CHAPTER - II

PROJECT PLANNING

(A project may be defined as a scientifically evolved work plan devised to achieve a specific objective within a specified period of time. From the point of view of resource allocation, a project can be considered as a proposal involving capital investment for the purpose of developing facilities to provide goods or services. Planning may be defined as the method of preparation, development and presentation of the ideal or optimal plan.)

When any project is to be launched, either in the public sector or in the private sector, an idea is conceived by some one called promoter. For putting his idea into practice, the promoter has to perform a number of duties, first and foremost being the examination of the viability of the project. Other important problems facing the promoter are generally to organise and arrange the finance and the personnel. The promoter has to consult various experts and specialists for this purpose. All this involves huge expenditure.

A developing economy which is already working under the constraints of resources cannot afford any wasteful
expenditure. In such economies the technique should have built-in mechanism of ringing the danger bell at the earliest possible stage of resource utilisation. The proposed project should be developed in an orderly fashion through investigations and analysis to prevent loss through underlying an unsound and uneconomic project. Such a procedure should be adopted so that the project may be cancelled easily, with minimum wasted expenditure, when it becomes clear that the project should not be carried forward any more. It is wise to nip the evil in the bud.

(Not only in the developing economies, but even in developed countries the planners are faced with an uphill task of undertaking an exercise aimed at the identification of the right type of projects. In this context, it hardly matters whether the industrial development is concerned with the large, medium or small scale sector. The projects, so identified, must generate growth impulses or be able to fit into the spectrum of industrial development as viewed at the local, state or national level. The project must not be vulnerable to economic fluctuations in the country and must be such as to have an adequate inherent strength.)

In the case of Central Government Undertakings, projects are generally formulated by the Administrative Ministeries when the Five Year Plan is being drawn up, but
it is not a hard and fast rule. Sometimes new projects take shape also during the plan period. As already explained in the first chapter, the initiative regarding the establishment of industrial undertakings in the State of Punjab was taken by the PSIDC as far as the units in public sector were concerned. The establishment of the units under study are no exception to it.

Project formulation is the process of presenting a project idea in a form in which it can be subjected to comparative appraisal for the purpose of determining in definite terms the priority which the project should receive during the course of resource allocation under conditions of severe constraint on the availability of funds. The constraint may be due to the scarcity of resources per se, as is the case in most of the developing economies, or may be due to the availability at any point of time of a large number of competing project ideas. The technique involves an analysis of the project idea from the point of view of input as well as output, so as to present the authority or person responsible for the resource allocation or investment decision with a set of basic valuations for facilitating investment decisions.

It may be noted that an essential adjunct of planning is cost-benefit analysis. No doubt, because of the absence of standardised methodology of this analysis, it has not been in an extensive use in developing countries. The basic purpose of cost-benefit analysis is to single out projects which should be taken up for preferential treatment over other competing projects. Financial analysis looks upon the project from the point of view of executing body. It is concerned with the development of the financial project so as to establish the financial viability of the project. It is a closed door exercise where the project formulation team examines the internal cash flows which the project will generate. Cost-benefit analysis examines the project in all its details. It does not consider the project as an isolated entity but as a part of the wider community and examines the impact which the project will have on the community. (A distinction between financial analysis and cost-benefit analysis becomes imperative because every project, howsoever small it may be, generates both spill-over as well as spread effects.)

Cost-benefit analysis involves not only the examination of the primary costs and benefits but also seeks the examination of the secondary as well as tertiary costs and benefits. The objective here is to find whether
the economy is in a position to sustain the project. A project with a sound internal cash flows may be detrimental to the economy and lead to serious aberrations in the existing set-up or even to a disturbance of the overall equilibrium. The project implementing body may prosper while the economy suffers as a whole, which cannot go unnoticed in an economy like India where she is committed to the socialistic pattern of society and a welfare state. In fact, cost-benefit analysis must follow the financial analysis so as to complete the financial analysis of a project. Because the financial analysis x-rays the framework of the project whereas cost-benefit analysis looks upon the flesh and blood and clearly states the strong and weak points of the project.

Investment profitability analysis should precede the cost-benefit analysis and financial analysis. Investment profitability analysis is the measurement of profitability of the resources put into the project, more directly the return on the capital no matter what the sources of financing are. Thus, it is an assessment of the potential earning power of the resources committed to a project without taking into account the financial transactions occurring during the project's life.
Different methods may be used as a basis on which to assess the investment profitability of a project:

(a) Simple rate of return;
(b) Pay back period;
(c) Net Present Value (NPV);
(d) Internal Rate of Return (IRR).

