
ADMINISTRATION OF DEVELOPMENT PROGRAMMES AND PROJECTS

INTRODUCTION

The success of a development plan lies in the effective and efficient execution of programmes and projects. Development programmes and projects play an important role in the strategies for national development. They constitute devices and tools in the development process. They have gained wide recognition both as building blocks and as action units for national development plans all over the world. In fact, some national and international agencies lay greater stress on the formulation of development programmes and projects than on general planning. At a time when developing countries are embarking on the path of modernisation, planners and public enterprise managers have emphasised the need for instituting programmes and projects which help realise this goal. The capability of these administrators/managers in formulating and implementing programmes and projects oriented to developmental goals of socio-economic progress and nation building is of great importance in the development effort. In most developing countries, projects are widely used but their use and importance differ from country to country. In many of them, they are set up with the purpose of receiving technical assistance or finance from foreign countries or international financial institutions (like World Bank, International Monetary Fund or International Finance Corporation).

In others, projects are used to handle development of certain major programmes such as industrial development, education reform, etc. Projects also provide information to planning agencies which in turn determine the use of existing resources to achieve the desired purposes. To quote from a United Nations publication, projects are "a link in the process of successive approximations involved in the technique of programming and an important element in the flexibility and continuous revision of the programme."¹ Inevitably, projects are important tools in providing facts and figures for national planning. They help in the overall national planning process. They "aim at bringing about behavioural change ultimately leading to social change."²

National plans include a large number of investment projects and programmes. The nature and problems of implementation of large investment projects in sectors such as industry, minerals, power, transport and communication, differ from those of development programmes which are in the field of agriculture, rural development, village industries, social welfare, education, health, etc. Hence the modalities of formulation and implementation for programmes and projects are different.

Here an effort is made to discuss the management of projects which includes the process of formulation, implementation (monitoring) and evaluation of projects.

Meaning of Project and Programme

Programme and project are quite related to each other in the development process. However, a line of distinction between the two must be drawn.

Webster's *Seventh New Collegiate Dictionary* defines 'programme' as "a brief outline of the order to be pursued or the subjects embraced." In a United Nations publication, Egbert de Vries takes the programme to mean "a form of organized social activity with a specific objective, limited in space and time."³ He says that a programme often "consists of

1. United Nations, *Manual on Economic Development Projects* (New York: United Nations, 1958), p. 5.

2. Ashok Pradhan, "Organisational Design for Development Projects", in M.K. Singh and Anant Mahadevan, *Project Evaluation and Management* (New Delhi: Discovery Publishing, 1990), p. 191.

3. Egbert de Vries, "Programme Formulation and Implementation", in United Nations, *Administration of Development Programmes and Projects: Some Major Issues* (Geneva: United Nations, 1971), p. 2.

an interrelated group of 'projects' and usually is limited to one or more ongoing organizations and activities." A development programme is the grouping of development projects falling under a single jurisdiction or for a common purpose. Thus we might talk of the family planning programme of the Ministry of Health and Family Welfare.

A project is a specific plan or design or scheme presented for consideration. *The Manual on Economic Development Projects* defines 'project' as "the compilation of data which will enable an appraisal to be made of the economic advantages and disadvantages attendant upon the allocation of country's resources to the production of specific goods and services."⁴

Baum and Tolbert define the term project as "a discrete package of investments, policy measures, and institutional and other actions designed to achieve a specific development objective (or set of objectives) within a designated period."⁵ The term development project is little used in developed countries, where its nearest equivalent is capital formation, building and construction, or infrastructural investment.

From the point of view of resource allocation, P.K. Mattoo defines 'project' "as a proposal involving capital investment for the purpose of developing facilities to provide goods and services."⁶

As programmes and projects figure in national plans, the relationship between a development plan and a development programme should be understood. A plan provides the general framework within which projects are developed. Projects authorised by government should be consistent with the plan and approved by the Planning Commission or the Ministry concerned. A difference between a plan and a programme is that most plans are for a fixed term of years, often five. As the plan progresses, its unexpired portion diminishes. On the other hand, the development programme rolls forward. At any single moment it includes a portfolio of projects of different ages, some having been initiated in the current plan period and others in previous plan periods.

It may be mentioned here that a programme includes projects which have been taken in hand for implementation. Clearly, unstarted and abandoned projects are not part of a current development programme. Also

4. United Nations, *Manual on Economic Development Projects*, op. cit., p. xiii.

5. W.C. Baum and S. M. Tolbert, *Investing in Development: Lessons of the World Bank Experience* (Oxford: Oxford University Press, 1985), p. 8.

6. P. K. Mattoo, *Project Formulation in Developing Countries* (Delhi: Macmillan Company, 1978), p. 21.

once a project is physically complete and fully operational, it ceases to be part of the development programme, and can be appraised as a complete project.

Some projects are handled by private sector enterprises, others by public enterprises; but most are funded by government. The underlying philosophy is that a completed project will generate benefits of greater value than the cost of investment.

