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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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CRITERIA FOR AND EXPERIENCE IN PROJECT EVALUATION

Prepared by: Dr. M. Reza Amin
Deputy Managing Director
Industrial and Mining Development Bank of Iran

for: The Centre for Industrial Development
Department of Economic and Social Affairs
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OUTLINE

INTRODUCTION

PRIORITY CRITERIA IN PROJECT SELECTION

CRITERIA FOR PROJECT EVALUATION

PROMOTIONAL ACTIVITY

Introduction

Before the establishment of Industrial and Mining Development Bank of Iran (IMDBI) financial assistance to private industry was accorded by the various agencies of the Government of Iran. Experience gained through these agencies strengthened the belief of the Government that a private independent organization could more profitably and efficiently undertake this very important part of the whole effort for economic development.

With this belief, the Government encouraged and assisted Lazard Freres & Co. and Chase International Investment Corporation, both of New York City, in creating an industrial development bank in Iran. These two New York investment banking institutions, with the cooperation of an Iranian sponsoring group and with the assistance and guidance of International Bank for Reconstruction and Development (IBRD), established IMDBI in October 1959.

IMDBI was formed according to the general policies of IBRD, a leader in the promotion and creation of such institutions in developing countries, in order to develop, encourage and stimulate private industrial productive, mining and transportation enterprises in Iran. During the past 5½ years, the Bank has been successful in carrying out that heavy task by:

- granting medium and long term loans to and investing in the share capital of industrial enterprises.

- encouraging local and foreign investors in joint ventures.

- rendering technical, accounting and managerial services to its customers.

- preparing feasibility reports for new ventures and launching public owned companies.

- preparing the ground work for mobilization of private financial resources and establishment of a stock exchange.

IMDBI's share capital of $5.3 million is owned 40% by financial and investing institutions in the U.S.A. and Europe, and 60% by over 1,600 Iranian shareholders. At the outset, the Government granted IMDBI a 30 year interest free loan of $8 million with a 15 years grace period. In addition to this generous assistance, the Government transferred to the Bank $18.7 million out of its portfolio of loans for managing and then relending the proceeds. Furthermore, the Bank received two loans of $5.2 million each from IBRD and U.S. AID. Thus, IMDBI started its operation with financial resources amounting to $42.4 million. Since then, the Bank has been able to increase its sources of funds to $74.4 million through further loans from the Government and IBRD.

For the first 4½ years of its operation, IMDBI was under full control and management of the foreign sponsors, inspite of their 40% minority ownership. The Government and Iranian shareholders agreed to this peculiar feature so that in its early years the Bank could obtain for its management the best skills obtainable, and its policies and procedures could be set on the basis of the sound principles practiced in other parts of the world. The transfer to Iranian control was accomplished very smoothly, and now the whole management and staff of the Bank, which consists of 40 professionals in the fields of accounting, financial analysis, engineering, industrial management and economy, is Iranian.

In the period of operations of the Bank from its establishment (October 14, 1959) to March 20, 1965, the total of approvals amounted to $52.1 million comprising 130 loans for $49.1 million and 13 share participations for $3 million. The recipient industries were cotton and woollen textile, rubber products and tires, vegetable oil and sugar, tea and other food processing industries, metal products and electrical appliances, transportation means, cement and other construction materials, wood and paper products, chemicals and chemical products, and mining and quarrying.

Having briefly presented IMDBI's purposes, financial resources, management and scope of activities, the basis on which projects are selected for financial assistance and the methods which are employed in project evaluation will be discussed in the following pages.

Priority Criteria in Project Selection

In selecting an industrial project for financial assistance, IMDBI as a development bank has to consider the project's contribution to the national product and a balanced economic growth of the country in the light of available resources, in other words the national economic profitability of the project. But, to classify projects on the basis of their contribution to the national product, although an appropriate concept, is extremely difficult, particularly in the less developed countries. These countries are, in general, characterized by lack of adequate and reliable data without which a systematic approach on the basis of national economic profitability cannot be adequately applied. In many instances, common sense has to replace the required data or prevail over the available information.

The relative desirability of an industrial project, on the basis of national economic profitability is assessed in Bank by reference to the following guide lines.

1. Capital Requirement Per Net Output:

This is the rate of return to the whole economy based on the ratio of net output to total input, but adjusted for time and to real terms. Net output is the residue after deducting the value of raw materials, fuel and depreciation allowance from gross output, which is in fact the value added. For the best use of capital, it is important that the added value to the material on conversion is maximum. Therefore, one of the Bank's guide lines is the rate of capital to net output and projects with low capital requirement per value added are preferred. In this respect, time should be considered. Consideration should also be given to adjusting the rate of returns to real terms, since often benefits of a project are exaggerated by charging high prices to consumers.

