CHAPTER FOUR
Chapter Four

EXAMINATION OF THE PROCESS OF PROJECT MANAGEMENT IN MANUFACTURING INDUSTRY IN INDIA

4.1 National Planning and Project Identification

India advocated national planning as a vehicle of development in the 1950s. The basic objectives of Indian Planning include sustained and rapid economic growth, creation of a modern self-reliant economy, balanced regional development, gradual elimination of unemployment and poverty and more equitable distribution of income and wealth. Every Five Year Plan, which is part of a long-term perspective plan, is divided into sectoral plans or programmes. The sectoral targets are further divided into sub-sectors, projects or programmes.

Normally, major public sector manufacturing projects are considered for investment decision only after they have been included in the Five Year Plan. At the stage of formulation of the Five Year Plan, the Planning Commission of India invites ministries and departments to supply information in respect of industrial projects depending on the extent of studies and investigations already carried out.
The responsibility for project identification rests with the concerned administrative ministry. At the time of the Five Year Plan preparation, the ministry sets up working groups and ad hoc committees consisting of official experts and representatives of the Planning Commission as well as the concerned ministries to suggest the growth and strategy for the development of the sector whether public or private. Based on the recommendations of the working groups and pre-feasibility studies of alternative options of achieving the physical targets within the financial outlay earmarked for the sector, the concerned ministry is required to prepare the sector's plan identifying the projects of public sector for implementation during the plan period. This identification relates broadly to the physical targets, financial outlay, gestation period and selection of technology.

If a project is in its early stage of identification, only an idea of the estimated capital cost and other details such as the likely input can be supplied. Priority is given to these projects which were sufficiently investigated. It is worth noting that because at this stage detailed analysis is difficult for inadequacy of data, the decision to include a project in the Five Year Plan is based on qualitative judgement regarding the development needs keeping in view the consistency with the plan objectives.

At this pre-feasibility stage there is inter-ministrial
consultation for collection of data, considering representatives etc. The pre-feasibility information is contained in documents, viz., the internal papers of the implementing organisation, notes circulated by the sectoral ministry, reports of plan working groups or ad hoc-committees etc. This identification of projects is only a statement of intent and not a definite decision to go ahead. It, however, provides a basis for the preparation of a feasibility report for appraising and investment decisions.

4.2 Industrial Policy and Project Licensing

4.2.1 Industrial Policy

Two main documents beside the Constitution to help plan for, and control, the Indian economy, were the Industrial Policy Resolution of 1948 and the Economic Objective Resolution passed by the Parliament in December 1954.¹ The Government of India established the Planning Commission and passed the Industries (Development and Regulation) Act, 1951, as immediate steps to implement the policy. The Industrial Policy was revised in 1956.

The Resolution of 1956 classified industries into two groups: (i) industries listed in Schedule (A) which were

reserved for the public sector, and (ii) industries listed in Schedule (B) wherein both the Government and the private sector can co-exist. Apart from the demarcation, the industrial policies as well as the industrial licensing Acts have the following objectives:\(^2\)

(1) The regulation of industrial development and allocation of resources according to the Five Year Plan priorities and classification of investments into priority industries.

(2) Avoidance of concentration of ownership and control of companies.

(3) Prevention of concentration of location so as to encourage dispersal of industries to underdeveloped and backward regions.

(4) Prevention of undue competition between the large scale industries and small and cottage industries.

(5) Optimal utilisation of foreign exchange reserves.

4.2.2 Industrial Project Licensing

The Industries (Development and Regulation) Act, 1951, empowered the Government to license new investment, expansion of licensed units, production of new articles and change of

location by the licensed units.

An existing industrial undertaking should register within three months from the date when it comes under the definition of "existing industrial undertaking", which is included in the first schedule of the Act. Such a definition is applicable if production is carried in a factory, "any premises in any part of which a manufacturing process is being carried out: (i) with the aid of power, provided that fifty or more workers are working or were working thereon on any day of the preceding twelve months; or (ii) without the aid of power, provided that one hundred or more workers are working or were working thereon on any day of the preceding twelve months." 4

A licence for a new undertaking is required only when it wants to manufacture an item(s) listed in the schedule and the production is to be carried in a factory. An already registered undertaking proposes to manufacture a new article not already licensed has to get a fresh permission. Furthermore, a substantial expansion also requires a licence from the Central Government. The definition of substantial expansion is subject to changing policies.

There are exemptions from licensing. A small scale factory, a unit having investments held by ownership or by

4 Ibid., p.33.
lease or by hire purchase not exceeding Rs. 3,500 thousand. is exempted from licensing provided certain conditions are satisfied. Also if such conditions are satisfied, an ancillary unit, "an undertaking having investment in fixed assets in plant and machinery not exceeding Rs. 4,500 thousand and engaged in (i) manufacture of parts, components, sub-assemblies, toolings, or intermediaries, or (ii) rendering of services and supplying or proposing to supply or render 50 per cent of their production or total services, to other units for production of other articles," may be exempted. The conditions to be satisfied are that the unit is not covered by Section 20(a) or 20(b) of the Monopoly Restricted Trade Practices (MRTP) Act, it is not a foreign concern and it is not a subsidiary or owned or controlled by any other unit. In addition to that, the item of manufacture should not fall in category A of the Industrial Policy Resolution of 1956 and specified industries subject to special regulations.

4.2.3 Organisational Set-up and Procedure of Industrial Approvals

The primary organisation for promotion of industrialisation in India is the Department of Industrial Development. The Directorate General of Technical Development (DGTD) is the

5 Ibid., p. 38.
6 Ibid., p. 38.
7 Ibid., pp. 38-39.

* Other exemptions are also offered by the Government (see Appendix 11).
principal adviser and consultant to the Government in the industrial field. It is the authority which examines applications for industrial licences from the technical angle.