(The first two methods are called conventional methods) since they do not take into consideration the whole life span of the project and rely on one model period (normally one year) or at best on a few periods. Their application is based on the annual data of the project without taking into account the discounted cash flows. The latter two methods, popularly known as discounted methods take into consideration the entire life of a project and the time factor by discounting the future inflows and outflows to their present values.

In a developing economy like India, the economic development process cannot be left to the vicissitudes of economies and vagaries of nature but should be done in a planned manner directed towards fulfilment of the socio-economic aspirations and improvement of living standards of people. India resorted to planning in 1951 and it is an accepted principle that plans require projects and projects
require plans. Good plans cannot be formulated without proper choice of projects and the real value of the projects cannot be properly ascertained without the framework of a plan. The national plans set out the social objectives and priorities between different sectors and regions. The existence of a national strategy for economic and social advancement is prerequisite for the proper choice and planning of projects.

The success of a plan and attainment of its objectives to a large extent depends upon the selection of the right type of projects. The role of project appraisal in a planned economy is to ensure the selection of projects, which contribute most to the economic and social objectives laid down in the plan. Project appraisal is thus an instrument for translating the broad economic and social policies into a realistic programme.

Upto the year 1965, i.e., having 14 years of planned development to our credit, an investment of ₹ 2,415 crores had been made in 74 'Central Public Sector Undertakings', no directives were issued either by the Government or by the Planning Commission on the need or method by which 'Feasibility Studies' and 'Project Reports' could be prepared by the Administrative Ministries concerned. In the absence of such
directions most of the Administrative Ministries were engaged in the preparation of feasibility reports and project reports by the trial and error method.

It was in May 1966, a Manual 'Feasibility Studies for Public Sector Projects' was got prepared from a US consulting firm (Peat, Marwick, Mitchell and Co., Boston, Mass.) and the Committee on Plan Projects of the Planning Commission, Government of India. This manual was widely circulated with the clear indication that in future all the projects in the public sector should be guided by the manual. Realising that the document was not being given the importance it deserved, the then Deputy Prime Minister vide his letter No. 1942, DFM/67 addressed to the Ministries of Industrial Development and Company Affairs, Petroleum and Chemicals, Transport and Shipping, Steel, Mines and Metals, Parliamentary Affairs and Communication emphasised the need for the use of the manual in the preparation of feasibility studies and project reports.

The authors of the manual believed that a systematic development of the project (before the construction period) should consist of three formal stages. Project planning process normally encompasses that period of time which begins with project conception and terminates with the start of pre-
implementation planning. A series of logical and firm steps need to be taken during the period prior to the commencement of a project to achieve improved project development. These would involve the preparation and submission of the following documents before the implementation of the project:

(A) Preliminary project formulation;
(B) Feasibility report;
(C) Detailed Project Report (DPR)

The first step, i.e., preliminary project formulation is necessary because it helps in having an idea of the demand of the product or service, and the role which can be played by the (proposed) project in the economic development of the country, region or state, indicating broadly the following aspects of the project:

(a) Demand;
(b) Preliminary technical feasibility;
(c) Alternative locations;
(d) Preliminary economic viability or feasibility;
(e) Total capital cost;
(f) National benefits;
(g) Method of implementation.

The second important step in project planning is the feasibility study. It is a tool that helps the project promoter to take a decision on the investment proposal under
review. To facilitate this decision, both production and investment costs have to be examined in detail, keeping in mind that the profitability of a project will ultimately depend on the size and structure of investment and production costs and their timing.

The manual recommended that the feasibility study should form the basis on which the Government should give approval for the project to be undertaken. Thus, this study forms the most important part of the analysis. The purpose of preparing such a report is to gauge the most economic size, location, product pattern and the process to be chosen for the project. At this level of analysis, the technical development of the project is carried out to the extent necessary to evaluate the commercial and national economic aspects. The manual states that at this stage all alternatives are resolved and one project clearly emerges as being the most economic. The manual recommended a detailed analysis of the following:

(a) Demand analysis;
(b) Pricing;
(c) Technical development of the project;
(d) Location of the project;
(e) Project-cost estimates;
(f) Profitability analysis;
(g) National economic benefits.
It is not out of place to mention that for detailed analysis of the above mentioned points, the techniques have also been suggested in the manual.