2. Resource Utilization:

In bringing about a balanced economic growth, various sectors of the economy should be induced to expand relatively. Greater utilization of domesticly produced raw materials would benefit the national economy not only by foreign exchange savings, but also by inducing further development of agricultural and mining sectors of the economy and by further expansion of the market for industrial products. Therefore, industries that utilize domesticly produced raw materials are given priority. In this respect, IMDBI has assisted several tea, cotton processing, sugar and textile enterprises.

3. Labour-Intensiveness:

Since in the developing countries capital is scarce and labour is abundant and since it is desirable to provide more employment, the labour intensive enterprises are usually preferred. The fact that a large portion of unskilled labourers are virtually non-productive in agricultural fields, but when transferred to industrial activities they become productive, should be considered in labour-cost estimates. We are, of course, aware that this labour intensiveness is a function of the type of product and should not be confused with labour intensiveness caused by lack of mechanization and poor labour utilization.

In respect to labour-intensiveness, therefore, projects with high ratio of wages to gross output and lower capital requirement per person employed are given priority. At the same time, skilled labour and managerial talent are also scarce factors that require consideration. Hence, the ratios of skilled to unskilled and salaried [illegible] wage earners are considered in selecting a project. In certain [illegible] projects that contribute to formation of new skills are [illegible]

4. <u>Regional and Local Development:</u>

To achieve a rapid and balanced growth, all regions of the country should be developed relatively. In Iran, income varies widely between different regions and between urban and rural areas. Although not very successful, IMDBI has tried to encourage industrial establishments in the less developed regions of the country. The reason for partial failure of this policy has been the lack of overhead facilities such as electricity, water, cheap transportation to markets, and also availability of skilled labour in the less developed regions.

5. <u>Foreign Exchange Savings:</u>

Even though high oil revenues contribute greatly to Iran foreign exchange earnings, the deficit in balance of payment is a constant threat to the economy. Hence, one factor for selecting a project is its foreign exchange savings. In estimating foreign exchange savings, the following factors are considered:

a. Foreign exchange required for capital and current outlay of the enterprise,

b. The possibility of import replacement by the production of the new enterprise, and

c. Export possibility of new product.

6. <u>Contribution of the Enterprise to the Development of an Industrial Complex</u>:

The "base" or the "key" industries are essential to the development of an industrial complex. But, some of these "base" industries are beyond the scope of private enterprise and hence the Bank. In respect to these projects, the Government should and at present is taking definite measures. Outside these "base" industries, other industrial projects also contribute to the development of an industrial complex, but with varying degrees. Priority is given to projects that contribute more to cumulative growth of the industrial sector.

<u>Criteria for Project Evaluation</u>

In developing countries, due to inadequacy of statistical data, insufficient engineering and technical knowledge, and the lack of proper accounting systems, evaluation of industrial projects is a very difficult task. IMDBI, like many development banks in other countries, was faced with these problems from the beginning. But, during the past 5½ years, through application of various techniques, IMDBI has developed adequate methods and systems for project evaluation. Furthermore, since the

Bank's staff has gained experience in processing loan and investment applications, and since through the efforts of IMDBI and due to industrial development of the country, the applicants have become more sophisticated, some of the initial problems are solved.

The projects which are submitted to the Bank for financial assistance and the projects which are to be launched by the Bank, are subject to a thorough study and analysis by the Bank's Economic, Technical and Loans Departments. The professional officers of these departments examine all aspects of each and every project. Then, in close cooperation with one another, they report to the management of the Bank their findings and recommendations. Although certain procedures and systems have been developed for project evaluation, the Bank's expertise are not restricted to those methods and have the liberty to use their initiatives in introducing new ideas and approaches when examining a project. This policy has resulted in improvement of the quality of work and has contributed to the establishment of better and sounder procedures.

Since IMDBI's role in the promotion of industrial projects will be discussed later, we will limit our discussion here to those projects which require medium or long term loans. Often, such projects not only lack a comprehensive feasibility report, but they are also incomplete. In these cases, IMDBI prepares the techno-economical feasibility report and helps the applicant in completing the project.

