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THE WORLD BANK  
Washington, D.C.

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KHERADJOU, GASEM - Articles and Speeches (1963)

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INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

INTERNATIONAL FINANCE  
CORPORATION

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

ROUTING SLIP		Date	
NAME		ROOM NO.	
Mr. Young			
Mr. Roone		224	
Mr. Simon		228	
To Handle		Note and File	
Appropriate Disposition		Note and Return	
Approval		Prepare Reply	
Comment		Per Our Conversation	
Full Report		Recommendation	
Information		Signature	
Initial		Send On	
REMARKS			
<p>Dis -</p> <p>This speech will be given on March 10.</p> <p>Atty.</p> <p>This is very good of its kind and deserves re-typing. I have done a little polishing to that end. G.R.V.</p>			
From			

## OFFICE MEMORANDUM

TO: MR. HAROLD GRAVES

FROM: GASEM KHERADJOU *Gkh*

SUBJECT: IRAN - IMDBI INVESTMENT CONFERENCE

DATE: FEBRUARY 26, 1963



As I explained on the phone, IMDBI is holding an investment conference from February 9 to February 12. A number of foreign institutions, including Chase International Investment Corporation, Lazard Freres & Company, ~~and~~ <sup>and</sup> Deutsche Bank, <sup>and</sup> ICICI are participating. I shall represent IFC ~~at~~ the conference and shall give a talk on project development in Persian. I shall follow roughly the lines of the attached paper which I have sent in advance for IMDBI records in English. I enclose also the agenda of the conference, but I should be grateful if this could be returned to me.

Enc: Agenda

"Project Development"



TEXT OF REMARKS BY A. GASEM KHERADJOU AT  
INDUSTRIAL AND MINING DEVELOPMENT BANK OF IRAN INVESTMENT CONFERENCE  
TEHERAN, IRAN, MARCH 10, 1963



Kheradjou/ms  
February 20, 1963

Project Development

It is fair to say that if you have good and sound projects nowadays you can find finance for <sup>them</sup> ~~it~~. This is especially true of less developed countries. One hears again and again from the officials of international financing institutions and bilateral agencies that one of the obstacles to more accelerated development in many countries is this lack of well prepared and presentable projects. I guess it is <sup>a</sup> truism to say that the process of sound economic development is the preparation and execution of sound projects.

The same principles and procedures apply to <sup>infrastructure</sup> projects such as harbours, highways, irrigation, land reclamation, power, railways ~~which we call~~ economic overhead projects <sup>to</sup> and schools, hospitals, municipal amenities, housing, the social overhead projects as to the industrial and mining projects which we consider in the domain of private people; however, I am here, <sup>with</sup> ~~of course, concerned with the latter, that is,~~ industrial and mining projects which have to be carried out through private initiative and enterprise. I might point out one big difference. Most public projects are in a monopolistic position and their mistakes, although more serious from the point of view of the harm they inflict on the economy, do not as soon hit the sponsors in the face as with competitive industrial projects which can end up in bankruptcy.

An industrial project by its very nature takes time and involves a series of complicated and inter-related decisions. It takes time to construct the building and facilities, time to install the machinery,



time to recoup your investment. Success depends on the accuracy of forecasts whether they relate to costs of construction, size of operational expenditure, volume of sales. You have to make calculations and allowances for every possible detail and contingency; so many elements are interrelating and important. If <sup>the</sup> machinery and the production process selected are of the wrong kind or too costly, if <sup>the</sup> wrong location has been selected, or the raw material and labor available are not suitable, if power, water or fuel are not adequate, if funds provided are insufficient, if the market forecasts contain too large a margin of error or if the whole thing is poorly organized and managed, any one factor could jeopardize or affect the profitability of the whole scheme.

I have seen so many examples of half finished or poorly engineered or wrongly calculated projects. In my travels around the world over the last few years, I have seen steel plants built to use ~~the~~ scrap which was not there, fruit canneries built where power and water were not available, coal mines so far away from centers of consumption that ~~it~~ <sup>had to be spent</sup> in order to sell the coal you ~~had to spend~~ vast amounts of money on uneconomic roads in the remote parts of the country, <sup>and a</sup> sugar plant in a part of the country where it could only have <sup>enough</sup> ~~have~~ cane sugar for 4 weeks of production. All costly monuments to poor planning and inadequate preparation, all <sup>a</sup> waste of scarce resources in countries too poor to afford ~~them~~ <sup>it</sup>.