The Secretariat for Industrial Approvals, set up in November 1973, is entrusted with licensing. The Project Approval Board is the principal committee assisted by other sub-committees, viz., the Licensing-cum-MRTP Committee, Licensing Committee, Foreign Investment Board and Capital Goods Committee.

The licensing system generally aims at developing and regulating industries. For the development aspects, the 1951 Act provided for the constitution of a Central Advisory Council and Development Councils. The Central Advisory Council is to advise the Central Government on matters concerning the development and regulation of scheduled industries and consists of a total number not exceeding thirty members.\textsuperscript{8} They are appointed by the Central Government to represent the interest of owners of industrial units in scheduled industries, consumers of goods manufactured by those industries and other classes of persons including primary producers.

The Central Government may also establish for any scheduled industry or group of industries, a Development

\textsuperscript{8} Ibid., p.46.
Council consisting of (i) persons who can represent interest of the owners of industries in the scheduled industry or group of industries, (ii) persons with technical, or other knowledge related to such industries, and (iii) persons who can represent the interests of persons employed in undertakings in scheduled or group of industries, or other persons who are capable of representing the interest of consumers of goods manufactured by these industries.

The functions of Development Councils are mainly to (i) recommend and coordinate production programmes and receive progress reports, (ii) suggest norms of efficiency to eliminate waste, (iii) suggest how to fully utilise installed capacity, and (iv) promote standardisation of products etc.

To obtain a licence, the promoter of an industrial project has to apply to the Licensing Committee which is headed by the Secretary, Department of Industrial Development. This committee, assisted by the other committees mentioned above, is to scrutinise the proposal and make recommendations. They consider, among other things, the following:

(a) The priority of the industry as specified in the Five Year Plan or annual plans.

(b) Demand and supply position of the product.

9 Ibid., p. 46.
10 Ibid., p. 47.
11 Ibid., pp. 42-43.
(c) Availability of raw materials, plant and machinery.
(d) Foreign exchange requirements.
(e) Location facilities.
(f) Efficiency from a techno-economic point of view.
(g) Direct and indirect employment potential.
(h) Competence of the entrepreneur (preparatory work, previous record of implementation, technical qualification etc.)
(i) Steps taken to prevent air, water and soil pollution.

Pollution measures should conform to effluent and emission standards prescribed by the State Government in which the project is located. These conditions are imposed when issuing a letter of intent, a conditional permission to the entrepreneur to proceed with the project subject to a final approval, and the industrial licence is issued only when the anti-pollution measures are actually installed.

4.2.4 Project Licensing Procedure

A sub-committee of the Licensing Committee was formed which meets once every fortnight to consider applications of both public and private sectors. A public enterprise planning a new project or a major expansion is required to apply to the Licensing Committee. Copies of feasibility study approved earlier along with the application are to be sent to the Secretary of the concerned administrative
ministry. The administrative ministry applies to the Department of Industrial Development for a licence. If the product envisaged is not from the banned list, copies of the application shall be sent to the DGTD, the Department of Company Law Administration, the Director of Industries of the State concerned and the administrative ministry for examination and reporting. After receiving the comments, the Department of Industrial Development prepares a note for the consideration of the Licensing Committee.

The Licensing Committee examines the foreign exchange requirements for capital goods and import of raw materials, foreign collaboration requirements, manufacturing programmes and technical feasibility of the project. Thereafter, either an industrial licence or a letter of intent is issued to the enterprise.

An enterprise seeking foreign collaboration and equity participation has to apply to the Foreign Investment Board for approval. Foreign Investments are controlled by the Department of Economic Affairs. However, some powers are delegated to the ministries to approve collaboration agreements without the prior approval of the Department of Economic Affairs. Such scope of delegation is subject to consultation with the Technical Development Director and/or other appropriate agency concerned. "Where the ministry/department concerned thinks a more liberal treatment is warranted, than such as
recommended by the Technical Development Directorate or the agency concerned, the question should be referred to the Ministry of Finance, Department of Economic Affairs.\textsuperscript{12}

The Board for Approval of Hundred Percent Export-Oriented Undertakings and Capital Goods Committee also deal with foreign exchange.

The whole system of industrial approval is based on checks and counter-checks. These, as will be discussed later, resulted in more delays. Such delays and their consequential costs discouraged potential foreign investors from contracting with public enterprises in India.\textsuperscript{13}

A letter of intent will be automatically converted into an industrial licence when the final subsequent clearances required, viz., foreign collaboration or capital goods clearance is given. This is, of course, in addition to installing the anti-pollution measures as stated earlier. After meeting these conditions, the promoter applies to the administrative ministry concerned for conversion of the letter of intent to an industrial licence. The administrative ministry has to assure that the letter of intent is valid and the conditions are fulfilled. If satisfied, the administrative ministry recommends that the letter of intent may be converted to an industrial licence. That is to be sent


\textsuperscript{13} Raj, A. Besant C., Op.Cit., p. 97.
to the Department of Industrial Development where a conversion licence is issued.

4.3 Project Formulation

This is a pre-investment exercise to determine whether to invest, where and when to invest and how much to invest. It is the formulation of an investment proposal in a feasibility report for a specific project. The project feasibility report is meant to provide required information for evaluating technical, financial, commercial, organisational and economic viability of the project.