STAGES OF PROJECT MANAGEMENT

Within a programme, we find projects at different stages of completion—some just prepared, others in the process of implementation and still others nearing completion. In other words, the management process of projects follows a cyclical pattern, the major stages of which are: (i) identification; (ii) formulation; (iii) appraisal (including approval); (iv) implementation (including monitoring); and (v) evaluation.

1. Project Identification

The first stage of the cycle is concerned with identifying project ideas that represent a high priority use of the country's resources to achieve development objectives.

Projects usually do not emerge themselves. The motivation and decision to set up a project or projects lie with the existing departments, corporations, boards, commissions, institutions, and the like. It may so happen that external pressure (from such bodies as World Health Organization, Food and Agricultural Organization, United Nations Development Programme and World Bank) or internal pressure (from political parties, legislative bodies, etc.) may motivate government to set up a new project.

However, it is observed that most organisations and departments in developing countries presently suffer from innovative and initiative elements for a variety of reasons. One reason is that these organisation and departments are preoccupied with day-to-day work. Second, they lack adequate financial resources to finance projects. Third, they lack trained personnel and other material resources to run them. Fourth, non-existence of a healthy atmosphere hinders the overall development planning process. A number of United Nations agencies have confirmed that there is an "acute shortage of good and well-prepared projects and of suitable

organisational structure which were the major impediments to the execution of plans for development."⁷

In any case, project ideas should meet the initial test of feasibility, that is, there should be some assurance that technical and institutional solutions will be found and suitable policies adopted.

In the case of India, projects are identified on the basis of data available with the information cell in the State Directorate of Industries, Directorate General of Technical Development (DGTD), National Planning Commission, Union Ministry of Commerce, state level surveys undertaken by various industrial development authorities (e.g., Punjab State Industrial Development Corporation) and general consultative services available in the country.

Criteria: A project should be of value to the economy of a country and should meet the limitations of policy laid down by the government. There are also other important criteria which need to be kept in view as argued by Bajwa. These are: "(i) factor intensity criterion; (ii) plant size and complexity criterion; (iii) foreign exchange benefit criterion; (iv) commercial profitability criterion; and (v) national economic profitability criterion."⁸

For public sector projects in India, investment decision lies with the central/state government. Investment is channelised through appropriate public licensing policies. On getting the licence, private enterprises prepare feasibility reports for submission to the financial institutions [e.g., ICICI, IFCI, Industrial Development Bank of India (IDBI), Unit Trust, Life Insurance Corporation, nationalised banks] for obtaining loan finance.

Public Sector Projects in India

Working groups which are set up by the administrative ministries and project authorities before the beginning of every Five Year Plan make a detailed evaluation of the existing units in the public and private sectors. Based on their recommendations and pre-feasibility studies, the concerned ministry in the central government formulates a sector plan. It is in the sector plan that public sector projects for implementation in the Five Year Plan are identified. The identification exercise undertaken at this stage relates to the physical targets within the financial outlay, the gestation

7. United Nations, *Organizational Systems for National Planning* (New York: United Nations, 1979), p. 107.

8. P.S. Bajwa, "Identification of Projects", in J.C. Bansal and B. Ghosh (eds.), *Project Management of Process Plants* (Chandigarh: Punjab University, 1985), p. 54.

period and choice of technology. In this phase, indication for the formulation of a feasibility report for the project is given.

The Project Monitoring Division (PMD) of the Department of Programme Implementation, Ministry of Planning and Programme Implementation, also helps the administrative ministries in identifying the projects. Thus the responsibility for identifying the projects lies mainly with the concerned ministry and department.

Rejection of projects at this stage is due to the scarcity of raw materials or the facility proposed to be provided under the project. The main constraints may relate to (i) lack of project planning capability organisations where project ideas originate, (ii) lack of understanding between those who identify projects and those who appraise them, and (iii) improper analysis of location of new projects and availability of the required infrastructure facilities.

2. Project Formulation

The project formulation exercise is a large and complex task undertaken after a positive decision has been made on a project idea. At this stage, the nature and scope of a project has to be spelled out in a comprehensive form. This requires a progressive refinement of the design of the project in all its dimensions. At this stage a feasibility report is prepared by the concerned public enterprise in consultation with the concerned administrative ministry.

Issues in Formulation

Many issues are involved in the formulation phase of a project. The first is the comprehensiveness of the project which includes formulation of a detailed prospectus spelling out its economic, technical, financial, organisational, and other administrative aspects. The second issue is linked with its time profile. The third relates to the project format. The project format should meet the requirements of the technical and economic planners, administrators, managers, budget directors and other personnel involved in the subsequent operations. The fourth concerns the department entrusted with the project which is required to submit information on the location, cost, period of construction, manpower and materials and financing. The fifth, which is the most important issue in project formulation, relates to the administrative dimensions of the project. These include questions in regard to the agency for implementing the project, number of personnel required, availability and method of recruitment, training for skills and

other matters relating to personnel administration. Other questions pertaining to administrative dimensions are scheduling of project activities, procurement of inputs, coordination with other inter-related activities and system for review and evaluation of progress.⁹