After the approval of feasibility study, a detailed project report is prepared which should contain complete technical designs and detailed estimates for the selected project. Much of the technical development of the project may take place on the basis of feasibility study. But for making detailed technical plans and estimates and for awarding contracts sufficient information may not be available from the feasibility study and, therefore, forms the part of a DPR. Broadly speaking this document (DPR) should encompass the following:

(a) Detailed engineering designs;
(b) Detailed plant layout;
(c) Detailed estimates of works;
(d) Detailed specifications;
(e) Complete work plan and schedule;
(f) Detailed contract plans and schedules;
(g) Manpower plan;
(h) Financial plan;
(i) Organisational plan.

On an analysis of the contents of the DPR, it can be observed that this document is as important as the feasibility report. DPR is a must for the evaluation of
the progress of the project. The absence of DPR may result into heavy losses. The Committee on plan project on Trombay project of the Fertiliser Corporation of India reported that the absence of detailed project report led to scheduled slippages, cost over-runs and contractual difficulties. The Committee report (Second Lok Sabha) on Indian Telephone Industries Limited, would show that the absence of a detailed project report had led to excess purchase of plant, delays in getting manufacturing data etc. It is not out of place to mention here that Mr Fazal (a member of Planning Commission) in his inaugural address wanted the executives in charge of project implementation to be frank in their discussions to arrive at honest conclusions. He emphasised that project management in modern context was highly sophisticated and fast developing concept and practice. The public sector should learn from such experience and adapt it to our purpose.

Because of the limited availability of goods and services in developing economies, the time factor is also one of the main considerations in project appraisal and investment decision. At the time of the formulation of a

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2 CPU (Second Lok Sabha) 13th Report, December 1965, Para-37.

3 Economic Times: 21.11.1981, p.5. Mr Fazal was inaugurating the 'Management meet on Cost Escalation' attended by Chief Executives and senior managerial personnel of public sector enterprises.
project, the time which the project is likely to take should be determined with as much accuracy as possible. In establishing the acceptability of a project, the trade-off period is a material determinant. This period determines the time-lag which will elapse between the commencement of investment and the start of return on investment.

Project Evaluation and Review Technique (PERT) and Critical Path Method (CPM) provide the project formulation personnel with one of the most effective analytical aids. These are the two facets of the network based methodology of project planning. These techniques help in developing a logical sequence of activities which, when executed, would lead to maximised effectiveness and for controlling and monitoring the ever elusive project costs and project time schedules. If these network techniques are effectively used for monitoring the progress during the construction stage the time over-runs can be minimised, if not eliminated.

On the completion of the project (i.e. when the construction is over) a report called 'Project Completion Report' should be prepared, so that the projections made may be compared with the actuals. The reasons for the time and cost over-runs may also be analysed.
In the following few pages an attempt has been made to study the position of project planning in the units under study.

(1) Punjab Footwears Limited, Jullundur

According to one of the former Managing Directors, the unit was started without any sort of project-planning. No feasibility study was conducted. When asked how the unit came into existence without any techno-economic survey etc., it was reported that the Government established this unit for the uplift of scheduled castes and backward classes. In the later years a 'Feasibility Report' was got prepared by the company from the National Productivity Council, making a payment of ₹5,158 for the same. No satisfactory reply was given, when the researcher asked the reason for getting this report prepared at such a late stage when the unit had already gone into production.

(2) Punjab Nylo-Transmissions Limited, Jullundur

No effective project planning was done in the beginning in this unit. A 'Project Report' was prepared by one of the former Managing Directors (who was representing the private promoters) in which no provision was made for the 'Administrative Block' which really cost the unit ₹2.42 lacs. Delays were involved in the issuance of an
import licence by the Government of India and in the allocation of land at Jullundur by the Government of Punjab. Indegenous demand and export potential were also rated high in the project report.

When the company framed a scheme for diversification (to manufacture nylon strips) a feasibility report was prepared. No provision was made for the contingencies in this report. Margin money was also under-estimated in as much as a provision for the import of raw-materials had been made for 3 months, as against a normal position of 4 to 6 months. There was no provision for credit sales. Since its inception, the unit was incurring losses and it was thought that with the scheme of diversification, the viability of the unit would improve. It was considered that if implemented, the scheme would rather salvage the present project.