Serious time and cost overruns in implementing public sector manufacturing projects (like those in Appendices 6 and 7 of Indian public sector fertiliser projects) made the Government of India to think of preparing a manual to guide capital budgeting decisions. In May 1966, the Manual on Feasibility Studies for Public Sector Projects\(^{14}\) was prepared by a United States consulting firm and the Committee on Plan Projects of the Planning Commission. The Manual discussed in detail the major approval phases and preparation of feasibility studies, viz., demand analysis, pricing and its determination, technical development of size processes and layout of the project, location, cost estimates,

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profitability analysis using discounted cash flow methods, analysis of national economic benefit etc. The main focus of the Manual was on profit maximation aspect of investment decisions rather than on national economic benefit.\(^{15}\)

In 1972, the Government of India established the Project Appraisal Division (PAD) in the Planning Commission. The PAD is entrusted with the following functions:\(^{16}\)

1. Suggesting standard formats for submission of projects and procedures for their techno-economic evaluation.
2. Conducting techno-economic evaluation and social cost-benefit analysis of major projects and programmes posed to the Planning Commission.
3. Assisting State Governments and Central Ministries in giving effect to standardised formats and procedures for project evaluation.
4. Undertaking and supporting research leading to progress in refinement of methodology and procedure of project evaluation.

The PAD prepared and circulated the Guidelines for the Preparation of Feasibility Reports for Industrial Projects. The Guidelines, however, were first prepared as a draft,\(^{15}\) For full description and critique of the Manual, see Raj, A. Besant C., *Op. cit.*

forwarded to the Ministry of Industrial Development, all concerned agencies, Public Sector Enterprises of the ministry concerned and other relevant departments for comments. Only after receiving the comments in 1975, the Guidelines were finalised and published. The Guidelines have been summarised as follows: "The feasibility report lies in between the project formulation and the appraisal and sanction stage. The project formulation stage involves the identification of investment options by the enterprise in consultation with the administrative ministry, the Planning Commission and other concerned authorities."¹⁷ The Guidelines indicate information and data required to be presented and analysed in the feasibility report. They require that the feasibility report should include:¹⁸

(a) General information (e.g., analysis of industry performance, priority given, past record of the enterprise in project implementation etc.

(b) Preliminary analysis of alternatives (gap between level of demand forecast and supply for the proposed output, list of existing factories stating their capacity and level of production actually achieved, factories with letters of intent/industrial licence etc.)

(c) Project description (description of information required

¹⁸ Ibid., Chapters 1-8.
to enable evaluating the technical conception of the project).

(d) Marketing plan.
(e) Capital requirements and costs
(f) Operating requirements and costs.
(g) Financial analysis.
(h) Economic analysis.

The Guidelines require that data required for the purpose of social profitability analysis is to be collected by the enterprise. Indirect costs and benefits are to be quantified wherever possible, otherwise (e.g., damage costs) they should be analysed and their importance emphasised.

As planning is a continuous process, the PAD thought of preparing new guidelines. The idea emerged in 1981 but it is yet to be implemented. The new guidelines aim at:

(a) Communicating a new understanding of project planning to public sector units and hence highlight the areas which project formulation should concentrate on.

(b) Urging the enterprise to present the preparedness, i.e., how equipped is the organisation preparing the feasibility report.

(c) Urging the unit to continuously update its knowledge about procedures and not only to stick to guidelines. Any system is a dynamic concern; therefore, the

19 Interview with Mr. Devendra Narian, Joint Adviser, Project Appraisal Division, Planning Commission of India, 8.4.1987.
enterprise should not follow rigidly the guidelines but should update its knowledge. The situation requires constant updating.

After the feasibility report is prepared by the administrative ministry or department it is submitted to authorised Government organisations for evaluation.

4.4 Project Evaluation

The evaluation or appraisal is a sort of checking data presented in the feasibility report as well as working out or appraising the financial and economic soundness of the project.

The procedure for evaluating the feasibility report and investment decision depends on the size of the project and the delegation of authority. Projects which cost Rs. 50 million or less are within the responsibility of the Ministries/Departments of the Government. Their approval and investment decision are taken within the Ministry/Department though they may consult and obtain comments of other agencies.

4.4.1 Project Clearance System

For the large public sector manufacturing projects beyond the authority of the Ministry/Department, a detailed procedure has been laid out. It falls in two categories:
(A) For projects costing more than Rs. 50 million but less than Rs. 200 million the Ministry/Department prepares and circulates copies of the feasibility report to the appraising agencies, such as the PAD, Subject Division of the Planning Commission (dealing with the sector to which the project belongs), Ministry of Finance, Bureau of Public Enterprises (BPE), Ministry of Environment and Forests etc. The main appraising agency is the PAD which carries out a detailed ex-anti appraisal with the help of the Subject Division of the Planning Commission. Various issues raised by the appraising agencies are discussed with the Ministries and project authorities, normally in the Inter-Ministerial Meetings. Environmental issues, viz., air and water pollution are given proper consideration in the evaluation process.

Taking into account the preliminary comments, the Ministry/Department or project authority may decide to drop the project or modify it and/or submit it for investment decision. If it is decided that the project is to be submitted for investment decision, a note, known as Note for the Expenditure Finance Committee (EFC),* is prepared. Thereafter, the PAD prepares a comprehensive appraisal note in consultation with the Subject Division in the Planning Commission. The EFC note, the appraisal note and the comments of the other appraising agencies are placed before

* The EFC is a committee of secretaries headed by the Secretary, Dept. of Expenditure, Government of India.
the EFC. The EFC may reject, defer, or clear (in the form presented or in modified form) the project. Once cleared, the project goes for ministerial approval and sanction of funds.