The Project Appraisal and Management Division (PAMD) of the Planning Commission has the function to develop formats and guidelines for the submission of proposals for projects and programmes and for their techno-economic evaluation. The central government has issued guidelines for preparing projects in important sectors with a view to improving the quality of project formulation so that after the first stage clearance the project authorities could take up detailed investigations and analysis, obtain necessary clearance in regard to environment and forests, get budgetary quotations and then submit a properly formulated project with reasonably firm physical and financial parameters. However, in practice, these procedures have not been adequately followed in preparing projects.¹⁰

Some Cautions and Suggestions

Certain cautions need to be kept in mind while formulating a project. First, the task involves a cost exercise even in preliminary studies, especially in the fields of transport, industry and resources development. Second, duplication of efforts and waste of resources in project formulation should be avoided. Third, existing research and development departments should be improved to avoid the waste of time and resources. Fourth, there is need of a reciprocal relationship between overall planning and projects. As stated in a United Nations publication, "the availability of well-conceived projects and the institution of work on their formulation simultaneously with the institution of the formulation of plans will improve their implementability. By the time a plan is finalized and approved, enough projects should be available to go in the implementation phase."

3. Project Appraisal and Approval

(i) Project Appraisal

Project appraisal is an important aspect of project planning. It involves such techniques as analysis and evaluation. The objective of the appraisal

9. United Nations, *Administration of Development Programmes and Projects*, op. cit., p. 78.

10. India, Ministry of Planning and Programme Implementation, Department of Programme Implementation, *Annual Report 1997-98* (New Delhi: Manager of Publications, 1998).

process is not only to take a decision whether to accept or reject an investment proposal but also to make recommendations as to how it should be reformulated so as to ensure better economic, technical, financial and commercial viability. Project appraisal is the culminating step in the process of project design development and evaluation.¹¹ It comprises appraisal of project objectives, project organisational, administrative, technical and managerial set-up, project demand potential, project technology, project design, project time-profile, project non-recurring and recurring resource requirements, project financial feasibility and project social cost-benefit profile.

Presently the Project Appraisal and Management Division (PAMD) of the Planning Commission is the principal agency which appraises central sector schemes/projects costing more than Rs. 15 crore and prepares Appraisal Notes in consultation with the subject divisions of the Planning Commission before these are considered by the Public Investment Board (PIB), Expenditure Finance Committee (EFC) and Committee of Public Investment Board (CPIB) depending upon the nature and size of the proposal. However, proposals on projects and schemes costing Rs. 1.5 crore and more but less than Rs. 15 crore are considered by the Standing Finance Committee (SFC). The concerned Ministry can now convene SFC meeting without waiting for comments of the Planning Commission provided that (i) the scheme is included in the plan and (ii) no net increase in domestic budgetary support (excluding EAPs) for the ministry/department is required.

The PAMD also assists central ministries and state governments in establishing proper procedures for appraisal of projects and programmes. Further it is required that PAMD would act as a Management Adviser to the PIB/EFC and on receipt of PIB/EFC proposal, based on the information contained in the PIB/EFC Memorandum, it will complete appraisal and management advice tendered to PIB/EFC.

With a view to ensuring that the appraisal carried out by the PAMD is comprehensive and meaningful, the project authorities/administrative ministries are required to submit only such proposals which are complete in all respects.

The outer limit for issue of appraisal note by the PAMD has been fixed at four weeks from the date of receipt of PIB/EFC proposal.

The Project Monitoring Division (PMD) of the Department of Programme Implementation, Ministry of Planning and Programme Implementation, also appraises central sector projects (costing Rs. 20 crore

11. P.K. Mattoo, op. cit., pp. 243-246.

and above) referred to the Public Investment Board (PIB) from the state of preparedness with respect to the project inputs in terms of land availability, equipment deliveries, feedstock and other linkages necessary for the project completion and its commissioning, and the strength of the organisation/management team for implementation within the stipulated time and cost. It also analyses the causes of time and cost overruns in the case of revised cost estimates.

It may be pointed out that the appraisal notes on projects mainly comment upon whether the assumptions made by the project authority relating to: "(a) gestation period, (b) optimal location, (c) life of the project, (d) production build-up, (e) capacity utilization, (f) technical feasibility, (g) capital costs and norms along with proposed phasing, (h) operating cost and norms as well as likely availability of assumed infrastructure facilities in time and required quantity/volume, and (i) realisation of income and benefits, etc., are realistic, feasible and optimal."

During the year 1996-97, two hundred ninety-four projects involving a total project cost of Rs. 1,42,397 crore were appraised in the Division. During 1997-98 (1.4.97 to 31.03.98) two hundred sixty-seven projects involving a total project cost of Rs. 1,48,757 crore were appraised. Whereas earlier all the projects/schemes costing Rs. 5 crore and above were appraised, from 6th August, 1997, as per the guidelines issued by the Department of Expenditure (Plan Finance-II) only projects/schemes costing Rs. 15 crore and above are being appraised. The projects appraised included both the new as well as the proposals on revised cost estimates.

The sectoral distribution of projects appraised during the year 1996-97 and 1997-98 is given in Table 11.1.

Project appraisal has at present several shortcomings. Often there is no link between plan objectives and project investment decisions. Efforts are, however, being made to improve appraisal methods and also to provide guidance to the project authority to plan and formulate better projects.