(3) Punjab Salpetre Refinery Limited, Ferozepur

This unit was set up to refine crude saltpetre ($\text{KNO}_3$). Before accepting the proposal a detailed scrutiny was done by the PSIDC. M/S Khaming Engineering Private Limited, Calcutta were appointed as consultants in 1969 for the purpose of preparing project report to set up a plant for saltpetre benefication. The company was incorporated even before the preparation of report by the
Moreover, because of faulty design and supply of defective equipment the production of saltpetre was not found possible. As the machinery was not workable for the refining of saltpetre, a scheme of diversification was conceived for the formulation of pesticides, because Punjab being an agricultural state had numerous attacks of pests which virtually destroyed the crops. It has since been engaged in the manufacture of Malathion 50%, Endrine 20%, DDT 25% and Endosulphan 35%.

The faulty project-planning is evident from the fact that the unit could not commence production/manufacture of the commodity envisaged in the project report. The machinery supplied by M/S Process Machinery and Equipment Private Limited, Calcutta was found to be defective in the trial runs conducted in December 1969 at Ferozepur in the presence of consultants and suppliers. The defects which were noted during the trial runs were to be removed by the suppliers. Non-fulfilment of this commitment by the suppliers led to prolonged litigation between the company and the suppliers.

(4) Punjab Semi-Conductor Devices Limited, Mohali

A project report was prepared by M/S SMS Associates Private Limited, New Delhi. It was stated in the report that the international and Indian market for semi-conductor
devices was extremely volatile. While making the calculation for capital investment provision for contingencies and price escalation was made, which enabled the unit to avoid any cost over-runs. Profitability analysis was made in which a loss was estimated in the first year. The succeeding year was expected to show a marginal profit. No investment profitability analysis and cost-benefit analysis was made in the project report. This unit had the minimum investment for the product range and output among all the semi-conductor units in the country, which is evident from the following:

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Unit set up or being set up by</th>
<th>Estimated investment (Rs)</th>
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<tbody>
<tr>
<td>1</td>
<td>BEL (Bharat Electronics Limited)</td>
<td>Over ₹ 6 crores</td>
</tr>
<tr>
<td>2</td>
<td>ECIL (Electronics Corporation of India)</td>
<td>About ₹ 4.5 crores</td>
</tr>
<tr>
<td>3</td>
<td>Maharashtra State Industrial Development Corporation</td>
<td>Over ₹ 4 crores</td>
</tr>
<tr>
<td>4</td>
<td>Andhra Pradesh Industrial Development Corporation</td>
<td>About ₹ 4 crores</td>
</tr>
<tr>
<td>5</td>
<td>Punjab State Industrial Development Corporation (in Punjab Semi-Conductor Devices Limited)</td>
<td>About ₹ 89.25 lacs</td>
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</table>

Project Report laid too much emphasis on the technical aspect of the project while little attention had been paid to the financial and economic aspects of the project.
(5) **Punjab Scooters Limited, Nabha**

The project report was prepared by its Collaborators M/S Scooters India Limited (SIL) Lucknow, a Government of India undertaking. When the plan was formulated the scooters were in great demand and thereby the State Government was anxious to set-up a scooter plant. No market survey regarding the demand and choice was conducted in the State. The demand figures at all India level were relied upon. It was thought that because there is a long waiting list for 'Bajaj' and 'Priya' scooters, there would be no marketing problem. Moreover, there is a tendency with the States to jump to the band wagon or certain apparently glamorous projects regardless of their growth potential or amenability to local conditions or requirements, availability of human, physical and financial resources.

The unit was set up at Kakrala village which is at a distance of 6 km from Nabha Township. No infrastructure was available and the reason advanced for setting up the unit at Nabha was 'to encourage the growth of ancillary units'. It may not prove to be a sound reason because the benefits that may accrue from a growth in output using industries could have been secured by imports even if the project is not established. Similarly, the input supplying industries could have exported their output.
Moreover, such 'availability effects' presuppose that all that is holding up the expansion of the industries (units) concerned is the availability of demand. Availability effects will be significant only for truly non-tradable goods. As far as tradable goods are concerned, such benefits are in most cases already reflected in the product price and in transport costs.

In the early stages when the unit was to assemble the scooters, parts were supplied from Lucknow, which is located hundreds of miles away from Nabha. The power pack assemblies supplied by SIL were also of the poor quality.

The guidelines or the policy statements on locational decisions emphasise the availability of raw-materials, nearness to markets and sources of supply etc. In the case of present location of this unit, these considerations have been ignored altogether.

It was also emphasised that the unit was located at Nabha to develop the industrially backward area of the State and to provide the employment opportunities to the local population. But no cost benefit analysis seems to have been done in the real terms.
So much so once it was proposed to close down the unit. But thinking that the remedy would be worse than the disease, the company was to amalgamate with Punjab Tractors Limited, Mohali. This proposal was also shelved and numerous schemes of diversification were thought of.