Since IMDBI's assistance is limited to private enterprises, only those projects which, in addition to contributing to the national economy, could become viable, are considered for financial assistance. The criteria which determine the viability of projects and the methods employed in our evaluation are presented below:-

1. Marketability

The most vital questions which every industry faces are: is there or will there be a market for the product and if so, how big and what is its rate of growth? Unfortunately, many unsuccessful industries have been established without prior study of answers to these questions. In order to avoid such errors and prevent a poor investment in a country where capital is scarce, IMDBI's Economic Department studies the market prospects of the proposed product at an early stage of project evaluation.

In conducting a market survey, our economists collect, analyse, and evaluate the following data concerning a particular product:

- The import statistics
- CIF price of the article, custom duties, taxes and handling charges.
- Existing and/or planned volume of domestic production.
- The market price and its possible changes.
- Distribution facilities
- Effects of the Government's development plans on the consumption of the product.

- Possible increase in demand or development of a new market as a result of rural habitants education and improved standards of living.

The import statistics often do not reflect the true consumption of a commodity, for the goods imported in one year may be consumed in several years, or due to some particular Government projects, consumption of certain commodities may be exceptionally high during one or more years.

Since the available data are often inadequate, a door to door market survey has to be carried out. These data are collected by interviewing numerous importers, manufacturers, wholesalers, distributors and large consumers.

The Bank's Economic Department having carried out a market survey for a particular commodity, up-dates its data from time to time. Often a market report on one commodity is helpful in market analysis of another product. As an example, we were recently asked to finance a glass wool project. The import statistics indicated very small consumption of that product. But further study revealed that with the development of light metal industry for manufacturing refrigerators, hot water heaters and cooking stoves, glass wool will have a sizeable market.

When the marketability of a product is established, the following question arises: could the proposed industrial enterprise produce this product at a reasonable cost? To answer this question, the project should be evaluated technically and financially, but the first step is to make a comprehensive study covering the availability of suitable raw materials at reasonable prices. For domestically produced raw materials, the following points should be established: sufficient quantity, adequate quality and possibility of delivery to the site at an economic price. In cases where raw material requirements of a project are to be imported partially or totally, a careful study of the international market as to availability and CIF prices of the materials should be made. Furthermore, possible fluctuations in supply and price and the Government's tariff policy should be considered. Such studies are often carried out superficially by our applicants and in some cases, they are completely lacking. Our Economic and Technical Departments help the applicant in preparing such studies, and in cases where our staff is not qualified to do so, the applicant is assisted in finding competent experts to make the study.

Our economists recommend a project for financial assistance when:

- they are assured of an existing or potential market.
- the availability of raw materials is established.
- production costs as calculated by our Technical and Loans Departments justify sales prices which should compare favorably with the prices of similar and/or locally produced products.

2. Technical Feasibility

As mentioned before, the projects which are presented to us are often incomplete. On the other hand, some projects which may be considered complete, are technically unsound due to poor choice of site, layout, design and machinery.

In evaluating the submitted project, our engineers and technicians study all technical aspects of the projects. Their knowledge and experience qualify them in evaluating most of the projects, but in cases where our own staff is not qualified, we are assisted by Iranian and/or foreign experts. Only those projects which are proven as technically feasible are considered for financial assistance.

The selected site is examined, taking the following points into consideration: access to materials and market, geological condition of the soil, vulnerability to earthquake and flood, availability of water, fuel, power and labor, access roads and means of communication, expansion of the nearby city, and sufficiency of land for future plant expansion. The applicant is requested to supply information regarding these points and in some cases, he is assisted by our engineers in preparing adequate data.

The plant layout and construction designs are examined by our engineers. We have found that sometimes designs which have proven satisfactory in other countries are inadequate in Iran. In that respect, our engineers, taking into account factors such as labour capabilities and habits and available construction materials and equipment, recommend alterations in plant-layout and construction design. Since in some of the submitted projects building costs are under-estimated and since in some cost estimates such items as water and sewage systems are neglected, a careful estimate of construction costs based on IMDBI's experience in its other industrial projects is prepared. When the project is realized, the actual and estimated costs are compared. These comparative analysis help IMDBI engineers in making better estimates for subsequent projects.

Since the type, size and cost of machinery and equipment, the processing method, and the scale of the plant will contribute to the success or failure of a project, IMDBI insists on a thorough study of these points when the applicant is choosing his machinery. In that respect, our Technical Department must be assured that:

- The proposed machinery and equipment are complete and balanced, and that their costs are reasonable.
- The climatic conditions and the geographic location of the plant are taken into consideration.
- The plant is capable of producing the estimated quantities.
- The product's quality meets prescribed specifications and that quality control means are provided.
- Estimates of raw materials, water, power and fuel consumptions are realistic.
- Utilities are provided.
- The plant scale is justified by available raw material and/or market demand for the finished product.