(B) Projects costing Rs. 200 million or more require clearance of the Public Investment Board (PIB). The Board was set up in India in September 1972 to examine broad aspects of investment proposals in the project formulation stage, to take investment decisions on proposals for public sector projects and to consider proposals for revision of cost estimates which exceed certain limits.\(^\text{20}\)

For projects to be cleared by the PIB, a two-stages clearance procedure has been prescribed. The first stage is a pre-feasibility report stage in which the Ministry/Department is required to circulate a note on the broad features of the project. The appraising agencies examine these broad features which are considered by a committee of the PIB to decide the desirability of the preparation of a detailed feasibility report. While clearing such a project (at pre-feasibility stage) the committee of the PIB would also authorise incurring of necessary expenses for activities like site investigation, tying up of know-how and technology, engaging of consultants for the preparation of feasibility reports etc.

When the feasibility report is prepared, at the second stage, it is circulated to the appraising agencies and is appraised on the lines discussed in connection with the EFC projects. The final proposal of the ministry in form of a PIB note, detailed appraisal note prepared by the PAD in connection with the Subject Division of the Planning Commission and comments of the other appraising agencies are placed before the PIB which may reject, defer, or clear the project in its original or modified form. Once cleared, the proposal goes for ministerial approval and sanction of funds.

Projects costing more than Rs. 1,000 million and recommended by the PIB need approval of the Cabinet. In such case, the Government presents to the Parliament a White Paper. This should include a note of the concerned administrative ministry, main conclusions of the PIB and a brief note of the Finance Minister. Only then, a final decision will be taken and thereafter, sanction will be made.

In the present system, after the decision of the PIB, project authorities are asked to finalise the cost estimates within a prescribed time limit. If the revised cost exceeds 20 per cent of the first approved one, it calls for fresh appraisal and investment decision.

4.4.2 Description of the Appraisal Note

The appraisal note prepared by the PAD in consultation

21 Ibid., p.7.
with other appraising agencies has three basic parts. The first part gives salient features of the project while the second part discusses the background of the project, how it was conceived, whether any action has already been taken and its present status. In the third part of the appraisal note, the link between the project and the plan is discussed indicating the plan provisions, the Five Year Plan as well as the annual plan. Thereafter, major issues considered are:

(a) Need for the project keeping in view plan objectives, demand-supply gap of the product proposed, backward-forward linkages etc.

(b) Technical aspects, viz., choice of technology, location, site, infrastructure facilities, demand-supply of inputs, gestation period, impact on environment etc.

(c) Organisational aspects including marketing plan and organisation structure, manpower requirements, availability of skilled manpower, whether the project will be implemented by an existing organisation or a new one would be set up and the implementation plan.

(d) Uncertainties keeping in view the possibilities of time and cost overruns and fall in productivity, profit and capacity utilisation.

For projects scrutinised through the two-stages clearance system the appraisal note of the pre-feasibility report emphasises the examination of the need for the project, the
alternatives generated, technical feasibility and economic viability of various alternatives.

4.4.3 **Investment Decision Criteria**

Generally speaking, investment decisions are taken on the basis of development needs (determined in the light of plan objectives and strategies), techno-economic feasibility and viability. While a project is considered viable if it gives 12 per cent internal rate of return, both in financial and economic terms (in economic terms with premium on foreign exchange), it can also be approved if it is in the core sector.\(^{22}\) The domestic resources cost of earning/saving foreign exchange is also an important consideration. That is to say, a project passes through a number of stages of scrutiny. Each stage of scrutiny results in some decision whether the project should be rejected, deferred, modified or accepted in its original form. This process continues till the final decision is taken. The PAD puts more weight on financial and economic viability of the project.

4.4.4 **The PAD Methodology of Appraising Financial Profitability.**

The purpose of financial analysis is to assess the

financial soundness, or otherwise, of the project. The PAD evaluates the project from the following angles:23

(a) Annual rate of return on total investment. This is compared with the annual rate of capital cost.

(b) Rate of return to the enterprise with and without the project.

(c) Internal rate of return (IRR).

(d) Net present value (NPV) — calculated at 12 per cent cost of capital.

(e) Cost of production. Unit cost of production is calculated.

(f) Break-even point.

(g) Payback period.

(h) Year when cash flow becomes positive.

(i) Year when cash flow to the Government becomes positive.

(j) Financial position of the undertaking with and without the project.

4.4.5 The PAD Approach to Economic Viability Analysis

The PAD developed a methodology which is an attempt with a limited use of social cost-benefit analysis (SCBA) to assess the economic viability of the project. An attempt is made to identify and quantify direct and indirect costs and benefits of investment proposals. As the required national parameters to be used for the SCBA have not been estimated for India, some adjustments are made to calculate the

23 Ibid., pp. 15-17.
economic internal rate of return (IRR) of the project. The economic analysis is undertaken to reflect the following:\textsuperscript{24}

(a) The IRR – with 25 per cent premium as well as without premium on foreign exchange.

(b) The NPV with and without 25 per cent premium on foreign exchange, at 12 per cent discount rate (cost of capital).

(c) The economic cost of production.

(d) Domestic resource cost, i.e., the rupee cost of earning/saving foreign exchange.

(e) The share of different beneficiaries or target groups in the total benefit.

Traded inputs and outputs are valued at border prices while non-traded inputs are considered net of transfer payments. Marginal economic cost of production is taken where project inputs are serviced from additional production linked to it. Qualitative analysis is carried for indirect costs and benefits which are non-quantifiable. Other aspects considered are:\textsuperscript{25}

(a) Externalities: When they are harmful or beneficial they are identified and to the extent possible quantified. Otherwise, they are described.

\textsuperscript{24} Ibid., p. 22.
\textsuperscript{25} Ibid., pp. 24-25.
(b) System cost: A boundary of the project is drawn and associated investments are considered to give a wholistic view of the investment scenario.

(c) Sunk cost: When a project, otherwise abandoned or likely to be abandoned is to be considered, incremental analysis is taken treating the investment already made as sunk cost.