During the year 1978-79 only 19 scooters were manufactured and actually the company was wholeheartedly engaged in the implementation of the diversification scheme for the manufacture of 'Enamelled Hollow-ware', along with the contract work undertaken on behalf of Diesel Locomotives Works, Varanasi and Punjab Tractors Limited, Mohali.

(6) Punjab Tanneries Limited, Jullundur

The fact that the project of this size was started with a paid up capital of Rs 5 lacs only goes to prove the inadequate planning which went into it. In fact, there was absolutely no planning about the project notwithstanding that it was the first project of its kind in the State. No careful thought appears to have been given to the question of the viability of the project, total investment involved, the sources from which the funds were to come, procurement of machines, the quantum and value of production, the product mix, the items of leather to be produced and their marketability etc. It was in the year 1972\(^4\) that on the

\[^4\] A blue print had earlier been drawn up by PSIDC with the help and co-operation of Department of Industries, Punjab and Central Leather Research Institute, Madras.
insistence of Punjab Financial Corporation, a 'Project Report' was got prepared from the National Productivity Council, who by no means were experts in the field and were as such, guided mainly by the actual position of the unit at that time. This point is proved by the fact that no provision had been made for the construction of a cold storage for the storage/preservation of raw-hides or for a proper and bigger finished leather store. The total expenditure on these additional works came to Rs 3.80 lacs.

The machines listed in their report were not adequate for achieving the target capacity and they were not priced correctly. For example, the machines to be imported at a cost of Rs 14 lacs were not provided for in the report, again the equipment and works provided for were short by Rs 8.28 lacs. The major items which were omitted by the MPC and had to be provided were:

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<table>
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<tbody>
<tr>
<td>1</td>
<td>Construction of Toggling Chamber</td>
</tr>
<tr>
<td>2</td>
<td>Provision for sewerage</td>
</tr>
<tr>
<td>3</td>
<td>Conveyor cum drying tunnel</td>
</tr>
<tr>
<td>4</td>
<td>Electric fitting and change of wiring</td>
</tr>
</tbody>
</table>

Similarly the machinery which had already been purchased by the company at a cost of Rs 13.31 lacs was not provided for in the NPC's report.
It is clear from the above that the project was undertaken and actually commissioned without any preliminary project planning. No tie up with the financial institutions was arranged and no schedule of production was worked out.

The purpose for which the project report was got prepared from the NFC, was frustrated when the company had to surrender a loan of Rs 19 lacs in the year 1974 (which was sanctioned in 1972) since the assets could not be mortgaged to the FCC, because these had not been formally transferred to the company by the Government Tanning Institute, Jullundur by then.

It was revealed during the discussions that the company was not satisfied with the project report prepared by NFC because some items were either not considered or sufficient provision was not made for them. Thereby the company prepared a project report itself in 1976. A comparative account of the project reports prepared by the National Productivity Council in 1972 and the company in 1976 is given in Table 2.1.
Table 2.1

Table showing the amount provided in NPC's report and the Company's report (Rs in lacs)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Particulars</th>
<th>As per NPC Report</th>
<th>As per Company Report</th>
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<tbody>
<tr>
<td>1</td>
<td>Land</td>
<td>2.40</td>
<td>2.13</td>
</tr>
<tr>
<td>2</td>
<td>Building (existing as well as new)</td>
<td>6.80</td>
<td>18.08</td>
</tr>
<tr>
<td>3</td>
<td>Machinery</td>
<td>18.60</td>
<td>40.37</td>
</tr>
<tr>
<td>4</td>
<td>Miscellaneous assets</td>
<td>1.20</td>
<td>1.20</td>
</tr>
<tr>
<td>5</td>
<td>Stores and spares (additional)</td>
<td>-</td>
<td>0.40</td>
</tr>
<tr>
<td>6</td>
<td>Preliminary and Pre-operative expenses</td>
<td>-</td>
<td>0.80</td>
</tr>
<tr>
<td>7</td>
<td>Contingencies</td>
<td>-</td>
<td>1.62</td>
</tr>
<tr>
<td>8</td>
<td>Margin money for working capital</td>
<td>9.00</td>
<td>17.50</td>
</tr>
</tbody>
</table>

Total: 38.00 82.10

- 2.00 (Provisional dep. for 1975-76)

Total: 38.00 80.10
Above figures go to show the divergence between the two reports. As already emphasised initially the unit was started with a meagre amount of Rs 5 lacs only.