- Adequate supply of spare parts and maintenance equipment are provided.

- The process is not obsolete and that it is suitable for the country.

- Plant erection and installation of equipment are carried out by competent personnel.

In order to satisfy themselves regarding the above points, our engineers study the industry in question by reading the available literature, visiting similar plants, consulting experienced institutions such as IBRD and IFC, and holding numerous discussions with the applicant, his consultant and machinery suppliers. To get a fair estimate of the machinery cost, the applicant is often requested to present competitive bids from various equipment suppliers. In industries which the Bank has experience, our engineers often help the prospective borrower in preparing machinery and equipment specifications.

Being satisfied with the technical aspects of the project, our engineers prepare estimates of construction and erection period, annual production, capital and production costs and working capital requirements. These calculations form the basis for estimating the financial requirements of the project.

3. <u>Financial Soundness</u>

A survey of the industrial projects which were financed by the Government prior to the establishment of IMDBI revealed that some projects which were technically sound and their products were salable, failed due to poor financial structure. In some cases, the owners funds amounted to about 30% of the cost of fixed assets and the working capital was omitted from capital cost estimates. With such a poor debt-equity ratio, the enterprise was in trouble even before the start of operation.

In its efforts to develop healthy private industrial enterprises, IMDBI has insisted on sound financial structures. Today, out of its portfolio of 130 loans, only one loan is in serious trouble due to poor management. Also, a few borrowers have had difficulties due to the recession years (1961-1963), but the rest are profitable going concerns. Since the Bank's lending policy is not restricted to a rigid frame-work, each project is evaluated on its own merits. However, all projects should meet the following general financial requirements:

a. The estimate of the total capital cost of the project is realistic and conservative.

b. The working capital requirements, calculated on the basis of a reasonable flow of materials, are included in the total investment estimates.

c. The project's financial requirements, other than the requested loan, are secured.

d. The project's debt-equity ratio is sound.

e. The estimated earnings and available cash will be such that the project's debts could be serviced comfortably.

f. The expected returns on total investment and the estimated earning on share capital justify the investment.

To evaluate the project's ability in meeting the above requirements, IMDBI Loan officers prepare forecasts of the enterprise's profit and loss, balance sheet and cash flow over the future years. These forecasts are based on the techno-economical feasibility report and take into account such items as financing costs during construction, erection and operation, starting up costs, all operating costs, depreciation, taxes, variations in raw materials and sales prices, possible increase in wages and salaries, and increase or decrease in debtors, creditors and inventories. When the project's soundness is established, the amount and the duration of the loan are determined in such a way that the enterprise will be able to service the loan satisfactorily. The projects which have been so far financed by IMDBI have debt-equity ratios of 60-50 / 40-50 and the loan durations range from 3 to 10 years.

From time to time, IMDBI is presented with projects which are techno-economically feasible, but the sponsors' equity capital is less than the equity warranted by a sound financial structure. In these cases, the Bank invests in the share capital of the industrial enterprise from its own funds and/or from the Government funds at its disposal. By doing so, in addition to implementing worthwhile projects, the Bank builds up a portfolio of shares. These shares could be utilized later in providing some useful trading papers to the stock market which the Bank in cooperation with other banks and the Government, is trying to establish.

4. <u>Competent Management</u>

Poor management could cause failure of projects which are economically, technically and financially sound. There are plenty of examples in Iran and other developing countries. Since some of today's entrepreneurs are the merchants and traders of the past, and since they are not familiar with the art and science of management, they try to run an industrial enterprise in the same manner that they conduct their trading business. Proper accounting reporting, means of production and inventory controls, and knowledge of distribution and marketing are missing in their enterprises. However, inspite of these deficiencies, some industries continue to operate for some time due to a high profit margin which is created by exceptional Government protection and/or a captive market. But even with such protections, poorly managed industries cannot stand economic tides over the years and fail eventually. The recession years of 1961-1963 in Iran proved this point and alerted many investors to the role of good management.

In order to ensure the success of a project, IMDBI puts special emphasis on the question of management in its project evaluation. To that end, the character and reputation of entrepreneurs and their managerial abilities are studied. In cases where the competence of the owners in management is questionable, IMDBI guides and helps its borrowers in establishing good management. In new and complicated industries where experience and know-how is essential, the Bank in cooperation with the project sponsors, tries to interest foreign manufacturers of the same products in investing in the share capital of the enterprise and managing the industrial company for the first years of operation. IMDBI's experience in such joint ventures has been satisfactory.

