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SOME EXPERIENCES OF INTERNATIONAL FINANCE CORPORATION IN INDUSTRIAL PROJECT APPRAISAL

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The development of industrial enterprise in the underdeveloped countries offers complex problems. The difficulties experienced stem from a diversity of factors, including the shortage of local capital, the lack of an entrepreneurial class with experience in industry and the gap in the technological environment that exists between the developed and the developing countries. Low purchasing power and the often inadequate size of domestic markets also serve to inhibit the process of industrial growth and risk-taking in many of the developing countries.

It was to help meet some of these problems that the International Finance Corporation (IFC) was established in 1956 as an affiliate of the World Bank. IFC supplements the activities of the World Bank and the Bank's other affiliate, the International Development Association (IDA), by providing loan and equity capital to private productive enterprises in the less developed of its member countries, without government guarantee. Some 79 countries are now members of IFC and have subscribed its share capital of nearly $100 million. Since the Corporation was established, it has made commitments of more than $137 million in 32 countries of Asia, Africa, the Middle East, Europe and Latin America. The majority of enterprises which IFC has helped to finance are in the field of manufacturing industry: iron and steel, heavy engineering, pulp and paper, construction materials, chemicals, textiles, electrical goods and others. In addition, IFC has invested in processing industries -- such as flour milling, sugar refining and leather tanning -- and in service industries, such as aero engine overhaul and warehousing.

In performing its operations, IFC has three main objectives. It helps to finance sound projects of high economic priority, it attempts to stimulate the international flow of private capital into productive enterprises in the developing countries and it endeavors to promote the development of local capital markets.

Over a period of years, it has been the experience of IFC, as well as of the World Bank and IDA, that the chief obstacle to a higher rate of investment in industry in the developing countries is the shortage of soundly conceived and adequately prepared projects. In the words of Mr. George D. Woods, President of the World Bank and its affiliates, to the UN Economic and Social Council in March 1965: "Neither general programs nor even generous supplies of capital will accomplish much until the right technology, competent management, and manpower with the proper blend of skills are brought together and focused effectively on well-conceived projects. Projects are not only focal points, they are growing points, not only for the goods and services they contribute to the economy but for the new skills and the new attitudes which they engender both among the people carrying them out and those who benefit from their effects."

It is for this reason that the identification of opportunities for investment and the appraisal and preparation of specific projects occupy a key position in IFC's operations. IFC's appraisals are generally concerned with requests for financing projects to expand or diversify existing enterprises or to establish new ones. The Corporation does not take part in direct financing of either imports or exports or in operations whose prime purpose is refunding or refinancing. IFC's investments are made in association with private investors and management, and the Corporation does not assume management responsibilities nor does it normally exercise the voting rights of stock it holds. These factors help to explain the priority attached by IFC to its pre-investment studies.

In addition to direct investments, IFC provides technical and financial assistance to local development finance companies. Institutions of this kind are a useful means of assisting medium-sized industries, acting as a channel for both domestic and foreign private capital, underwriting issues of securities by local privately owned enterprises, identifying new opportunities for investment and assisting in the promotion of new companies. Since 1962, IFC has been responsible for appraising and supervising development finance company projects on behalf of the World Bank group. In this respect, it has been required to assist in fostering new institutions, helping existing ones and appraising requests for financial assistance from the, whether directed to IFC, the World Bank or IDA. The appraisal of development finance company projects rests on a number of criteria: including the ability of such institutions to fill some of the gaps existing at present in the capital markets of most developing countries; their economic viability in terms of the potential volume of business available to them, and their capacity to operate on a sufficiently profitable basis to attract private investors.