(ii) Investment Approval of Projects

This phase relates to the procedure of scrutinising investment proposals of public sector projects. As there are many investment proposals competing for the existing scarce resources, it is necessary to subject them to careful selection in order to determine their priority.

Until 1972 the procedure of scrutinising proposals for investment in the public sector, which was governed mainly by circulars issued by the

Table 11.1 Sectoral Distribution of Projects Appraisal during the Year 1996-97 and 1997-98

S. No.	Sector	(Cost in Rs. crore)			
		1996-97		1997-98	
		No. of projects	Total capital cost	No. of projects	Total capital cost
				(1.4.97 to 31.03.98)	
1.	Agriculture, water resources	33	7838.04	20	3951.05
2.	Energy including coal	17	13579.16	22	10964.11
3.	Surface Transport	45	3856.01	39	2789.78
4.	Petroleum & Natural Gas	37	52755.48	11	28511.25
5.	Petrochemicals & Fertilisers	10	3753.00	10	14609.76
6.	Electronics	2	566.56	6	180.29
7.	Biotechnology	3	98.81	2	25.61
8.	Information & Broadcasting and Communications	12	170.15	13	117.41
9.	Steel & Mines	6	6399.65	2	2728.72
10.	Industry & SSI	6	737.93	10	2399.27
11.	Civil Aviation	5	607.57	3	904.85
12.	Urban Development	3	145.27	3	6662.49
13.	Rural Areas & Empl.	4	36497.85	4	4752.00
14.	Textiles	1	10.00	3	1136.63
15.	Commerce	7	178.90	3	43.30
16.	Planning Commission	2	29.78	1	70.00
17.	Environment & Forests	13	413.93	9	4913.61
18.	Home Affairs & DOP	—	—	6	500.46
19.	Health & Family Wel.	26	1689.17	14	6422.29
20.	HRD (Women & Child Dev. Edu. & Cul.)	16	1174.74	21	43238.66
21.	Welfare	6	4682.69	11	3626.20
22.	Science & Technology	5	122.79	4	149.46
23.	Labour	5	185.41	5	1065.88
24.	Post	4	126.26	2	36.70
25.	Railways	22	6679.80	22	7740.14
26.	Youth Affairs & Sports	2	32.50	5	119.25
27.	Ocean Development	—	—	4	106.80
28.	Statistics	1	55.93	6	61.19
29.	Scientific & Industrial Research	—	—	4	474.45
30.	Civil Supplies	1	9.50	—	—
31.	Tourism	—	—	1	100.00
32.	Economic Affairs	—	—	1	356.00
	Total	294	142396.88	267	148756.61

Source: India, Planning Commission, Annual Report, 1997-98.

Ministry of Finance (Finance Division) and the Bureau of Public Enterprises, was not adequate. The machinery was lacking in government at a single point which could advise about the best investment decisions as between several existing choices. The procedure followed was dilatory and complex. Often project investment proposals were hurriedly prepared

without careful scrutiny of norms pertaining to gestation period, capital cost, capacity utilisation, operating cost rates, etc.

Public Investment Board: In 1972 the Government of India set up a Public Investment Board (PIB) in order to ensure systematic project planning with the following functions:

- “(i) Examination of the contours of investment proposals in the project formulation stage based on which a decision to prepare the feasibility report would be taken.
- (ii) Taking investment decisions on proposals for public investment to produce goods and provide services.
- (iii) Consideration of proposals for revision of cost estimates which exceed those approved at the time of investment decisions.”¹²

Approval Board and Committees: Mainly there are four Board/Committees to which appraisal notes and recommendations from the PAMD of the Planning Commission are sent for their consideration and approval: (i) Public Investment Board (PIB), (ii) Expenditure Finance Committee (EFC), (iii) Standing Finance Committee, and (iv) Committee of Public Investment Board.

The recommendations and suggestions of the PIB (or Committee) on investment proposals are sent to the Cabinet for final clearance. The Cabinet generally accepts the recommendations, and the next stage of project implementation as per approved project begins. It may be mentioned here that it is not always that projects are approved. Investment decisions may be put off till certain further data, analysis, etc., are completed or projects are approved subject to their fulfilling certain conditions.

It has been observed that project approval procedures are often dilatory and cumbersome. Even after the investment clearance, there are a large number of clearances, often as many as fifty, which a public sector project may have to seek from government and other authorities at various levels.

Since the introduction of economic reforms in 1991, central public enterprises, which have signed a Memorandum of Understanding (MOU) with government, have been given more financial powers to make investments in the new or old projects subject to their fulfilling certain requirements.¹³

12. India, Ministry of Finance, *Office Memorandum on Public Investment Board* (New Delhi: September 30, 1972).

13. India, Planning Commission, *Eighth Five Year Plan 1992-97* (New Delhi: Planning Commission, 1992), Vol. II, p. 470.

A Data Bank on projects has also been developed in the Planning Commission to help in improving the appraisal of projects. In addition, the Commission has issued guidelines to streamline the investment approval procedures and minimise delays in the system.