Decisions which have to be taken to make a project economically justified, technically sound and financially viable require a happy blend of knowledge and character. Character, because too often human nature has so many devices for deceiving itself. Once a country or an



individual decides to embark on one of these projects they so easily deceive themselves or are deceived; the rose-colored spectacles hide the defects and exaggerate the advantages, benefits, and profits. So many of us, even if we have the knowledge, are not equipped by nature to suppress surplus optimism, to have patience, to keep <sup>a</sup> cool head in the face of importunities from clever salesmen, half-baked enthusiasts or just mere charlatans and rogues. This is why you so much need your banker, not just to add his money to yours, but to put his hard head against yours.

We talk about a series of inter-related decisions which have to be made to arrive at a good and sound project. What are they:

#### Creation of fertile environment

The first series of decisions <sup>is</sup> ~~are~~ of a general type and <sup>has</sup> ~~have~~ to be taken by the public authorities; they have to do with creating a favorable environment for enterprise and to encourage people to go into industry. This is a separate subject and I shall only make a passing reference to it. They have to do with providing: (a) environmental incentive such as basic facilities of transport, power, water, or to develop raw materials and higher purchasing power through <sup>the</sup> development of agriculture, or better laws, courts, and efficient administration or the devices to induce foreign investment to come in and blend with local enterprise.

(b) financial incentives, such as tax exemption, tariff exemptions on raw materials and machinery or subsidies, provision of credit such as helping to set up <sup>an</sup> industrial bank ~~such as this~~ or industrial estates or hire purchase schemes for smaller industries.



(c) training and technical assistance such as <sup>the</sup> provision of higher training, research ~~on~~ local raw materials, or technology, encouraging good trade publications and statistics and directly, or through institutions such as <sup>the</sup> Industrial and Mining Development Bank, making available managerial or technical assistance, technological intelligence and promotion, bringing together foreign management and technology with domestic capital and enterprise.

Public Authorities point out opportunities

The next series of decisions have to do with charting the country's industrial possibilities. In more industrialized countries the market mechanism and <sup>the</sup> existing body of industrial entrepreneurs are sufficient to direct new investment. In less developed countries opportunities have to be pointed out. In every country which has had little industry broad decisions have to be made to select and encourage, out of a countless number of possible industries, those which would make the greatest contribution to the national income and welfare of the country. This does not mean, of course, making specific decisions to carry out specific projects. In a free enterprise economy that can best be done by businessmen. It <sup>means</sup> ~~is~~ the preliminary screening of types of industry, providing answers to questions such as these: what industries can make <sup>the</sup> best use of domestic raw material and available skills, can replace important imports, can provide <sup>the</sup> highest degree of employment with the smallest amount of scarce capital, stimulate or complement other industries, provide <sup>a</sup> high rate of return on capital invested, are adaptable to the environmental conditions of the country, or employ unemployed resources. <sup>A</sup> high degree of economic calculation and thinking are involved here.



Broad studies into the possibilities of a particular category of industries, such as the study which was made jointly by IFC and IMDBI for chemical industries in Iran, or <sup>industries in</sup> special industries such as glass industry or sugar industry, <sup>point out the way to out</sup> ~~to~~ throw up projects which could be taken up by business. To be useful these studies ~~would~~ have to cover the extent of the present and prospective market, either domestic or export, the availability and volume of the necessary raw material, the availability <sup>of</sup> skills and technical know-how, the right machinery for the purpose, the right processes, some ideas as to the total capital needed and what profits might be expected and who can provide the businessmen consulting services for the preparation and implementation of the actual project. However, as they say, you can take a horse to water but you can't make <sup>it</sup> ~~him~~ drink. Somebody in the final count has ~~to~~ be willing to sponsor the project and invest in it, otherwise a lot of time and money could be wasted. I have seen too many highly paid experts round the world carrying out ~~very~~ learned studies without any visible sign of their ending up in physical plants and production. This is where the promotion and capabilities of your development <sup>bank</sup> will come into play.