4.4.6 Sensitivity Analysis

As the future is uncertain, assumptions on which feasibility reports depend may not turn out to be true. Therefore, sensitivity analysis is carried out to indicate the project financial profitability and economic viability or cost of production when there are changes in the key parameters. The extent of change in the key parameters is based on past experiences relating to the sector.

4.5 Project Implementation

Every project in the public sector manufacturing industry is so unique that it calls for its own implementation system. A broad implementation framework for the Government manufacturing industry, however, could be described under five issues, viz., contracting, organisational set-up, payment, monitoring and control and commissioning.

26 In preparing this section I relied mainly on: SCOPE, Proceedings of National Workshop on Project Management in Public Enterprises, New Delhi, 1983.
4.5.1 Contracting

Contracting may start before the implementation stage. The project sponsor may take initial steps in consulting some foreign companies for collaboration and offering technology early during licensing process. Therefore, selection and finalisation of contracts and consultants make an important activity of the scope of project work. The Bureau of Public Enterprises (BPE) laid down general conditions of contracts and standard contract forms for civil works in public sector undertakings in 1974. These guidelines were prepared by the BPE, the Standing Conference of Public Enterprises (SCOPE), Ministry of Law and Justice and public sector undertakings. They cover issues related to inspection of site, setting out work, contractor's supervision, completion certificate, duties, valuation and payment.

Different public sector undertakings and different public sector projects draw their own contract management systems according to their needs taking into consideration the general contract guidelines. Procurement contracts are drawn according to the special needs of the projects. Project authority is free to draw its own contract management system to secure efficient implementation.

4.5.2 Organisational Set-up

Although projects should be structured to the specific needs of the situations, the common feature in India is that a separate project department is created in the headquarters for handling projects directly or through consultants depending on the complexity of the project. In many cases, there is a central control unit at the headquarters and a monitoring cell at site. Sometimes a matrix organisation is born where the project draws experts from different departments of its mother organisation at the headquarters. The experts work under the supervision of a project manager but are responsible to their bosses at the headquarters for matters other than the project in question. Such experts are from areas of process, civil engineering, mechanical engineering, electrical engineering and finance.

The project department is to ensure timely preparation of process designs, schedules, procurement, tendering and construction. It monitors progress, controls costs and ensures on-time implementation. On the other hand, a site cell is assigned supervision of implementation, follow-up and monitoring of progress of work. Where the implementation know-how is available in the headquarters, then the project authority can take over the job of implementation.

The Government of India put more weight on large projects costing Rs. 200 million and above by creating a full fledged ministry for monitoring them. The Ministry of Programme Implementation was established in September 1985 to carry the following functions: 29

(a) Monitoring of the performance of infrastructure sector.
(b) Monitoring of implementation of projects costing Rs. 200 million and above.
(c) Monitoring of implementation of the 20 Point Programme.

The coordination and the project cells of the Cabinet Secretariat which had been monitoring the performance of the infrastructure sector and other central projects were transferred to the new ministry. Also the division in the Planning Commission which had been monitoring the 20 Point Programme as well as those monitoring projects costing Rs. 200 million and above were transferred to the new ministry. The organisation chart of the Ministry is shown in Appendix 12.

As seen from the chart, there is a division for project monitoring. This division monitors performance of central sector projects costing Rs. 200 million and above and State projects in the power and irrigation sectors. The projects are classified into mega projects exceeding Rs. 10,000 million major projects between Rs. 1,000 million and Rs. 10,000

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4.5.3 Payment System

Major Central Government manufacturing projects are usually financed from Central Government budget and/or foreign debt. In both cases, payment to contractors is specified in the contracts. Mainly, payment is made through the letter of credit. Upon completion of agreed-upon activities and after verification of project authorities or their consultants, the contractor is paid. Payment does not pose much problem. However, some project managers in the public sector complain that their project budgets were cut by the Government authorities when annual budgets are approved. This ultimately puts the projects into troubles in meeting their urgent payment, which in turn, leads to delays. Furthermore, some project authorities sometimes delay opening the letter of credit. This gives the contractor good reason to ask for extensions and more payment.

4.5.4 Monitoring and Control

The Government of India has been recommending the setting up of monitoring cells for public sector projects.\(^\text{30}\) Guidelines for proper setting up and functioning of monitoring

cells as well as for the application of network techniques were issued by the Monitoring and Information Division of the Planning Commission and the Bureau of Public Enterprises.\(^{31}\)

Therefore, several public sector corporations use PERT and prescribe to contractors. However, these techniques of project implementation planning and control namely, PERT and CPM have yet to be well understood and, hence, effectively used by project authorities in the public sector.\(^{32}\) The feature of project monitoring system in public sector industry is that in many projects, reporting by exception is adopted.\(^{33}\) More complex problems are usually referred upward in the management level.

In 1970, the BPE requested public sector projects to adopt network techniques (PERT/CPM).\(^{34}\) Two guidelines were attached to the memos; the first was about basic concepts and principles of the techniques while the second was about procedures to be adopted.

Monitoring is also done by the Ministry. A management information system reporting by public enterprises to the Government was set in 1975.\(^{35}\) It was an outcome of a seminar

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32 Ibid.
35 Office Memo No. BPE/GL-003/75/I & R/16(4)/72, dated 11th March, 1975.
on management information systems (MIS) organised in September 1972 followed by recommendations of working groups of public sector enterprises, foreign experts on MIS and representatives of administrative ministries. The recommendation report laid out an integrated reporting system which public enterprises should follow in reporting performance in production, sales, inventory, implementation etc. As for projects under construction, two types of reports were required; one for activities in the pre-construction stage and the other for activities during construction. All the reports required were quarterly. The Ministry is to keep track on basic information and pre-construction information. Construction reports have been designed for obtaining information on items from projects under construction namely, project time schedule, cost and expenditure, manpower, scarce resources, interrelated activities and problems and action areas.