A United Nations publication comments: "As development projects frequently involve investment of capital, allocation of foreign exchange and use of scarce resources, organizations concerned with those areas must also give their approval."¹⁴

Among the factors that have a bearing on decisions of approval of projects are whether the requesting government "(a) had taken account of the relative priority to be accorded to the project in its development programme; (b) had the political and administrative capability to implement the project; (c) manifested the necessary support at highest levels; (d) provided adequate counterparts, facilities and services; and (e) had incorporated in its own programme provisions for research and development, training and other essentials to carry it out."¹⁵ In brief, these administrative dimensions should be given serious consideration while approving a project.

4. Project Implementation and Monitoring

The implementation stage covers the actual development or construction of projects up to the point at which these become fully operational. It includes monitoring of all aspects of the work or activity as it proceeds, and supervision by "oversight" agencies within the country or by external lenders. This phase is the heart of project management. "Implementation is what realizes plans, what generates project outputs and what utilizes the scarce resources". Its role is to mobilise the resources which were anticipated and operationalise the activities which were designed. Further, it has the objectives of anticipating deviations from planned performance and making proper adjustments.

(i) *Issues in Project Implementation*

The first issue pertaining to implementation is the agency which undertakes a project. At present there are mainly three agencies: governmental, private (contract) and those with a mixture of the two. This is to say that

14. United Nations, *Administration of Development Programmes and Projects*, op. cit., p. 80.

15. United Nations, *Public Administration in the Second United Nations Development Decade: Report of the Second Meeting of Experts* (New York: United Nations, 1971), p. 9.

a project may be split up for implementation in part by a government agency and in part by a contract agency.

In the case of a private agency, the government department concerned adopts a system of contracts. The contract system is generally found in construction and industry fields in mixed economies. In developing countries where projects are developmental in magnitude, contract procedures have to be streamlined to ensure effective implementation of projects. If project implementation is the responsibility of a government agency or department the questions involved relate to its formation, autonomy, accountability, personnel and administrative arrangements. Public enterprises in the developing countries have come to handle developmental projects as a type of government agency. When a government agency assumes the responsibility of administering a project, "steps have to be taken to build the organisation, to develop the operating procedures, to hire and induct the people into jobs and to schedule the various activities required for the implementation of the project. The overall framework for most of these activities may be provided by legislation or by executive decrees authorising and approving the projects." In building the organisation, appointment of a project officer/manager and recruitment and selection of personnel are of great significance. For, the success of a project depends greatly upon the personnel who are engaged in its implementation. As a management team, it has to "develop a detailed plan of organization and administration, including scheduling, budgeting, staffing, continuous evaluation, reporting, planning for contingencies, and the final transition stage." In the effective and efficient administration of a project, management techniques such as CPM (Critical Path Method) and PERT (Programme Evaluation and Review Techniques) can be applied.¹⁶ Other methods that need to be taken into account in project implementation are the inflow of cooperation and coordination from other departments, the existence of favourable administrative, political and social environments from which the inputs of the projects are drawn.

(ii) Monitoring

The purpose of monitoring is to ensure timely completion of projects for which resources have been allocated in the plans. The essence of a good monitoring system is its speed of communication of dependable information on key result areas. Monitoring has several aspects. Broadly speaking, it covers (a) physical progress of implementation of projects

16. Both CPM and PERT lay stress upon the efficient performance and temporal dimensions of a project.

(e.g., irrigation canals and drains, power projects, etc.), (b) production, productivity and profitability performance for established public sector units in the core sector, and (c) maintenance of capital assets created to be monitored selectively so that expenditure is utilised purposefully.

Monitoring, is generally undertaken through reports, review meetings, and field visits. The primary responsibility of monitoring lies with the agency entrusted with the execution of the project. It may be mentioned that over-reporting and overlapping at different monitoring levels can cause confusion and tend to become counter-productive.

The PAMD provides assistance to central ministries, state governments and Subject Divisions of Planning Commission in developing and operating, implementing, planning and monitoring information systems. It also provides assistance in the analysis of PERT/CPM based implementation plans of major projects.

Department of Programme Implementation

The Department of Programme Implementation (formerly Ministry of Programme Implementation, created in September 1985) became a part of the Ministry of Planning and Programme Implementation in July 1991 with the exclusive purpose of independently monitoring central sector projects and key infrastructure sectors including social sectors.

The Department of Programme Implementation has five divisions,¹⁷ namely, (1) Twenty-Point Programme and Common Minimum Programme Division, (2) Members of Parliament Local Area Development Scheme Division, (3) Infrastructure Monitoring Division, (4) Project Monitoring Division, and (5) Administrative Support Division.

1. *Twenty-Point Programme Division*: The TPP division monitors the progress of implementation of social sector programmes (i) alleviating poverty by increasing employment opportunities in rural sector; (ii) ensuring basic sector needs for human survival by providing essential food items at an affordable price through the public distribution system, safe drinking water and housing; (iii) improving the quality of life in rural sector through provision of basic minimum health facilities, immunisation of children, increasing family welfare, village electrification; (iv) ensuring individual rights and dignity of human beings through abolition of bonded labour, taking special care for the needs of the SC and ST families; (v) integrating "environmental sustainability" into "rural development process."