Consultant services are very important because so much depends on the right calculations and forecasts, <sup>the</sup> right design and specifications for the factory and machinery, proposed lay-out, the most suitable process and organization and accurate estimates of financing needs, profits, and returns. These services often have to come from outside and are expensive and a businessman who wants to embark on an industrial project is reluctant to pay out a large sum before he has even begun. In any case, the quality



of these services <sup>varies</sup> ~~vary~~ so much, from very good to very bad, that somebody has to advise on what kind of advice the businessman should seek. Your development bank could either help with these services <sup>directly</sup> ~~itself~~ or ~~it~~ ~~will~~ advise you where and from whom to get them and even finance some of it.

We all know that in recent years in Iran, as soon as somebody started a project and met with success, everybody rushed into the same kind of project. As a result, everybody lost, the man who had initiated the first one and all who followed. If other projects are available and preparations have been made, one hopes this kind of blind imitation will be stopped.

Now we come to the preparation of a project <sup>itself</sup>, <sup>the</sup> decisions that have to be made about the economic, technical, commercial and financial aspects of the project, and about management and organization for its construction and operation.

#### Economic Aspects

Of the economic aspects of the project, some have been mentioned above concerning the priorities of any particular industry. Some of the broader decisions concerning the priority and contributions to the economy at large <sup>will</sup> have been taken by the authorities who have issued the licence or tax exemption or protection. Your development bank as a national developmental institution would want to check these features. One of the most important decisions is to establish the size of the market, how much of your product you can sell and at what price. You will look into the present demand and see how much of it is served by imports and by other suppliers. You will have to estimate how demand



will grow in future years and what plans are afoot by others to set up manufacturing. You will have to estimate the effects of increasing population, <sup>changes in the</sup> standard of living, <sup>or</sup> changes of taste, changes in transport facilities and opening of new markets and supplies, <sup>the</sup> possibilities of substitution and government decisions, probably changes in subsidies, tariffs, taxation, etc. You have to calculate the effect of all these on price and always take the most realistic and conservative price, take the gloomiest picture and start from there.

### Technical Features

The technical decisions affect the scale of operation, operational techniques, lay-out and location. You have to fix the schedule of construction and make a fair estimate of costs of construction and its phasing. Some industries such as steel making or heavy chemicals require large capital and can only be economical if a minimum scale is produced. A cement plant much below 200 to 300 tons a day can only produce expensive cement, a blast furnace has to make something like 300,000 tons a year or it cannot compete. Optimists may design for higher production, hoping that in years to come demand will catch up. But large investments must pay their way as they go, and <sup>anyway</sup> ~~in any case~~ time renders ~~these~~ plants obsolete, <sup>in which case</sup> ~~and~~ you have lost before you begin to make a profit. In the selection of your processing techniques you must not choose one that is already out of date or soon will become obsolete. On the other hand, you must leave techniques of an experimental nature to those who have more financial and technical resources to cope with them. You can lose your shirt on somebody's bright ideas. I have heard



of too many sleek suppliers of machinery who get hold of an innocent businessman, and with fine talk, beautiful catalogues, and offers of credit sell him untried processes <sup>or</sup> ~~of~~ obsolete plants with which he can never hope to have a competitive business.

You have to choose your location carefully in relation to your market, availability of labor, <sup>especially skilled labor</sup>, which can be very choosy about living conditions, <sup>availability of transport facilities</sup>, water, power and fuel, and social amenities; unless the scale of your operation is <sup>enough</sup> ~~as~~ large like the Abadan refinery or a large steel or mining operation, ~~as~~ to allow you to provide all these yourself and build your own city.