After the conclusion of the loan contract, the Bank continues its interest in the project by following up the project's implementation. Since most of our borrowers are not yet in a position to prepare comprehensive financial and technical reports, from time to time our engineers and financial analysts inspect the industrial companies. These inspections have many advantages among which are: one, the borrower, faced with the Bank's requirements, tries to improve his reporting and accounting systems, two, the Bank's officers in comparing their estimates versus actualities, gain valuable experience in project evaluation, and three, the Bank having regular progress reports on the project, will be in a position to anticipate and solve in time possible difficulties which otherwise may cause the failure of the project.

During the first years of our operation, IMDBI's requirements for and procedures in project evaluation seemed unnecessary, tedious, and time consuming to many of our prospective borrowers. But since a great majority of the projects which have been financed by the Bank are profitable going concerns, today most of the applicants have a better understanding of our methods and try to meet the standards which are set by the Bank.

Promotional Activities

Most of the existing Iranian industries are owned by individuals and/or small groups of their friends and relatives. These investors due to their limited financial resources which are already exhausted, cannot cope with the desirable industrial growth of the country. Furthermore, since they insist on majority shareholding and control of the industries in which they invest, small investors from the medium income bracket are not willing to purchase shares in such companies where their rights as minority shareholders cannot be defended. Therefore, in order to mobilize the financial resources of the country for an accelerated rate of industrial growth, IMDBI has decided to promote and launch joint stock companies in which the general public can invest. For this purpose, the Bank has adopted the following promotional policies:

a. IMDBI should identify a number of high priority industrial projects and make every effort to study the economic, technical and financial feasibilities by its own staff or with the help of experienced and reputable consultants or manufacturers in industrialized countries, in other words, prepare the projects for implementation.

b. To finance the projects, IMDBI would secure the share capital out of its own or Government resources at its disposal, find and interest other institutional investors in Iran or abroad in investing, find foreign industrial partners in some cases, and, finally, invite the general public to buy shares in such ventures.

The loan capital required for the project would come out of resources at the disposal of IMDBI in association with other banks in Iran or abroad or by suppliers credit where the needed loans are greater than IMDBI would want to finance.

c. IMDBI and the institutional investors such as pension funds or charitable foundations etc. would hold together, for a number of years, a controlling share ownership in the company formed to carry out the project. By this device, IMDBI hopes to safeguard the interest of the small shareholder until such time as the company is a going concern and well established.

d. IMDBI would not directly manage the project but would find, with the approval of other investors, proper management for it and, through its participation in the Board of the Company, would take part in policy making and keeping the operations of the company under review.

e. In every case, companies would be audited by independent professional auditors appointed by the shareholders.

In carrying out the above policies, IMDBI is aware of the pitfalls of getting too much involved in these projects. It is aware of the unrewarding investment of its administrative resources. It is also aware of too close an identification of its own name with projects which, in case of failure, would heavily affect its public image. For these reasons IMDBI hopes that it can limit the number of projects it will undertake to carry out in this fashion, and it hopes that other institutional investors, especially newer investment corporations such as the Oil Consortium Investment Corporation, will rise and take a larger share of the burden. IMDBI also hopes that over the years, with the creation and growth of institutions such as stock exchange and auditing professional bodies, and with the reforms of tax and company laws, and with the advancement of better business and legal standards and practices and with a more enlightened public opinion in this field, the small shareholder will find better protection and the bank can follow more normal investment and promotional policies. Meanwhile, the Bank takes its responsibilities very seriously in these promotional cases, in the choice of the projects, in its painstaking preparation, and in the selection of partners and technical and managerial set up for them.

IMDBI has recently launched a public company for implementation of a sugar beet plant in the city of Neishabour, located at about 760 km. north-east of Tehran. The share capital of that company is owned by the Bank (its own funds and Government funds at its disposal), National Iranian Oil Company Pension Funds, and over 1120 investors. The company's affairs are conducted by a competent management which is responsible to a board of directors, consisting of representatives of all shareholders. Under this set-up, the project's implementation has started on a sound basis and there is every hope for the success of the company.

The Bank has already prepared the ground work for launching two more industrial companies for glass and paper manufacturing. These companies will be formed in cooperation with experienced foreign partners who will be entrusted with the management during the first years of operation. In view of our experience with the Neishabour Sugar Project and the public confidence in IMDBI, we anticipate an enthusiastic and affirmative respond from the general public when the shares are offered for sale.

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