Appendix 13 shows a brief description of the above information subjects, periodicity and purpose of the formats of the integrated reporting system for projects under construction.

The Ministry of Programme Implementation, as stated earlier, keeps track of public sector projects costing Rs. 200 million or above. For projects costing Rs. 1000 million and above, the project authorities are required to send to the Ministry by the 3rd of every month a flash
report indicating the achievement of the milestones scheduled for that month or those pending from earlier months, import supply and other problems they encountered in the implementation of the projects and action taken/proposed to be taken. If there are delays, project authorities are required to state their magnitude and reasons.

Each ministry is requested to indicate action taken or proposed to be taken as well as anticipated problems in the next three months with steps taken and planned. These are to be sent by the 14th of every month to the Ministry where they are scrutinised and a consolidated exception report is drawn up. The problems are communicated to the highest level in the Government, i.e., Prime Minister and Cabinet Secretary.

4.5.5 Commissioning

How trial tests are to be carried out is prescribed in the contracts. Therefore, they differ from one project to the other. In some projects, trial tests are carried out with respect to finished activities while other activities are still under implementation. In other instances, it is made for the whole project after all the activities are finished. The first type of trial test guards against defects in implementation at an early stage and, hence, production may start right after the trial test of the last
activity is carried. On the other hand, if defects are detected in the second type of trial tests, then more time (extension) will be taken and additional costs may be incurred to make needed adjustments and start production.

4.6 Industrial Project Evaluation by Term-Lending Institutions

4.6.1 Historical Background

Capital needs of investment projects in the private sector in India are usually met by term-lending institutions at home and, sometimes, by foreign loans. The recognition of the need for specialised financial institutions to meet the requirements of term finance for industry in India led to the establishment of financial institutions at the Central level in addition to State financial corporations and State industrial development and investment corporations.

The first all-India term-lending institution, the Industrial Finance Corporation of India (IFCI), was established in 1948. It was jointly owned by the Government of India, the Reserve Bank of India (RBI) and financial institutions. Its primary role is to provide direct financial assistance to medium and large scale industrial projects in the corporate (public limited companies) and cooperative societies in India. Many State financial corporations were also established after 1951. In 1955, the Industrial Credit
and Investment Corporation of India (ICICI) was set up as a limited liability company with the collaboration of the Government of India, the World Bank and other foreign institutions. Its main aim is to provide assistance to private sector units irrespective of the form of organisation, particularly to meet their foreign exchange requirements.

Although the IFCI and the ICICI have performed their jobs, the increasing need for more long-term finance during the end of the 1950s called for establishing a third term-lending financial institution at the central level. This need was enhanced by a need for a coordinating machinery to bring the lending institutions in general, and the term-lending ones in particular, together. Therefore, the Industrial Development Bank of India (IDBI) was set up in 1964 as a wholly owned subsidiary of the RBI. Later, in 1975, the ownership of the IDBI was transferred to the Central Government with effect from 16.2.1976.

As the principal financial institution or apex development bank, the IDBI aims at coordinating the activities, the policies and procedures of all development finance institutions, and also to act as adviser to the Government of India in the matter of formulation of industrial development and industrial financing policies. This is in addition to extending term-loans to industry in conformity with national priorities.
4.6.2 Appex Role for IDBI

The mechanism designed to achieve coordination among all-India term-lending institutions, namely, the IFCI, the ICICI and the IDBI, is the Senior Executive Meeting (SEM) and the Inter-Institutional Meeting (IIM) for the purpose of deciding on consortium loans. The SEM is an inter-institutional forum at which representatives of all the institutions at the level of second in command meet every fortnight. The IIM is a forum of chairmen of the institutions which meets monthly. While at the SEM representatives of each institution decide on their share of the project cost (where project cost is between Rs. 30 million and Rs. 100 million), the chairmen at the IIM decide on the share if the project cost exceeds Rs. 100 million.

The procedure of processing of applications as explained by a representative of the IDBI\(^{36}\) is that a standardised application form is available for all the institutions. The filled-form may be handed by the entrepreneur in any office or branch, regional or head office of the institutions. The organisation to which the application is submitted comes up with a flash report whereby the minimum essential aspects of the project are stated and brought to the notice of the SEM. A lead institution is appointed if the project

\(^{36}\) Committee on Public Undertakings (1980-81), Seventh Lok Sabha, "Twenty Fourth Report on Industrial Development Bank of India", Lok Sabha Secretariat, New Delhi, April 1981, p.44.
is found worthy. Thereafter, all further correspondence of the entrepreneur will be with the lead institution. However, at the various stages of evaluation the lead institution keeps the other institutions informed of the progress of work.

Thereafter, the application is processed by the lead institution in consultation with the other institutions, and if the project is found support-worthy, a detailed appraisal note will be submitted to the joint meeting of the institutions for final clearance of the proposal. Sharing of assistance for projects costing Rs. 30 million to Rs. 100 million is decided in the SEM and for projects costing over Rs. 100 million is decided in the IIM. After the sharing has been decided, the lead institution takes it to its board for clearance. Later, it claims reimbursement from the other institutions to the extent of their respective participation.

If the project is a special one involving sophisticated technology from abroad or if it involves high risk because of uncertainty in demand or the size of the project, then the matter will be referred to an ad hoc expert committee in the lead institution.