If <sup>you or the</sup> local authority ~~or you have~~ <sup>has</sup> to build a power plant or other facilities essential to your operations, you have to check and make sure at every stage <sup>how that</sup> ~~the progress of this~~ <sup>is progressing</sup> scheme. Some factories have to be built near the market, some near raw materials. Some operations ~~which~~ <sup>depend</sup> ~~on~~ <sup>entire</sup> heavy use of cheap power, <sup>the</sup> such as aluminum industry, may go near the source of power. If you are making bricks or furniture you have to be, of course, near your customers, unless you are making such quality furniture as the Scandinavians make and sell to richer customers around the world. The engineers must plan the construction and installation very carefully so that everything comes on the job at the right time. So much money can be lost as a result of idle labor and supervisors waiting for equipment to arrive <sup>contrariwise</sup> or equipment arriving long before there is a roof, and left in the rain to rust. An important technical job is to calculate carefully cost estimates, not leaving out important elements



such as interest during construction or spare parts, or maintenance of equipment during construction and allowing sufficient margin for contingencies, such as work stoppage or accidents or unfavorable movements of prices. Working capital required must be carefully worked out on the basis of the length of the production process, material flow, etc. Cost of operation has to be compared with similar plants in the country or in similar locations abroad.

#### Management and Organization.

Before you begin to construct, you must determine who is going to run the works during construction and operation and how. The management and organization for both the construction of a plant as well as its operation, when completed, must be decided before you start. You have to choose the right manager or managers and technical supervisors with the right kind of experience. Numbers as well as quality have to be adequate. If you have to use foreign skill, you have to check <sup>particularly</sup> carefully that they have the right qualifications and experience, as this is more difficult to check with them. A suitable organization has to be set up, considering the scale of operation, so that proper co-ordination among various sections is achieved, information can be made available regularly and speedily and decisions taken and communicated expeditiously. Proper tools of management, reporting, budgetary and accounting systems, most appropriate to the scale of operations, will have to be set up. Naturally, these <sup>need</sup> ~~would~~ not be too elaborate with small scale business where an energetic overseer or manager can be everywhere at the same time. But



with larger undertakings everything can go wrong if proper organization for buying, labor, and factory management, selling, accounting etc. are not worked out and maintained. Proper systems of controlling and scheduling of production of inventories, both in size and quality, and proper maintenance schedules are very important parts of management and organization, and which have to be taken into account.

*The operation of*  
~~No other aspect of an~~ industry depends so much on experience, which can be learned only by doing. That is why sometime it is necessary to import management and ~~why~~ in more difficult and large scale manufacturing, foreign capital which can bring in experienced and high-level management can make <sup>a</sup> substantial contribution to industrial development. A suitable scheme of training must be set up to teach every job, both to improve the work of those ~~who are doing~~ <sup>now employed and to train</sup> the future staff which has to be built up with the development of operations.

### Financial features

For the construction stage, machinery and equipment have to be purchased and contracts for work placed. Transport and insurance have to be arranged. I need not tell you how important it is for the efficiency and profitability of the project <sup>to ensure that</sup> ~~that for all these~~ you pay a reasonable price, <sup>for all these things, with due consideration for quality,</sup> ~~considering the quality.~~ You must spare no effort to contact as many sources of supply as you can so that you know you have the right price for all the goods and services you require. Far too often ~~one~~ <sup>businessmen</sup> take the line of ~~the~~ least resistance and yield to high pressure



salesmanship, especially when apparently easy credit terms are offered by the suppliers. You must be particularly suspicious in these cases and check carefully. Too many people have been over-charged for shoddy machinery by the lure of credit facilities. I need not quote any examples; you can see too many examples around you of people who are suffering the consequences of this kind of mistake.

*As a part*  
~~after the completion~~ of the project, you have to make proper arrangements for the purchase of raw materials, fuel, power, water, etc. You have to make arrangements for the sale of your products. The price and credit terms have to be worked out. Sales organization has to be carefully worked out and prices and terms which are competitive as well as profitable have to be calculated. One thing we often neglect in *less developed* ~~our~~ countries is the value of publicity. Sufficient care is not given to bringing the product to the notice of the public. I recently visited a factory which produced a good quality beer, as good as any imported *beer,* but all it did for publicity was to appeal to patriotism. Patriotism is a noble sentiment, but when it comes to selling your product *such an* ~~to it~~ arouses a suspicion that the quality or price is not as good as the imported product. A new product is competing against established imports or domestic products and has to make *a* vast effort to make a place for itself.