(7) **Punjab Tractors Limited, Mohali**

Punjab being the most highly mechanised State in the field of agriculture, the Government was very much keen to set-up a tractor project in the State to meet the ever-increasing demand for tractors among farmers. During the Fourth Five-Year Plan, the annual requirement of tractors in the State had been assessed at 25,000 tractors against a national aggregate annual demand of 1,04 lac tractors. Figures available with the Punjab Agro-Industries Corporation Limited and the Agriculture Department, Punjab revealed that nearly 40,000 applications were pending with the distributors in the State for allotment of tractors. Moreover, with 20 per cent tractor population in the country being concentrated in Punjab alone proved beyond doubt the dire necessity of setting up a tractor project in the State with maximum potential for consumption of tractors in future as well.

In spite of this ever-increasing demand, the State of Punjab had been conspicuously lacking in a tractor manufacturing unit. Attempts had been made both to secure
foreign collaboration for manufacturing tractors as well as to persuade other manufacturing units in the country to set up their unit in the State.

At the invitation of the Department of Industries, Punjab, the 'Japan Consulting Institute' undertook a survey to explore the feasibility of setting up a tractor manufacturing plant in the State. After conducting the survey, the JCI submitted a 'Feasibility Study' for the manufacture of 12,000 number of 13 H.P. four-wheel tractors suitable for agricultural purposes in Punjab. The 'Feasibility Report' developed a thesis that an annual production of 12,000 tractors would cover the needs of the area in 10 years. The production of 12,000 tractors in the very first year was too much optimistic. The National Industrial Development Corporation estimated the manufacture of 4,000 tractors in the first year.

The total annual factory cost as developed in JCI report worked out to be ₹ 1388 crores. This figure was assessed at ₹ 183 crores by the NIDC. In the report prepared by the JCI, due allowance had not been given for commission to be given to the selling agents who will actually be engaged in the actual sales.

The profit calculations made by the JCI did not seem to be very much remunerative. Cost of production and
overhead cost was worked out at Rs 10,372 and Rs 1,200 respectively (per tractor). The selling price of Rs 12,000 left a margin of Rs 428 per tractor, i.e., a margin of 3.57 per cent on the selling price.

The grey iron castings which comprised 2/3 of the total cost of raw-materials had been estimated at Rs 5 per kg in the JCI report, which was very high. It was felt that this figure should not have been more than half i.e. Rs 2.50 per kg. The cost of machinery and equipment was also over-stated to a very large extent.

It was felt that the reason for all this was that the conditions and prices prevailing in Japan were in the minds of the team and that is why inflated costs had been assumed in the report.

Realising the fact that 'Japanese Team' did not consider the conditions prevailing in India, the Director of Industries, Punjab, wrote letters to many parties exploring the possibilities for preparing the revised 'Feasibility Report' for this project. National Industrial Development Corporation was also approached for the purpose, but the amount of fee to the tune of Rs 18,000 was not found acceptable.

PSIDC spent two years exploring various alternatives available for manufacturing tractors in Punjab. Various
alternatives considered at one time were:

(a) Bulgarian 14 H.P. tractor;
(b) Japanese tractor 13 H.P.;
(c) Czechoslovakian Zetor tractor;
(d) Swaraj tractor.

Bulgarian tractor was not approved by Tractor Testing Station, BUDNI. Japanese (13 H.P.) tractor had to be given up because of its low horse power and heavy foreign exchange outlay involved. Zetor was reserved by the Government of India for allocation to an existing Central Public Sector Unit. It was found by a technical team that the 'Swaraj' tractor scientifically developed by Central Mechanical Engineering Research Institute, Durgapur, after five years of concentrated research incorporated certain highly favourable features and had created a very favourable response during field trials at Punjab Agriculture University, Ludhiana and in some villages of Ludhiana District. Having successful trials on the soil of Punjab, it was felt that the project should be implemented at the earliest, with the fullest support of Punjab Government. The implementation of the project will honour the Government's promise to farmers of this State and will be a great boon to the development of ancillary engineering industries.

The 'Detailed Project Report' was prepared by
M/s M.M. Suri and Associates, a firm of Indian Consultants. This report ran into three volumes, which covered almost all the aspects of the project.

