

Formulation of Development Plans – Planning Techniques

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Abstract

Planning is an appropriate development path to improve the life of common people. Deliberation in this article revolves around development planning and development plans. The main focus is on the formulation of development plans. The other development issue that has been discussed in this article is the planning techniques with reference to the one used in Nepal.

1. Development Planning: The Concept

- 1.1 Planning has been defined in many ways. Planning involves the formulation of a national program of action for achieving development objectives. A. Waterson defines that planning is, in essence, an organized, conscious and continual attempt to select the best available alternatives to achieve specific goals (Waterson 1971, p 26).
- 1.2 Broadly speaking, development planning is of two types: the central planning and the indicative planning: the former is practiced in a centralized economy where the role of the state is dominant in the socio-economic life of the people. Such types of planning were pursued in socialist countries like the then Soviet Union, North Korea and so forth. In mixed economics like Nepal, planning takes the form of indicative in nature. Economics decisions are partly guided by the 'invisible hand' and partly done by the state intervention. The state sector and the private sector both remain active and play their respective roles. The role of the public sector is conceived as that of a facilitator to promote development in the country. The private sector on the other hand is involved in providing goods and services needed for economy to move on the growth path.

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Formulation of Development Plans – Planning Techniques

- 1.3 The need for planning arises from the inability of the price mechanism to ensure growth, efficiency and equity. Sometimes the political objective of a nation may dictate the necessity of planning and the government may need to intervene in the economic activities of the country.
- 1.4 The more pressings are the development problems, the greater is the need for planning. Hence, the art of planning is to intervene in the economy with sufficient vigor to overcome the major problems without at the same time exceeding the capacity of the civil service and causing a breakdown of development administration. The proper balance between intervention and restraint is likely to be both delicate and changing: delicate because administrative capacity is small and limited, and the problems are immense; changing because the ability of the management to analyze and resolve difficulties should increase. (Griffin and Enos. 1970 pp.3-78).
- 1.5 The country may have different objectives which need to achieve simultaneously such as social, economic, political, cultural etc. Market forces influence primarily only the economic aspects.
- 1.6 In less developed economies like Nepal, the market mechanism or the price system does not function with a reasonable degree of efficiency as a mechanism for allocating investment and other resources in accordance with social demand. The reasons are many. There are generally unemployed and underemployed resources. A variety of bottlenecks impede production and distribution. The government machinery is weak. Price responds haphazardly to changes in supply and demand because markets are often rudimentary and fettered by rigidities. There are barriers to the free flow of information. Changes in these circumstances are often a precondition of development. Development planning seeks to break down such structural obstacles and achieve growth. Hence, accelerated economic growth and structural change are the two main aims of development planning.
- 1.7 A development plan contains, among others, the following features (i) a survey of the current economic situation; (ii) objectives, targets, strategies and programs for accelerating economic growth and development (iii) a list of proposed government expenditures (iv) a macroeconomic projection for the whole economy etc.

2. Development Planning and Development Plan

2.1 It is worth pointing out the distinction between development planning and development plan. Development planning as a process helps the formulation of effective development policies. The plan is the product of the planning process while the first is the process itself. The preparation of a plan has advantages because it provides a systematic approach to co-ordinate development decisions. Further, development plans are useful for initiating or stimulating development process. Just as there is more to planning the preparation of a plan so planning does not necessarily require a formal development plan. However, it needs to be said that a development plan is not a sufficient or even a necessary condition for ensuring rapid development.

3. The Planning Periods

- 3.1 Development plans are prepared for a fixed period. Plans are of three kinds-annual plans are used mostly as an instrument of translating medium-term plan objectives and programs for implementation. Thus, an annual plan deals with current development activities without losing sight of medium-term objectives.
- 3.2 A medium term plan-a five-year plan in the context of Nepal-indicates total investment and investment by sectors for the entire plan period and the targets to be achieved at the end of the plan period. Medium term plans are not operational plans. In order for them to become effective guides to action, output and expenditures must be determined for each year of the plan period. This is accomplished by the formulation of the annual plans.
- 3.3 Perspective plans usually covering a period of 10-20 years are less detailed than medium term plans. Such perspective plans are based on longer-term growth prospects with general targets based on only rough approximations of the likely supply of, and the demand for, resources. They provide a good enough idea of priorities to enable planners to concentrate on the most promising sectors in preparing medium-term plans. They also indicate, in advance, in what area reinvestment and other surveys will be required before specific projects/programs can be formulated.