In the construction stage careful costing for building, equipment, transport, insurance, interest during construction, and working capital will have been worked out with the help of engineers and consultants. You have to make sure you have all the money which is necessary for the



whole project until it can bring in sufficient revenue: your own money and what you can borrow. And you have to plan so that this money is available as and when it is needed, gradually as the construction proceeds. The terms of loans have to be worked out in such a way that they do not overburden the business and can be repaid with interest comfortably out of the cash generated by the business. Just look around you; how many businesses that <sup>you see</sup> are in trouble because of unsuitable terms for suppliers' credits or loans were accepted.

Working capital is often neglected and it is very important to make a proper estimate for it. <sup>The</sup> flow of goods and services in and out of a factory locks up a certain amount of capital in the production process. The amount <sup>needed</sup> depends on the volume and on the length of the production process. Workers have to be paid, raw materials, fuel, power, etc. have to be purchased before goods are produced and sold. Even then you have to grant suitable credit to customers. On the other hand, you can get some of your supplies on credit. All these have to be worked out carefully so as to ascertain the size of the working capital. If you are producing sugar, you have to give credit to beet or cane growers and the whole production process lasts a few months. Sales on the other hand, are spread throughout the year. If you make fertilizer, you produce the whole year round to sell in certain seasons. Proper arrangements have to be made with commercial banks to meet seasonal needs.

For the operating period careful forecasts have to be made of annual sales, earnings, expenses, taxes, and profits to make sure that cost



generated will cover the fixed charges such as payment of interest and repayment of debt. To work out the break-even point, <sup>you have to find</sup> the point at which earnings will cover the fixed financial charges. And ~~the~~ bad years must be taken into account as well as good years.

A development bank which is contributing a large part of your required funds is at least as interested as you are in the success of the whole undertaking. Your success is its security. The conditions which <sup>it</sup> ~~he~~ imposes ~~and~~ may seem irksome to you, <sup>but</sup> ~~as to~~ limitations on expansion, on further investment, on paying of dividends, maximum ratio of debt to equity, minimum debt service coverage, minimum ratio of current assets to current liabilities, proper supervision of operations and regular and prompt reporting on the progress of the project all protect your interest as much as <sup>that of the bank. If it</sup> ~~his~~. If <sup>it</sup> ~~he~~ does not insist on proper preparation of all aspects of the project, if <sup>it</sup> ~~he~~ does not check all the calculations and facts, <sup>it</sup> ~~he~~ will have endangered not only <sup>its own</sup> ~~his~~ money, but your money as well <sup>have</sup> ~~and~~ ~~has~~ lost your confidence in the bargain.

I recall vividly a conversation I had nearly ten years ago with a very high official who believed in pouring money into industry without wasting too much time with careful preparation and appraisal that I was insisting on. He said: "Even if 30% of the projects go sour, we have created <sup>70%</sup> ~~the~~ industry and that is worth the effort." I remember saying that it was not only the shameful waste of resources involved in the 30% <sup>lost</sup> ~~gone~~, but the fact such a situation would burn too many fingers, scare <sup>frighten</sup> ~~scare~~ entrepreneurs, and <sup>would</sup> ~~would~~ set back industrial development for years. I wish my prophesy had not come true.



# INTERNATIONAL FINANCE CORPORATION

1818 H STREET, N.W., WASHINGTON 25, D. C. TELEPHONE: EXECUTIVE 3-6360



## TEXT OF REMARKS BY A. GASEM KHERADJOU AT INDUSTRIAL AND MINING DEVELOPMENT BANK OF IRAN INVESTMENT CONFERENCE TEHERAN, IRAN, MARCH 10, 1963

It is fair to say that if you have good and sound projects nowadays you can find finance for them. This is especially true of less developed countries. One hears again and again from the officials of international financing institutions and bilateral agencies that one of the obstacles to more accelerated development in many countries is this lack of well prepared and presentable projects. I guess it is a truism to say that the process of sound economic development is the preparation and execution of sound projects.

The same principles and procedures apply to infrastructure projects such as harbours, highways, irrigation, land reclamation, power, railways and to the social overhead projects -- schools, hospitals, municipal amenities, housing -- as to the industrial and mining projects which we consider in the domain of private people; however, I am here concerned with industrial and mining projects which have to be carried out through private initiative and enterprise. I might point out one big difference. Most public projects are in a monopolistic position and their mistakes, although more serious from the point of view of the harm they inflict on the economy, do not as soon hit the sponsors in the face as with competitive industrial projects which can end up in bankruptcy.