The R & D Department of the Company made concerted efforts to make the unit a model of prosperity. It had very successfully worked on the development of small low-cost tractor (15-18 H.P.) and a large tractor (45 H.P.) to increase the range of Swaraj products to cater to a wider market spectrum necessary for the prevailing market situation of extreme competitiveness. Further, feasibility studies for the grey iron foundry and Swaraj combines have been developed by the company itself. Both the proposed projects are likely to be launched (successfully) in the near future.

(8) Punjab Wireless Systems Limited, Mohali

The feasibility Report of the unit was prepared by the professional consultants. A 'Detailed Project Report' was also prepared by a firm of 'Chartered Accountants'. Before the unit was set up, a market survey was conducted and the information was collected with the help of a questionnaire. The survey report brought out that there existed a good market for the product.

The setting up of the unit was found feasible because the Home Ministry (Government of India) had estimated
Except Punjab Tractors in no other unit, a project completion report has been prepared. By and large, no technique of capital budgeting has been applied.

The public enterprises are expected to fulfil numerous objectives and goals in an economy in the throes of economic and social development. In view of the problems of conflicting economic and social obligations, it is necessary to have a broad statement of objectives for public enterprises as a whole, and specific objectives and obligations for each public enterprise. The setting-up of clear-cut corporate objectives for each one of these enterprises would go a long way in facilitating the managers to administer the enterprises efficiently towards the realisation of goals. The performance of the enterprise will be evaluated easily by taking a note of both negative and positive deviations. Further, for each enterprise it is necessary to state clearly major commercial and non-commercial objectives it is expected to serve. In the National Convention of Public Enterprises, held on 13th and 14th April 1976 stress was laid on the urgent need for the declaration of national objectives in respect of the role of public enterprises in the national economy and the need to formulate corporate objectives by individual enterprises.

In Indian context, at the Central level the overall objectives of the various public sector enterprises are

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given in Industrial Policy Resolutions and Five Year Plan documents. But at State level, no serious attempt has been made to lay down the specific objectives of individual enterprises.

Public sector industrial projects in the State of Punjab which came into existence after the reorganisation of the erstwhile State are functioning without any specific corporate objectives or goals. Of course, some objectives which are general in nature have been mentioned in the various documents. An attempt has been made in the following pages to analyse the position of State enterprises in this regard.

In the case of Punjab Footwears Limited, the basic objective was to help the scheduled castes and backward classes by providing job avenues. The other objective was to serve the consumers by providing them quality shoes at rates within the reach of a common man.

Punjab Nylom-Transmissions Limited

Because of the rapid industrialisation of the country, the demand for transmission beltings has also arisen and leather nylon-re-inforced beltings were considered much better than the usual conventional belts. Keeping this factor in view the PSIDC agreed to contribute 45 per cent. It became a public sector unit in 1977.
of the equity share capital. And the main purpose of locating the unit at Jullundur was to create a leather complex by setting up a tannery as a base for the supply of leather for footwears, beltings and the sports goods industry located at Jullundur.

Punjab Saltpetre Refinery Limited

The principal object of setting up the unit was the acceleration of the process of industrial development in medium and large scale sectors in Punjab. Before the establishment of this unit traditional methods were being employed and the recovery varied between 60 per cent to 70 per cent. Or the crude saltpetre was sent to Haryana for the purpose of getting it refined.

The company could not start the refining process because the machinery supplied by a Calcutta firm was found to be defective in the trial runs. The company has since diversified its production and switched over to the formulation of pesticides. Other units were cheating the farmers by supplying sub-standard materials.

Punjab Semi-Conductor Devices Limited

The main object for setting up the unit was to cater
to the needs of semi-conductor devices for T.V., telecommunication and instrumentation industry. It was expected that the establishment of the unit will lead to export promotion and import substitution. The development of this industry was considered to be vital and in the overall interest of the national progress, because this industry was making rapid progress as the electronic devices were being widely used in various industries.

Punjab Scooters Limited

The main objectives of Punjab Scooters Limited, were enumerated as:

(a) To manufacture and market 'Vijai-Kesri' 150CC Scooter in accordance with the following schedule of production:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Scooters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>5,000</td>
</tr>
<tr>
<td>1978</td>
<td>16,000</td>
</tr>
<tr>
<td>1979</td>
<td>24,000</td>
</tr>
</tbody>
</table>

(b) To diversify manufacturing activities wherever possible, in the overall interest of the company and to ensure maximum return on capital invested (being in the competitive market, there is no harm in maximising the profits)
(c) To provide a sound industrial base at Nabha and the surrounding areas with a view to create ample employment opportunities for the local population;

(d) To generate wide range of ancillary industries in Punjab especially in and around Nabha area to maintain product of high quality, price advantage and encourage entrepreneurship;

(e) To raise the standard of living of the people of Punjab, by providing them two-wheelers at the competitive prices.