17. India, Department of Programme Implementation, Ministry of Planning and Programme Implementation, *Annual Report 1996-97* (New Delhi: 1997).

2. *Members of Parliament Local Area Development Scheme Division:* The Members of Parliament Local Area Development Scheme (MPLADS) Division has been assigned the job of monitoring implementation of various works and activities under the MPLADS. Nearly one lakh works of different nature have come up for the benefit of general public at large. These works include construction of village roads, school buildings, library, small bridges, community centre, etc.

3. *Infrastructure Monitoring Division (IMD):* Infrastructure Monitoring Division monitors the performance of the Infrastructure Sectors with the aim of removing bottlenecks standing in the way of accelerated growth. For this purpose, the Division monitors on monthly basis the Power, Coal, Steel, Railways, Cement, Telecommunication, Ports, Fertilisers, Petroleum and Natural Gas, Roads and Civil Aviation. The focus is primarily on the production targets which are included in the MOU of the various Infrastructure Sectors.

4. *Project Monitoring Division (PMD):* As the central monitoring agency, the Project Monitoring Division (PMD) monitors all central projects of the Government of India costing Rs. 20 crore and above. This Division makes appraisal of the projects from the point of view of the state of preparedness, examining causes of time and cost overrun of the projects and identifies the bottlenecks in the implementation thereby playing an important role as coordinator and facilitator. Evaluation of compilation report and carrying out system study also falls within the purview. Sometimes this division is called upon to examine the causes of time and cost overrun in specific projects for fixing the responsibility. Through its studies and evaluation reports this division has contributed in identifying strengths and weaknesses in the entire system of projects formulation, appraisal, implementation, monitoring and evaluation. Besides the constraints of the resources, the other serious weaknesses identified by this division are incomplete feasibility study, delays in land acquisition, delays in the tie-up of technology, delays in preparation of engineering design and drawing, etc. It has been observed that pace of implementation of many projects could be improved by better management as is shown by some projects in PSU which have been implemented within the gestation period. In the light of experience gained in different sectors of economy, this division has suggested various remedial measures to be adopted by the administrative ministries and project authorities. The importance of project management has been analysed by this department from time to time. One of the important contribution of this division has been to bring about improvement in the system of project management.

Inadequacies in Implementation of Public Projects

In several cases, implementation of public projects is taken in hand without full and detailed planning, covering the physical work effort, matching of the input and equipment requirements with the availability constraints, linkages with other projects and activities, etc. There appear to be a few projects which have clear resource-based PERT or CPM charts indicating different areas of activities and monitoring system. Insufficient time is often provided for preliminary activities like engineering design, technology collaboration, invitation and evaluation of tenders. Besides, there is an unrealistic assumption as to the time required for clearances, placement of orders, deliveries by suppliers, transportation, erection and testing.

Time and Cost Overrun

A large proportion of public sector investment in projects suffers from problems of time and cost overruns. The Planning Commission reports that "about two-thirds of the major projects under implementation" are facing such problems. It has been found that the costs of the four hundred ten projects under monitoring have escalated from that the latest approved costs of Rs. 1,22,225 crore to Rs. 1,49,996 crore, that is by twenty-three per cent. Of the total cost overrun of Rs. 27,771 crore, Rs. 24,918 crore, i.e., forty-eight per cent, is accounted for by two hundred seven delayed projects. An analysis of the time and cost overrun of projects on the monitoring system sector-wise is given in Table 11.2.

The factors responsible for time and cost overruns have been stated by the Planning Commission as:

- (a) Inadequate investigations and project formulation; frequent changes in scope and revision of drawings due to inadequate project preparation;
- (b) Delay in clearances from various regulatory agencies;
- (c) Delay in land acquisition;
- (d) Delay in activities such as supply of equipment by suppliers;
- (e) Inadequate release of funds;
- (f) Management problems such as personnel, labour and contractor disputes, mismatch of equipment, etc.; and
- (g) Unforeseeable reasons such as adverse geo-mining conditions, natural calamities, etc.¹⁸

18. India, Planning Commission, *Eighth Five Year Plan 1992-97* (New Delhi: Planning Commission, 1992), p. 470.

Table 11.2 Extent of Time/Cost overrun in Projects with Respect to Latest Schedule (As on 1.1.1997)