IFC makes standby and underwriting commitments in support of offerings of corporate securities, as a means of helping to develop local capital markets. It also seeks the participation of investors in the capital exporting countries in its own investments, in order to stimulate the flow of private capital to the developing countries. These participations are made either at the time of the original IFC commitment or subsequently by the sale of more seasoned securities from its portfolio. Up to the end of June 1965, the Corporation had sold or agreed to sell a substantial part of both its loan and equity investments to financial institutions domiciled in most of the countries of Western Europe, as well as in the United States, Japan and the Middle East. Among the institutions which have actively participated in IFC investments is the Kuwait Investment Company, which has acquired portions of investments made by the Corporation in Finland, Greece, Mexico, Nigeria, Spain, the Sudan, Tunisia, Uganda and Venezuela.

Careful and detailed appraisal of investment proposals is of particular importance to IFC in view of the multiple interests involved. As an international investment institution, IFC must consider the interests of the member countries which have subscribed its capital, as well as of both institutional and individual investors, whose decision to participate in an investment may be influenced by IFC's presence. In making an investment, the Corporation also must evaluate the economic priority of a project to the host country in question.

The IFC appraisal of an investment proposal may initially take the form of a basic feasibility study, moving through stages into a detailed review of the proposal, from both technical and financial viewpoints, in order to see if it can be strengthened and made to contribute more to the economy of the country. In IFC's view, there are several criteria that need to be met before a project can be regarded as suitable for an investment. Firstly, IFC must be satisfied that an adequate market exists for the company's product or products. Secondly, the Corporation must be able to determine the soundness of the technical concept of the project. There must, thirdly, be evidence of the capability and experience of management. Fourthly, IFC requires that the financial plan for a project should be realistic and the financial structure of the sponsoring company sufficiently strong.

Fifthly, it wants to be able to establish the prospects of profitable operation. Appraisal along these lines makes it possible to reduce both the risks and the margin for error in financing industrial projects.

Basic to the other questions is the need to establish what kind of market exists for the product or products in question. This can only be answered by evaluating trends in the economy of the country concerned, including a statistical analysis of production, imports and exports, and by supplementing this with an evaluation of parallels from the more developed countries, in terms of the pattern of consumption or the performance of competitive products. The assessment must establish what demand presently exists and how quickly it may be expected to grow; how the demand can best be met and how many alternative products exist; which is the best alternative given the economic circumstances of a particular country; and finally, what kind of risks would be run if the prediction of demand is in error.

This consideration leads naturally into a review of the soundness of the project in its technical conception. Only when the size of the potential market has been established -- as well as the degree of competition to be expected -- is it possible to decide whether a project is feasible. Factors that must be considered are those entering into production costs: including the availability of raw materials of suitable quality; transportation, utility and other costs; and the suitability of the plant location. Questions concerning the manufacturing process to be used also need to be answered, particularly if there are alternative processes available.

The failure to give due weight to these factors may jeopardize the whole success of an enterprise, particularly where it involves the introduction of a new product or a new process. One example of insufficient attention to these questions occurred, in IFC's experience, in a company set up to introduce a new, inexpensive and lightweight building material -- which had been successfully produced and marketed in Europe -- to a tropical country. The sponsors of the project felt that an adequate market for the new material existed in the field of low-cost housing: a factor that also appeared to confer some degree of economic priority on the project.

However, the new plant ran almost immediately into production problems because of the unsuitability of locally available raw materials. The company found it difficult to keep up production levels, with the result that costs rose to the point where the new material proved more expensive than ordinary brick or concrete block. To add to existing problems, the supply of what had previously been regarded as a waste material by the management of the company dried up when it became clear there was a steady factory demand for it: the result being that the company also had to pay higher prices than it had anticipated for its major raw material. Owing to these and other errors of judgment, the company never succeeded in establishing itself or its product.