4.6.3 Project Evaluation Criteria

Generally speaking, the term-lending institutions set basic criteria to be met by projects to pass the test for assistance. These are summarised in the remainder of this chapter.
From time to time, the Government of India sets priorities to industries and in allocating the resources for financing them. Industries which are in high priority list are given top-most importance in financing whereas those in the low echelon, or where adequate capacity has already been built up, are not generally assisted. Apart from individual priority, the following considerations are kept in view when financing industrial projects:

(1) Projects proposed to be located in notified backward districts/areas, specially in "no-industry" and "special region" districts.

(2) Projects which contemplate harnessing indigenously available technology or process know-how and raw materials.

(3) Export-oriented projects, normally with export obligation of 60 per cent and above.

(4) Projects promoted by new or technical experts.

(5) Employment-oriented and labour-intensive projects.

(6) Projects where benefits are to flow to rural areas or which are proposed to be set up in the cooperative sector.

(7) Projects which aim at either conserving the requirements

of energy or contemplate the use or manufacture of renewable energy systems/devices.

4.6.3.2 **Basic Requirements**

In addition to the priorities set out from time to time by the Government of India, there are six basic requirements for projects to be eligible for support by term-lending institutions. These are:

1. The entrepreneur and/or manager of the proposed project should be trained and competent.
2. The proposed product should not be from the banned list spelt-out by the Government.
3. There should be sufficient demand and inadequacy of the existing capacity to meet that demand. A market survey should have been carried out followed by a detailed project report. The report is to show the scope of the project, requirement from infrastructural facilities, raw material, machineries, etc.
4. If the project is an expansion, there should be sufficient demand for its produce.
5. Prices of the proposed products should be competitive with those of comparable goods.
6. Regarding the scope of a particular project, the guidelines for industries issued by the Government of India may be referred to. And if the project is not a small scale one, a feasibility study prepared by approved consultants is to be submitted.
After satisfying the above requirements, the entrepreneur is asked to submit an application for the loan along with profitability and cash flow statements as prescribed in the application form, application for working capital and a statement of assessment of working capital.

On the basis of the feasibility report, the application form and the other statements, the following specific aspects of the project are evaluated by the lead institution; promoter's capability and competence, technical feasibility, financial feasibility, commercial feasibility, economic feasibility and social aspects. These are briefly described below.

4.6.3.3 **Promoter's Capability and Competence**

Two features can be distinguished in promoter's evaluation. The first is that techno-management experts dominate in the financial institutions. This leaves very little for entrepreneurial evaluation as far as behavioural and psychological aspects are concerned, and the second is that the smaller the cost of project submitted by the entrepreneur, the lower will be the rank of the bank official who will evaluate it. The present practice of promoter's evaluation is as follows:

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(1) First, the scrutiny is done regarding the eligibility of the project under a particular scheme (project finance, modernisation etc) which includes varying margins, technical qualifications and project cost limits. The more conservative the financing agent, the more it concentrates on project cost versus promoter's contribution, the margin and the security. On the other hand, the more liberal the agent, the more it checks the adequacy of experience and viability of the project.

(2) The high weightage is either given to technical capacity or experience together with financial background.

(3) Interviews with the applicant.

In the process of evaluation, the assessment is usually in favour of the candidates who possess a definite project idea, preferably a project report and previous experience but not entrepreneurial qualities. In the interview, command over English language and a visibly impressive personality make a more favourable impact on the interviewers. The entrepreneurial quality is assessed with regard to familiarity with industrial activity, family background and some assessment of suitability for proposed activity. The wider and better knowledge the promoter has about manufacturing, the more he scores.
4.6.3.4 **Technical Feasibility**

Technical feasibility assessment deals with:

1. Appropriateness of technology and suitability of the selected process for India.

2. Scale of operations and whether the size of the project would be economically and financially viable.

3. Availability of land, cost of development, adequacy of area keeping in view further expansion, availability of labour, market, raw materials etc. Also where necessary, site inspection is undertaken.

4. Adequacy and suitability of plant and machinery and their specifications, reputation of machinery suppliers and reasonableness of cost, balancing of different sections of the plant, proposed arrangements for procurement of plant and equipments etc.

5. Adequacy of technical and executive personnel proposed for implementation and running the project at operation stage, their qualifications, background, experience, need for collaborators, training needs, terms of technology transfer etc.

6. Arrangements for disposal of factory effluents, protection and control of effluents etc.

7. Project implementation schedule, PERT and CPM charts, if any, and monitoring arrangements of project activities.

3.6.3.5 **Financial Feasibility**

The term-lending institutions in India put more

concentration on evaluating the financial aspects of the project. They analyse the working results of the project, balance sheets and cash flow for the past few years in the case of existing undertakings. This exercise also involves an examination of the following aspects for existing as well as new projects:

(a) Basis and reasonableness of the estimated project cost.
(b) Financial collaboration agreements and terms thereof.
(c) Financing plan with reference to capital structure, promoter's contribution, availability of the anticipated resources and debt-equity ratio. Although the debt-equity ratio is normally 2:1, it can be relaxed in some cases. It is normally consistent with the nature of industry, capital outlay involved, size of the project, gestation period and its expected profitability.
(d) Critical examination of the promoter's existing investments, if any, in other concerns or any trading activities other than normal industrial activities.
(e) Projections of future profitability. Projections of production costs, profitability and cash flow are obtained for ten years. In the production costs projections, the appraisers look into the assumptions regarding capacity built-up, raw material cost, estimates of wages and salaries, cost of utilisation, estimates of administrative expenses, selling price and provisions made for depreciation and statutory taxes.

40 Ibid., pp. 19-20.
In profitability projections, the appraiser, wherever possible, compares the profit projections of the project with the actual performance of comparable units in the industry. The following ratio analyses are also carried out: Profit sales ratio, profit total capitalisation ratio (percentage of operating profits plus interest on long-term debt to total capital employed) and profit equity ratio (percentage of net distributable profit to equity capital). These are in addition to other ratios (e.g., productivity ratio, debt servicing capacity and input structure).