An industrial project by its very nature takes time and involves a series of complicated and inter-related decisions. It takes time to construct the building and facilities, time to install the machinery, time to recoup your investment. Success depends on the accuracy of forecasts whether they relate to costs of construction, size of operational expenditure, volume of sales. You have to make



calculations and allowances for every possible detail and contingency; so many elements are interrelating and important. If the machinery and the production process selected are of the wrong kind or too costly, if the wrong location has been selected, or the raw material and labor available are not suitable, if power, water or fuel are not adequate, if funds provided are insufficient, if the market forecasts contain too large a margin of error or if the whole thing is poorly organized and managed, any one factor could jeopardize or affect the profitability of the whole scheme.

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Decisions which have to be taken to make a project economically justified, technically sound and financially viable require a happy blend of knowledge and character. Character, because too often human nature has so many devices for deceiving itself. Once a country or an individual decides to embark on one of these projects they so easily deceive themselves or are deceived; the rose-colored spectacles hide the defects and exaggerate the advantages, benefits, and profits. So many of us, even if we have the knowledge, are not equipped by nature to suppress surplus optimism, to have patience, to keep a cool head in the face of importunities from clever salesmen, half-baked enthusiasts or just mere charlatans and rogues. This is why you so much need your banker, not just to add his money



to yours, but to put his hard head against yours.

We talk about a series of inter-related decisions which have to be made to arrive at a good and sound project. What are they:

Creation of fertile environment

The first series of decisions is of a general type and has to be taken by the public authorities; they have to do with creating a favorable environment for enterprise and to encourage people to go into industry. This is a separate subject and I shall only make a passing reference to it. They have to do with providing: (a) environmental incentive such as basic facilities of transport, power, water, or to develop raw materials and higher purchasing power through the development of agriculture, or better laws, courts, and efficient administration or the devices to induce foreign investment to come in and blend with local enterprise.

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Public Authorities point out opportunities

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which has had little industry broad decisions have to be made to select and encourage, out of a countless number of possible industries, those which would make the greatest contribution to the national income and welfare of the country. This does not mean, of course, making specific decisions to carry out specific projects. In a free enterprise economy, that can best be done by businessmen. It means the preliminary screening of types of industry, providing answers to questions such as these: what industries can make the best use of domestic raw material and available skills, can replace important imports, can provide the highest degree of employment with the smallest amount of scarce capital, stimulate or complement other industries, provide a high rate of return on capital invested, are adaptable to the environmental conditions of the country, or employ unemployed resources. A high degree of economic calculation and thinking are involved here.

Broad studies into the possibilities of a particular category of industries, such as the study which was made jointly by IFC and IMDBI for chemical industries in Iran, or special industries such as glass or sugar, point out projects which could be taken up by business. To be useful these studies have to cover the extent of the present and prospective market, either domestic or export, the availability and volume of the necessary raw material, the availability of skills and technical know-how, the right machinery for the purpose, the right processes, some ideas as to the total capital needed and what profits might be expected and who can provide the businessmen consulting services for the preparation and implementation of the actual project. However, as they say, you can take a horse to water but you can't make it drink. Somebody in the final count has to be willing to sponsor the project and invest in it, otherwise a lot of time and money could be wasted. I have seen too many highly paid experts round the world carrying out learned studies without any visible sign of their ending up in physical plants and production. This is where the promotion and capabilities of your development bank will come



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#### Economic Aspects

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other suppliers. You will have to estimate how demand will grow in future years and what plans are afoot by others to set up manufacturing. You will have to estimate the effects of increasing population, changes in the standard of living or of taste, changes in transport facilities and opening of new markets and supplies, the possibilities of substitution and government decisions, probably changes in subsidies, tariffs, taxation, etc. You have to calculate the effect of all these on price and always take the most realistic and conservative price, take the gloomiest picture and start from there.

