for assembling various types of machines can be produced on a large scale at a very cheap rate and the problem of capital accumulation will not then be such a difficult problem as at present. Conditions peculiar to our country will then be to our economic advantage in competition with other industrially developed countries.

We are thinking in terms of either the village industries of primitive technology or the large scale industries of the Western type. The former is economically inefficient and the latter inefficient from the point of view of employment generation. With the existing technical knowledge, either available directly with Indian technologists or imported foreign technicians, it is possible to reconstruct the appropriate quantum of a production unit optimal from the point of view of the multiplier effects of both income and employment generation by disintegrating technology into the most economic types of production. What seem to be the drawbacks for rapid development can then be transformed into accelerators of development.

A machine is designed in America or the U. K. for the best solution of the problem of least-cost. Wages are far higher in these countries than in India. The machines, especially their speeds and labour utilisation points, are determined for the lowest labour costs. The same machine, under Indian economic conditions, can be speeded up and more labour associated with it. By a proper adaptation to Indian conditions, it is possible to have

1. more intensive utilisation of the machine per hour leading to greater production,
2. larger amount of employment, and
3. greater amount of profits at the same time.

The author has given an example elsewhere from the textile industry. Thus it is possible for India to compete effectively with Western countries.

Conclusion

A comprehensive engineering and econometric investigation has to precede the finalisation of the second five year plan. Economists without the knowledge of statistics and technology or statisticians without the knowledge of the other two and technologists of a similar variety or a mere committee of these people cannot necessarily produce an integrated picture. People with the necessary specialised knowledge have to be relied on for the purpose and it is hoped that the Government experts will see the wisdom of bringing together various people with the necessary specialised knowledge wherever they may be found in the country.

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