In cases where companies experience technical difficulties, the trouble often stems from the fact that the local sponsors have neglected to secure the assistance of an experienced technical partner in formulating and planning the project, providing the designs and supervising the construction and initial operation of the plant. Where new or advanced technology is involved in a project -- for instance in the manufacture of special steels, ball bearings and other engineering products -- a large part of the success of the project is likely to depend on the role of a competent technical partner. Many of the projects which IFC has helped to finance are in fact based on partnerships of this kind. In one Asian country, for instance, IFC is an investor in a new alloy steel producer being established by local interests in conjunction with a leading French steel maker. On other occasions, European, U.S. and Japanese companies have either acted as technical collaborators, licensors or consultants in projects financed by IFC. For example, IFC is a shareholder in a Latin American company producing heavy construction equipment either under license from or with the technical assistance of French, Swedish and U.S. companies. A less usual form of participation is represented by the role of a Dutch company in providing management services to an African sugar producing and refining company in which IFC has invested.

In IFC's experience, the most effective form of partnership is one in which the local sponsor and the foreign technical partner are directly identified with the fortunes of a project through participation in the share capital of the enterprise in question. One example of this is a new company in which IFC has invested, which is constructing a modern forge plant — the first of its kind in the particular country — to make a wide range of forgings at present being imported. In this case, the local sponsors obtained the participation of an experienced European steel producer at an early stage of the project, to provide the technology required. The foreign partner is supplying the machinery and equipment, providing supervision of the construction and start-up of the plant, training local staff to assist in running the operation and is, in addition, a substantial investor in the project. In an arrangement of this kind, the local and the foreign interests clearly have a long-run stake in making the new enterprise a success and both stand to lose if it does not succeed.

Since IFC financing is not tied to the purchase of specific equipment or to any particular country, the Corporation is in a position to take an objective view of the machinery and equipment as well as the other facilities needed for implementing a project. This process of appraisal requires an evaluation of the various engineering features of the project: for example, the adequacy of the foundations and buildings, the extent to which the machinery being considered will meet the real needs of the project and other technical features. While new equipment has been purchased for the majority of projects IFC has helped to finance, the possibility of making economies by using reconditioned equipment has occurred in the case of two projects, involving the expansion of a company making paperboard containers in an Asian country and the establishment of a new cotton textile mill in an African country. In both cases, IFC was able to satisfy itself, after a detailed appraisal, that the reconditioned equipment would enable the companies to make substantial economies without incurring the penalty of technical obsolescence.

While the purchase of machinery is in most cases undertaken on the basis of comparative "shopping", there are occasions when a project may be carried out on a turn-key basis, with one prime contractor agreeing to purchase or supply all of the machinery and equipment and to hand over the completed project to the customer.

In order to protect the customer's interest in such cases, it may be desirable to engage an independent consultant to review the equipment list and prices, to evaluate the role of the equipment supplier in the venture and to supervise the guarantee and performance test runs of the new plant when it is completed and ready for operation.

Only when the soundness of the technical concept of a project has been established is it possible to work out a realistic financial plan and to make some judgment about the strength of the capital structure of an enterprise. Failure to work out a proper financial plan may often result in the failure of an otherwise sound project. This may result from a variety of causes, among the most common being under-capitalization and insufficient equity capital to sustain extra short-term borrowing that may be necessary to meet various contingencies. These financial problems often are experienced at an early stage in the history of an enterprise, at a time when it is most vulnerable. One of the general problems encountered in financing industry in the developing countries is the failure to provide for contingencies such as overruns on the costs of completing a project, resulting from delays in construction, decisions to revise the character and scope of a project already in progress or from the escalation of imported equipment costs. To meet this sort of situation, IFC normally makes specific provision in its investment agreements for supplemental financing to cover overruns, in the form of standby commitments on its own part and the part of other investors in a project. Not all of these contingencies can be foreseen at the time of the initial investment agreement. Recently, in reviewing the progress made by a leading pulp and paper company in carrying out an expansion program for which IFC among others provided funds, IFC discovered that the company was experiencing an unexpectedly heavy overrun. When the situation was analyzed, it was discovered that the overrun was due partly to delays in construction (resulting from shortages of skilled labor, among other factors) and partly because of escalation in the cost of imported equipment. The escalation had occurred because the management had decided, after starting the project, to change the company's technical consultants and had asked the new consultants to guarantee higher performance for the new plant being installed. The consultants had in turn recommended the purchase of additional machinery as the only means of ensuring the performance demanded, resulting in an important change in the size and scope of the project.