4. Planning Techniques

4.1 Different countries use planning models/techniques depending upon the nature of the economy. the availability of the information, the capacity to use and manage such techniques and models. Some of the major models can be presented as follows:

Harrod – Domar, (b) Neo-classical growth models, (c) Input-output model.

4.2 **The H-D Growth Model:** The H-D model is the simple analysis of capital accumulation in the absence of technological progress.

The simple version of H-D model is given by the following equation;

$Y = K/\alpha$; where Y is the rate of growth, K = the savings (investment) rate and α = the capital – output ratio. The equation simply says that the rate of economic growth is determined, given the technology, by the rate of investment.

4.3 **The neoclassical growth model:** Since in the H-D growth model there is no place for technological changes, the neoclassical economists believe that growth is also the function of technological changes.

Hence, the neoclassical growth model is given by the production function.

$Y = A K^\alpha L^\beta$, where Y = the rate of economic growth, K is the capital and L the labor. A represents the technological progress α and β present the share of capital and labor in the production process. This is usually referred to as Cobb-Douglas production function which simply states that A the measure of the technological progress is important in the determination of the aggregate growth rate.

4.4 **Input-output Model;** (I/O) provides a microscopic view of the national economy. It is a statement of the output of goods and services produced by a sector and the volume of goods and services which are consumed to produce a given unit of production in that sector. Since different sectors of the economy are interrelated, and

Formulation of Development Plans – Planning Techniques

each sector has to depend on other sectors for input and to sell output. In other words, an output of one sector is used as inputs in other sector. The I/O is an instrument which recognizes the interdependence nature of the economy. For instance, the agriculture sector output depends on the production of fertilizer industry and so on.

There are other models/techniques such as linear programming, computable general equilibrium model and so on. But the above are some of the models which Nepal has tried in the past while trying to formulate development plan in Nepal.

5. Planning Institutions

5.1 Planning functions at the central level are widely scattered over a number of institutions. At least, five institutions/agencies are directly involved in the planning process. These are;

- The Cabinet
- The National Development Council which is sometimes referred to as "Development Parliament" (NDC)
- The National Planning Commission (NPC)
- Development Ministries, and
- The Regional/Zonal Offices of Ministries/Departments²

Each of these institutions does play a varying role at different stages of the planning process.

5.2 Several other ad hoc committees were formed for the formulation of the Tenth Plan. A Coordination Committee under the chairmanship of the Vice-Chairman of the National Planning Commission, Sectoral Steering Committees under the chairmanship of the concerned members of the NPC, and other technical committees were involved. Plan formulation activities were carried out by Task forces headed by the respective Secretaries of the ministries, consisting of planning officers and the heads of the Departments.

² The Regional Offices of the NPC Secretariat has been abolished since 2005, although the Tenth Plan proposes to adopt strategies to "strengthen the Regional Planning Office", p.632.

- 5.3 The Plan is basically the outcome of the interactive processes moving back and forth and is widely based on interactions conducted at different stages and at various levels. Discussions were held with various representatives related to different sectors including parliamentary committees, parliamentarians, and national level intellectuals, as well as at central, regional and district, village and municipal levels.

6. Planning Techniques Used in Nepal

- 6.1 Prioritization of the Projects: The Tenth Plan, 2002-07 has used prioritization as an instrument to strengthen the implementation and selection of programs/projects. Eighth criteria were used to for prioritization such as (i) direct contribution to the national goal of poverty alleviation, (ii) contribution to the sectoral priority (iii) regional balance (iv) necessity of government's involvement in programs/projects, (v) possibility of public participation, (vi) involvement of local bodies in line with the spirit of decentralization, (vii) contribution in enhancing private sector's involvement/competition, and (viii) achievements in the past in the context of the on-going programs/projects.