Sl. No.	Sector	Total cost (Rs. crore)			Project with cost overrun			Project with time overrun					
		No. of projects	Latest approved	Anticipated	Cost overrun %	No.	Latest approved	Anticipated	% Increased	No.	Latest approved	Anticipated	Range (MO)
1.	Atomic Energy	6	4052.0	5156.5	27.3	1	711.6	2107.0	196.1	5	3799.5	4903.9	20-37
2.	Civil Aviation	13	1998.8	2190.6	9.6	4	525.3	717.1	36.5	11	1871.3	2063.1	3-31
3.	Coal	72	12157.5	13621.5	12.0	14	5362.4	7048.5	31.4	20	5159.4	6625.4	11-48
4.	Finance	1	348.8	348.8	0.0	0	0.0	0.0	0.0	1	348.8	348.8	4-4
5.	Fertiliser	7	4948.4	5066.6	2.4	4	3250.9	3374.0	3.8	4	3053.2	3126.5	2-15
6.	I & B	7	282.4	309.4	9.6	2	42.3	69.3	64.0	5	199.8	226.8	1-108
7.	Steel and Iron Ore	12	10316.0	12997.4	26.0	4	8460.5	11152.5	31.8	4	6899.8	9404.1	4-47
8.	Chem. & Petrochem	4	3864.4	3885.0	0.5	1	3484.5	3505.0	0.6	4	3864.4	3885.0	4-35
9.	Petro. & Natural Gas	42	25366.2	27028.5	6.6	5	2862.5	5425.0	89.5	21	15747.7	17612.7	3-48
10.	Power	39	30612.5	46339.7	51.4	29	22830.2	38642.0	69.3	29	21764.7	35518.3	1-182
11.	Heavy Industry	1	191.2	307.0	60.5	1	191.2	307.0	60.5	0	0.0	0.0	—
12.	Railways	123	21334.9	24881.0	16.6	67	11854.1	16003.3	35.0	63	10044.9	12895.8	0-96
13.	Surface Transport	38	4701.2	5738.7	22.1	21	2445.7	3483.3	42.4	26	3539.4	4576.9	2-99
14.	Telecommunication	39	1815.8	1815.8	0.0	0	0.0	0.0	0.0	10	333.2	333.2	4-54
15.	Others	6	235.3	310.3	31.9	5	146.9	221.9	51.0	4	176.5	200.7	15-41
Total		410	122225.4	149996.8	22.7	158	62168.0	92055.9	48.1	207	76802.5	101721.4	

Source: India, Ministry of Planning and Programme Implementation, Annual Report 1996-97 (New Delhi: 1997).

Analysis of Factors of Delay

Delays in project implementation are a common feature in developing countries. They have not only affected their contributions to economic growth but also resulted in wastage of scarce resources, besides causing reduction in employment generation. It is found that several projects get delayed initially at government level on account of factors such as delays in tying up foreign credit, finalisation of technology transfer agreements, contracts, etc. An analysis of factors of delay as observed by the Union Ministry of Planning and Programme Implementation in the implementation of projects in fourteen sectors is shown in Table 11.3.

Remedial Measures for Expeditious Implementation of Projects

"The possible remedial measures which can go a long way in resolving the major problems are as follows:¹⁹

- (v) There is a need for the re-prioritisation so that the projects nearing completion or those strategically important from inter-sectoral or other linkages point of view are adequately funded.
- (ii) There is a need for adoption of some kind of moratorium to restrict approval of new projects. This will help in clearing the backlog of projects. Projects which are not able to take off due to resource constraints may be deferred or alternative way may be found for funding. The thin dispersal of limited resources over a large number of projects leads to time overrun and consequently cost overrun.
- (iii) No project should be sanctioned without due regard to the quality of studies and investigations, state of preparedness, assured availability of funds and managerial and organisational capability to implement MOEF clearance. These factors should be considered as important as the need and viability. In fact, these considerations are more important than the refinements in the calculations of IRR (internal rate of return).
- (iv) The state governments should extend necessary cooperation by making land available on time for project work and compensatory afforestation. They should make adequate investment in infrastructure (power, roads, bridges, etc.) necessary for the project.

19. India, Ministry of Planning and Programme Implementation, op. cit., 38-39.

Table 11.3 Major Factors of Delay in Implementation of Projects

Sl. No.	Sector	Fund			Land acquisition			Technology			Delay in supply of equipment		
		constraints	Forest	Other clearance	Environment	Selection	Agreement	Award of contracts	Indigenous	Imported			
1.	Atomic Energy	2	0	0	0	0	0	0	1	0	5	0	
2.	Civil Aviation	0	0	0	0	0	0	0	1	0	0	0	
3.	Coal	4	1	4	0	0	0	0	0	0	1	0	
4.	Finance	0	0	0	0	0	0	0	1	0	0	0	
5.	Fertiliser	1	0	0	0	0	0	0	0	0	4	2	
6.	I & B	0	0	0	0	0	0	0	0	0	0	0	
7.	Steel & Iron Ore	0	0	1	0	0	0	0	3	0	2	1	
8.	Chem. & Petrochem	0	0	0	0	0	0	0	0	0	0	0	
9.	Petro. & Natural Gas	0	0	0	0	0	0	0	2	0	8	0	
10.	Power	12	1	2	1	0	0	0	7	0	2	1	
11.	Heavy Industry	0	0	0	0	0	0	0	0	0	0	0	
12.	Railways	32	4	26	1	0	1	1	20	10	0	0	
13.	Surface Transport	4	0	0	1	1	0	0	15	1	1	0	
14.	Tele-communication	0	0	0	0	0	0	0	2	0	4	0	
15.	Others	0	0	0	0	0	0	0	1	0	0	0	
Total		55	6	33	3	1	37	53	37	4			