Other financial problems frequently occur when an enterprise, perhaps through over-optimistic profit estimates, has too high a proportion of short-term debt and finds that it cannot generate cash quickly enough to service the debt. In such instances, companies tend to run down their working capital, often creating additional problems as a result. The provision of permanent working capital is an indispensable part of project financing, and IFC has where necessary recognized this in its investment agreements, by specifying that the purpose of the financing is to provide working capital as well as to allow for the acquisition of fixed assets.

In analyzing the causes of success or failure in industrial enterprises in developing countries, management can perhaps be singled out as the major determining factor. Management, used in this sense, means corporate responsibility at the decision-making levels, involving not only administration but also financial and accounting controls. The strength of management becomes evident in the ability to undertake advance planning of a project, to recognize problems as they arise and take action on them, to establish harmonious working relations with foreign equipment suppliers or industrial partners and with local government authorities. It is revealed, as well, in the ability to look beyond production problems to the need for adequate sales and distribution systems for a company's products.

The need for management in depth has been apparent in many of the projects examined by IFC, where it has been possible to report favorably on the technical management while drawing attention to inadequate financial control. In such situations, management is generally unable to determine the source and application of funds, analyze production costs, maintain proper inventory controls and the like. For this reason, IFC emphasizes the need for effective accounting control systems in the enterprises in which it invests and also requires regular audited reports after investments have been made.

Experienced and competent management is essential not only to the establishment of new enterprises but also to enterprises in the process of expansion, whether in the same or in new lines of business. On occasions, even a past record of successful management is insufficient evidence of ability to meet new challenges. This is often a problem faced by managements that have been successful in running small enterprises but find they cannot control larger, more diversified operations. One case of which IFC has experience concerns a small company which had been successful in making and marketing a single line of home furnishings. Subsequently, the company in question decided to expand into a larger plant and to diversify into new lines, in which it was initially successful. Encouraged by its success, the company decided to attempt to manufacture a more sophisticated product and made a substantial investment in new equipment, only to run into problems of quality control. In the face of a product that proved unsaleable, and for which heavy short-term financing had been incurred, the company's working capital position deteriorated to the point where it could no longer service its debt and where a phased liquidation of its assets was the only solution.

An important factor in project appraisal is the competitiveness and potential profitability of a project or enterprise. While profitability can be measured directly in terms of the return on invested capital, the dividend yield to shareholders and the capacity for servicing debt, the conditions determining profitability also need to be analyzed. Much depends on how the margin between production costs and sales prices is determined. In the case of a project geared primarily to export markets, the key factor is the competitiveness of the pricing of its product or products in world markets. In the case of a project established primarily to satisfy the domestic market, the relationship between the company's prices and world market prices has to be established in a different context. If selling prices are high in relation to world market prices, the appraisal must consider how far the company will depend on direct import restrictions or on tariff protection in order to be profitable. A project appraisal must therefore consider how the company may be affected by changes in government policies and examine the level of protection necessary in order for the enterprise to sell its products profitably. This in turn raises basic questions regarding the justification for a project in terms of the benefits to the economy of the country in question. Such issues involve judgments on whether fostering a relatively high-cost producer is the best way of making use of scarce resources and whether benefits such as the creation of employment and of added worker skills outweigh the disadvantages of protection.

As an investment institution, IFC's main role in promoting the establishment or expansion of industry in the developing countries has been concerned with specific projects. In work of this kind, IFC has often been required to take the lead in reshaping a project in order to enhance its economic viability and profitability. In some cases, the purpose of the review has been to attempt to reduce the size and scope of a project in order to fit it to the resources available for financing. More generally, however, appraisal work has been directed to the problem of whether a project fits the minimum economic size to be viable; and it has not infrequently been found desirable to expand the size and scope of the project and to find additional capital resources. An example of IFC's working methods in this respect is provided by a North African fertilizer company in which the Corporation has invested. The company was originally established, under the sponsorship of a leading European fertilizer producer, to construct a plant to manufacture triple superphosphate fertilizer from local rock phosphate. The European sponsor found that it was not in a position to commit all of the funds required to complete the plant and turned to IFC for assistance.