Based on above criteria the evaluation of the programs/projects were done by calculating on the basis of the categorization of "very good" "good" "general" and "poor". (3, 2, 1, 0). Among the eighth criteria mentioned above, the first four are used in all sectors and the rest four are used by modifying as per the needs of the sectors in question. This was followed by the construction of Policy Action Matrix Activities³. Based on the score derived by evaluating each project/program on this basis, the projects/programs are categorized into priorities I, II, and III. If resource does not permit, the projects/programs falling into the II and III priorities are to be curtailed.

- 6.2 Application of Log Frame: The Tenth Plan, 2002-07 used the policy and program log frame massively in order to strengthen the implementation and monitoring aspects of the programs and to link formulation of the Plan and its programs to national goal. The policy

³ Ibid.

and program log frame are prepared for all sectoral areas of the entire plan. The sectoral log frame was prepared in two parts – (a) a summary of at the national level, and (b) an additional explanation of the major programs. the first aspect covers such areas as the overall goal, policies major activities of the sector whereas the latter includes the particulars of other policies and activities assuming the major activities incorporated in the former category as the results. While preparing the log frame, the overall sectoral goals matching the overarching national goal of the Plan are identified and sectoral policies/operational policies are presented in line with the overall sectoral goals so identified. The policy and program log frame included six aspects – goals, policies/operational policies, outcome indicators, sources of information, major programs and risk and assumptions. This is the first time the instrument of log frame has been so extensively used in the formulation of a periodic development plan.

- 6.3 Estimates of ICOR: While projecting the economic growth rate, investment and other major economy-wide parameters for the Tenth Plan, 2002-07, macro economic analysis, incremental-capital output ratio (ICOR) and input-output (I/O) have been used. Expected investment and sectoral production growth is projected for two scenarios: normal case scenario of 6.2 percent per year and alternative case of 4.3 percent per year. The estimation of ICOR is based on the figures for the last ten years and is examined by using linear regression model. The impact of cumulative investment of the past years is used as the basis. For the agriculture, industry, restaurant and hotels, as well as finance and real estate sub-sectors, the impact is measured by a one year lag investment of the respective of the sectors, for the transport, construction and communication sectors, the impact is measured by a two year lag cumulative investment of these sectors, and that for the electricity sector, three year lag cumulative investment. These cumulative investments are expected to explain more than 96 percent of the variations of the respective sector contribution of GDP⁴.

⁴ The Tenth Plan, 2002-07, NPC, HMG/N, 2002, Kathmandu, pp. A-56-58.

Altogether 51 equations and identifies are used in macro model. Among them, 8 relate to value added, 5 relate to consumption, money supply and price, 8 relate to employment, 4 relate to import, 6 relate to taxation and 20 relate to other definitional identifies. On the basis of these equations, the ICOR, sectoral investments and final demands are projected. The projected demand is adjusted with the I/O analysis to project the realistic growth rates.

- 6.4 **Medium Term Expenditure Framework:** The implementation of the Tenth Plan, 2002-07 is assured by the fact that the budgetary provisions for the programs/projects included in the Plan are provided in the MTEF document. The intention is that no program/project needs to suffer from the lack of fund in the midst of implementation. the framework provided basis for the forecast of the resources required for the implementation of the programs/projects. HMG implemented MTEF since 2002/03 with the objectives of (a) developing a consistent and realistic resources framework for sustaining macro-economic stability; (b) improving budget allocation to PRSP priorities among and within sectors; (c) increasing incentives for efficient and effective use of resources by government agencies; and (d) making development more result-oriented.

7. Conclusion

- 7.1 The above clearly indicates that planning has become a specialized task. With the development of techniques and methods, the task of forecasting and the evaluation of performance are bound to be more reliable and hence the development process more predictable.
- 7.2 The Tenth Plan anticipates that by virtue of above mentioned innovations, the development process will be more effective, participative and qualitative, resulting in the increase in the program and project completion rate.

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