*Punjab Tanneries Limited*

With the partition of the country, Punjab lost her medium chrome tannery at Batapur, Lahore and the World famous sports goods industry at Sialkot and thereby the primary objective of setting up a tannery at Jullundur was to cater to the needs of sports goods manufacturers who came to be concentrated at Jullundur after the partition. The sports goods industry required a large variety of leather for the purpose of manufacturing various sports goods and each of these leathers had to possess different attributes, had to be prepared from different raw-materials and through a different process. Developing
these leathers is a time consuming process and producing the same at prices workable for the company and acceptable to the buyers called for sustained and continuous efforts. That is why no tannery can and has ever produced with any success more than two or three types of leathers. The company was expected to earn foreign exchange by exporting the goods directly as well as through the institutions like STC. The unit also served the purpose of uplifting the scheduled castes by providing them ample opportunities of employment in the tannery.

Punjab Tractors Limited

Punjab Tractors Limited, was the first large scale venture based on wholly indigenous know-how and technology. The tractor field was highly competitive, there being nine other tractor manufacturers in the country, all based on foreign collaboration. Punjab, being an agricultural state was conspicuous by the absence of a tractor unit. To overcome the shortage of tractors, the State Government decided to establish a tractor manufacturing unit based on wholly indigenous design, know-how and technology developed by CMERI, Durgapur a national laboratory.

Through mechanisation, the unit was meant to bring prosperity to the farmers of the State. It was expected
to save a huge amount of foreign exchange and it may be mentioned that the contribution of this unit in import substitution was duly recognised by the Government of India, when 'Swaraj' was awarded the 'National Gold Shield' in 1975. (the country's highest award). The unit was expected to provide job opportunities to quite a good number of people. Moreover, because of 100 per cent indigenous content, ancillary units were likely to come up in the area in a big way.

Punjab Wireless System Limited

Punjab Wireless Systems Limited was incorporated as part of State Government's planned programme to promote allround development of electronics industry in public sector. It was the second unit in the country, next to BEL only, in the field of two-way communication equipment. The product-mix had been so chosen as to meet the ever increasing demands of public safety group and the objective was to provide reliable yet inexpensive equipment to civilian sector which had a very large untapped potential in the country.

From the above analysis, it is evident that no serious attempt has been made to specify the corporate objectives. These units being in the competitive market are expected to earn reasonable amount of profits at least. So there is an urgent need of fixing the financial obligations which
will serve both as an incentive to management and as one of the standards by which success or failure over a period of year may be judged.

Summary

Concentrated efforts to go deep into the position of project planning in the units have revealed that most of the units suffered either because of inadequate or faulty project planning. This lapse proved to be very costly, so much so that in some cases the management was compelled to think whether to close the unit or to diversify. The examples of Punjab Footwears Limited, and Punjab Scooters Limited are most glaring. Regarding the fixation of goals and objectives no serious attempt has been made to specify the goals of individual undertakings. Only general objectives have been given here and there.

Keeping in view the meagre resources at the disposal of the State, only viable units should be brought into existence. In case of industrial undertakings, because of a stiff competition with the private sector, a minor mistake at the initial stage may prove to be very costly affair. To avoid the lapses at the stage of project planning the following measures are suggested:

(a) No project should be approved without the preparation
of a feasibility report. The Government/PSIDC should lay stress on the preparation of pre-feasibility report also.

(b) A 'Detailed Project Report' should follow the feasibility report. For the preparation of such a report the experts from within the country should be engaged. An attempt should be made to find out the experts from Punjab or neighbouring areas because of their familiarity with the local conditions. Foreign experts should be sparingly appointed and the example of Japanese Consulting Institute (in case of Punjab Tractors Limited) should be an eye opener for the State. Net-work techniques like PERT and CPM should be adopted for monitoring the progress of construction.

(c) A project completion report should also be prepared, which may be used in future as a guide.

(d) In case of establishing an industrial undertaking, capital budgeting techniques must be applied. As these units are to compete with private sector and if there is a wrong choice of the project, results can be disastrous.
Specific corporate objectives should be defined as clearly as possible. This is particularly so in case of industrial undertaking because they are expected to earn a reasonable rate of return. This 'reasonable rate' should be clearly stated. Other non-commercial objectives of the unit must also be clearly laid down.