IFC conducted its own appraisal of the project, starting from the premise that the entire output of the plant was intended for export. The appraisal therefore placed particular emphasis on the marketing arrangements and on the competitiveness and profitability of the company's operations at world market prices. Attention to the marketing arrangements was particularly important in the light of substantial expansion plans on the part of other fertilizer producers and the difficulty of predicting demand in the low income countries of Africa, Asia and South America which were considered to be the logical market for the company's output. In order to strengthen the marketing arrangements, the sponsor of the

IFC's activities in appraising industrial projects in developing countries are now expanding. The Corporation earlier this year acquired the responsibility of acting on behalf of the entire World Bank group in the technical and financial appraisal, preparation and supervision of industrial and mining projects. Its role in this respect is comparable with its existing responsibilities on behalf of the group in the field of development finance company projects. This administrative move is intended to enhance the effectiveness of the World Bank group in financing industrial development: an area in which the group has so far provided capital resources totaling more than $1,700 million.

The role of IFC in project appraisal is also likely to grow in view of the proposed expansion of the Corporation's financial resources, which will make it possible for IFC to step up the level of its investment activities. The necessary steps have now nearly been completed to make effective a proposal for increasing IFC's resources by about $400 million, by permitting the Corporation to borrow from the World Bank. When the proposal takes effect, it is likely to affect IFC's operations in a number of ways. Among other things, it would free the entire present capital of the Corporation for making equity investments. It would also enable IFC to participate in larger, more capital-intensive projects and make more substantial loan and equity commitments to individual enterprises. In these ways, IFC can expect to become a more significant factor in financing the needs of private industrial enterprises in its member countries and more versatile in the types of financing it can provide. Together with the expansion of IFC's technical assistance activities, this development could be expected to help stimulate the increased flow of suitable projects on which a higher rate of industrial investment in the developing countries depends.

project agreed to enter into a long-term contract to purchase part of the output of the new plant for sale in Europe.

The IFC appraisal also recommended modifications on the technical side of the project. In particular, the appraisal established that there would be a definite cost advantage to the company in producing its own sulphuric acid, using imported sulphur, instead of purchasing sulphuric acid from abroad. This recommendation, which was also accepted by the sponsor, meant the introduction of a new technical feature and a substantial increase in the capital cost of the venture. To meet this situation, the project was brought to the attention of a leading U.S. sulphur producer which agreed to provide the additional capital required to complete the financing, in return for the opportunity to supply sulphur on a long-term contract basis to the new company. The project was completed on schedule last year and, benefited by the strong demand in world markets for triple superphosphate fertilizer, is operating profitably.

On occasion, IFC has undertaken technical studies relating not to specific projects but to broad sectors of economic activity and the possibilities of industrial promotion in these areas. In 1961, for example, the Corporation undertook a survey of the potential for a chemical industry in Iran, at the request of the Industrial and Mining Development Bank of Iran and the Iranian Plan Organization. The survey indicated likely areas of industrial promotion and also defined specific investment opportunities. There is little indication that the survey produced any direct yield, although local production of pharmaceuticals, sulphuric acid and paints and varnishes has started since 1961 along the lines suggested by the study. More recently, IFC has at the request of a member government provided technical assistance in evaluating the potential for a pulp and paper industry in the country in question. The appraisal in this case, conducted in conjunction with a leading pulp and paper manufacturer in a developed country, was essentially a feasibility study, directed to establishing the adequacy of the forest resources and the existence of a market for a local pulp and paper industry, as well as selecting suitable plant locations and determining the costs of raw materials.

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