Table 11.3—Continued

Sl. No.	Sector	Delay in									
		civil works	Govt. clearance	Geomining	Law & order	Slow-progress	Court cases	Inadequate infrastructure	Bad weather		
1.	Atomic Energy	2	0	0	0	3	0	0	0	0	
2.	Civil Aviation	8	0	0	0	3	0	0	0	0	
3.	Coal	0	0	4	0	6	1	0	0	0	
4.	Finance	1	0	0	0	1	0	0	0	0	
5.	Fertiliser	0	1	0	0	0	0	0	0	0	
6.	I & B	2	0	0	0	5	0	0	0	0	
7.	Steel & Iron Ore	0	0	0	0	2	0	0	0	0	
8.	Chem. & Petrochem	0	0	0	0	2	0	0	0	0	
9.	Petro. & Natural Gas	2	0	0	0	7	0	0	0	0	
10.	Power	6	8	1	7	9	0	3	0	0	
11.	Heavy Industry	0	1	0	0	0	0	0	0	0	
12.	Railways	27	1	1	3	14	4	0	0	0	
13.	Surface Transport	9	2	0	0	20	1	0	0	0	
14.	Tele-communication	6	1	0	0	4	0	0	0	0	
15.	Others	3	0	0	0	0	1	0	0	0	
	Total	66	14	6	10	76	7	3	0	0	

Note: The figures represent number of projects delayed.

Source: India, Ministry of Planning and Programme Implementation, Annual Report 1996-97 (New Delhi: 1997).

- (v) The contractors and suppliers must be taken to task for not meeting the commitment. Constant review and follow up is essential to arrest unavoidable delays. It may be necessary to blacklist those contractors who have not fulfilled their obligation regarding equipment supply and poor quality of work.
- (vi) There is also need to take action against the defaulters including those responsible for implementation, if held responsible for time and cost overrun. The investment decision rules prescribe for such action. However, no action has been initiated so far.
- (vii) If there should be provision for punishment, there should be provision for rewards as well. If the contractors and suppliers are to be punished for violating the terms of contract there should be suitable reward for timely or completion before time. Similarly, there should be a system of reward to the project team for timely or completion before time.
- (viii) The system of reward and punishment can be more effective only after certain other measures are taken:
 - (a) The contract management should be streamlined. The present system has several shortcomings.
 - (b) The DPI has suggested that the tenure of the core project management team should be coterminus with the gestation period of the project.
 - (c) The dispute resolution mechanism must be strengthened by delegating adequate powers to the implementing agencies. Apart from delegation of powers, a change in attitude is also required to expedite implementation. Very often those authorised to take decision or action prefer to play safe by referring the matter to other authorities/agencies.
 - (d) The field executives actually involved in implementation should be delegated adequate financial and administrative powers and their bonafide decisions should be honoured.
- (ix) There is need for strengthening the monitoring system at all levels. The adoption of PC-based computer packages would help in bringing better control and discipline in managing large projects.
- (x) In these suggestions, the emphasis is on control of delay. While cost overrun is also a matter of serious concern, as stated earlier, time overrun is the single most important factor contributing to cost overrun. The DPI's analysis shows that if time overrun could be checked nearly seventy-five per cent of the cost overrun could also be checked."

5. Project Evaluation

All the development projects undertaken need to be evaluated for the results they have achieved. In a way evaluation reveals the gap between what it was estimated and what it has achieved. The evaluation of a completed project seeks to determine whether the objectives have been achieved and to draw lessons from experience with the project that can be applied to similar projects in the future. Although financing agencies such as the IDBI, ICICI, IFCI, etc., routinely require *ex-post* evaluation of all projects that they finance, few developing countries, including India, have established a comprehensive system for evaluating the results of their project investment portfolios.

Programmes of national importance, such as poverty alleviation, health and family welfare, rural drinking water supply, elementary and adult education, public distribution system, and elimination of scavenging are now evaluated by the Programme Evaluation Organisation (PEO) of the Planning Commission. The PEO may also associate the State Evaluation Organisations and other research and academic institutions for taking up studies of regional and local importance.

In the case of central sector projects in India, a larger proportion of money is spent on them. These are projects with the greatest expected returns, chosen to accelerate socio-economic development: to alleviate poverty, generate employment, raise productivity, increase export earnings and import substitutes, expand industries, establish infrastructure and so on. They have a high profile. Over-optimistic claims are made about its likely effects. On the other hand the constraints which present project delivery, may be neglected or even ignored. Evaluation can provide a realistic assessment of development projects leading to future project formulation and implementation.

Further, part of the development programmes including projects are funded by international financial institutions. They require a reassurance concerning the way in which the money they grant is utilised. Besides questions of regularity concerning whether the money is appropriately accounted for in accordance with financial parameters and spent on the purposes for which it was provided. They are equally concerned with issues of value for money, including whether projects are completed in time, operate efficiently and provide the benefits which were intended when they were financed. Evaluation of projects can help in this field by the direct reporting of findings and indirectly when implementing agencies adopt management systems in response to evaluation.

Thus evaluation studies help to assess the performance, process of implementation, effectiveness of the delivery systems and impact of programmes. These studies also aim at identifying the factors contributing to success and failure of various programmes, and deriving lessons for improving the performance of existing programmes and better designing future projects and programmes.