Also the appraisers ensure themselves that the cash position of the project, as indicated by the cash flow, would be fairly comfortable throughout the projection period. Break even and sensitivity analyses of the project are carried out. Furthermore, an assessment of the financial rate of return is carried out.

4.6.3.6 Commercial Feasibility

In this exercise, the appraiser looks into the market survey of the project. He evaluates the adequacy and reliability of the study of the product and product mix, analysis of demand and supply position of the product(s) concerned, their cost and price structure, demand patterns, trends in capacity utilisation and prices, growth rate and growth...
forecasts of demand, marketing and sales strategies, sales organisation and selling arrangements etc.

4.6.3.7 Economic Feasibility

In India, as in most developing countries, capital and foreign exchange are the most important of the scarce resources. As such, the term-lending institutions have put special emphasis on them in the economic evaluation of industrial projects. The appraisers calculate the IRR and the internal exchange ratio.

The IRR is usually calculated on the cash flow for 10-15 years of the project life. For the purpose of cash flow, profit before tax plus interest on borrowed capital plus allowance for depreciation is taken. In addition, the rate of return on domestic capital and foreign capital is also computed separately. Generally, a 15 per cent IRR is acceptable. Inter-firm comparisons of the project with similar projects financed earlier are also made. This is in addition to calculating the payback period.

Internal exchange rate is carried out to see whether it is better to produce internally or to import the product, i.e., the project is evaluated as to how it stands to international competition and guarantee a home price which would be competitive with international price. Therefore, a project is

42 Ibid., p. 22.
accepted if its explicit exchange rate is equal to, or less than, the norm tentatively fixed (in terms of rupee per U.S. dollar).

A project which does not stand the IRR and foreign exchange tests, however, may still be accepted if it is likely to result in extra economic benefits which subserve the broad development objectives.

4.6.3.8 **Social Aspects**

Along with the economic evaluation, some social aspects are kept in view. It is ensured that the promoter has made adequate provision for treatment of effluents so that the environment remains pollution-free. Also the steps proposed to be taken for conservation of energy or use of alternative sources of energy are examined in depth.

Furthermore, adequate provision of housing and their cost are to be examined. Added to this, the use of appropriate technology transfer to India in the proper direction is given due weightage in the appraisal process.

4.6.3.9 **Linking Lending to Development Objectives**

The lending criteria are directly linked to the development needs of India. By way of example, the Government of

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43 Ibid., pp. 22-23.
India grouped backward areas in three categories (A, B and C) State-wise. Category A is the non-industrial districts category while B and C are districts with less industries (however, C is better than B as far as industrialisation is concerned). There are 133 districts in category A, 54 in category B and 112 in category C.44

Promoters are required to contribute 15 per cent of the project cost if the project is set up in category A or B districts and 17.5 per cent if the project is set up in category C districts. In addition, the limits upto which the rupee loans are available to projects located in backward areas at concessional rates of interest are Rs.50 million for category A districts, Rs. 30 million for category B districts and Rs. 20 million for category C districts. The underwriting commission is reduced by 50 per cent in respect of underwriting facilities to projects of category A, B and C districts upto Rs. 25, 15 and 10 million respectively.45

4.7 Chapter Summary

Since the 1950s, India has advocated national planning which mainly aims at achieving sustained and rapid economic growth, creation of modern self-reliant economy, balanced regional development and elimination of unemployment and poverty. Major public sector projects are considered for

44 Ibid., pp. 49-59.
investment only after they have been included in the Five Year Plan.

The industrial policy was implemented through the Industries (Development and Regulation) Act, 1951, which was revised in 1956. Industries were classified into two groups so that public and private sectors may contribute effectively to development. Small scale industries and ancillary industries are exempt from licensing. Requirements for licensing include priority in the Five Year Plan, demand/supply position of the product, direct and indirect employment potential and steps taken to prevent air, water and soil pollution.

Projects pass through pre-feasibility, feasibility and implementation stages. They are to be formulated according to the Guidelines set by the Planning Commission of India. Small industrial projects of the Government are evaluated by concerned administrative ministries but big projects have to be decided upon by the Expenditure Finance Committee and the Public Investment Board. The PAD is the main appraising agency. Financial and social appraisal are given due consideration. In this respect, market prices are corrected to conduct cost-benefit analysis, premium on foreign exchange is used and economic cost of production and domestic resource cost are calculated.

The implementation of public sector industrial projects

* Other exemptions are also offered by the Government (See Appendix II).
were sometimes contracted out following guidelines set by the BPE. A separate project department is usually created in the headquarters and a monitoring cell at site. A matrix organisation is built and payment to contractors is made through letters of credit. CPM and PERT monitoring techniques are used and reporting by exception is adopted. Once an individual activity is completed, trial test is carried out. Sometimes trial test is done for the whole project after its completion.

The IFCI, the ICICI and the IDBI are the major term-lending institutions for private sector industry in India. The IDBI plays an apex role in coordinating all term-lending institutions. Small projects are considered at Senior Executive Meetings while big projects are considered at Inter-institutional Meetings. Evaluation is made by the lead institution and is based on priority criteria as stated by the Government of India. The criteria include backward area location, export-orientation, pollution control and other criteria. This is in addition to availability of sufficient demand, competitiveness of prices and competence of management among many requirements. The lead institution critically evaluates promoter's capability and competence, technical feasibility, financial feasibility, commercial feasibility, economic and social aspects. In these exercises, lending criteria are directly linked to development needs of the country.