### Technical Features

The technical decisions affect the scale of operation, operational techniques, lay-out and location. You have to fix the schedule of construction and make a fair estimate of costs of construction and its phasing. Some industries such as steel making or heavy chemicals require large capital and can only be economical if a minimum scale is produced. A cement plant much below 200 to 300 tons a day can only produce expensive cement, a blast furnace has to make something like 300,000 tons a year or it cannot compete. Optimists may design for higher production, hoping that in years to come demand will catch up. But large investments must pay their way as they go, and anyway time renders plants obsolete, in which case you have lost before you begin to make a profit. In the selection of your processing techniques you must not choose one that is already out of date or soon will become obsolete. On the other hand, you must leave techniques of an experimental nature to those who have more financial and technical resources to cope with them. You can lose your shirt on somebody's bright ideas. I have heard of too many sleek suppliers of machinery who get hold of an innocent businessman, and with fine talk, beautiful catalogues, and offers of credit sell him untried processes or obsolete plants with which he can never hope to have a competitive business.

You have to choose your location carefully in relation to your market,



availability of labor - especially skilled labor, which can be very choosy about living conditions - availability of transport facilities, water, power and fuel, and social amenities; unless the scale of your operation is large enough, like the Abadan refinery or a large steel or mining operation, to allow you to provide all these yourself and build your own city.

If you or the local authority has to build a power plant or other facilities essential to your operations, you have to check and make sure at every stage how that scheme is progressing. Some factories have to be built near the market, some near raw materials. Some operations, such as the aluminum industry, dependent on the heavy use of cheap power, may go near the source of power. If you are making bricks or furniture you have to be, of course, near your customers, unless you are making such quality furniture as the Scandinavians make and sell to richer customers around the world. The engineers must plan the construction and installation very carefully so that everything comes on the job at the right time. So much money can be lost as a result of idle labor and supervisors waiting for equipment to arrive or, contrariwise, equipment arriving long before there is a roof, and left in the rain to rust. An important technical job is to calculate carefully cost estimates, not leaving out important elements such as interest during construction or spare parts, or maintenance of equipment during construction and allowing sufficient margin for contingencies, such as work stoppage or accidents or unfavorable movements of prices. Working capital required must be carefully worked out on the basis of the length of the production process, material flow, etc. Cost of operation has to be compared with similar plants in the country or in similar locations abroad.

#### Management and Organization

Before you begin to construct, you must determine who is going to run the works during construction and operation and how. The management and organization for both the construction of a plant as well as its operation, when completed,



must be decided before you start. You have to choose the right manager or managers and technical supervisors with the right kind of experience. Numbers as well as quality have to be adequate. If you have to use foreign skill, you have to check particularly carefully that they have the right qualifications and experience, as this is more difficult to check. A suitable organization has to be set up, considering the scale of operation, so that proper co-ordination among various sections is achieved, information can be made available regularly and speedily and decisions taken and communicated expeditiously. Proper tools of management, reporting, budgetary and accounting systems most appropriate to the scale of operations will have to be set up. Naturally, these need not be too elaborate with small scale business where an energetic overseer or manager can be everywhere at the same time. But with larger undertakings everything can go wrong if proper organization for buying, labor, and factory management, selling, accounting etc. are not worked out and maintained. Proper systems of controlling and scheduling of production of inventories, both in size and quality, and proper maintenance schedules are very important parts of management and organization, and have to be taken into account.

The operation of industry depends so much on experience, which can be learned only by doing. That is why sometime it is necessary to import management and why, in more difficult and large scale manufacturing, foreign capital which can bring in experienced and high-level management can make a substantial contribution to industrial development. A suitable scheme of training must be set up to teach every job, both to improve the work of those now employed and to train the future staff which has to be built up with the development of operations.

#### Financial features

For the construction stage, machinery and equipment have to be purchased and contracts for work placed. Transport and insurance have to be arranged. I need not



tell you how important it is for the efficiency and profitability of the project to ensure that you pay a reasonable price for all these things, with due consideration for quality. You must spare no effort to contact as many sources of supply as you can so that you know you have the right price for all goods and services you require. Far too often businessmen take the line of least resistance and yield to high pressure salesmanship, especially when apparently easy credit terms are offered by the suppliers. You must be particularly suspicious in these cases and check carefully. Too many people have been over-charged for shoddy machinery by the lure of credit facilities. I need not quote any examples; you can see too many examples around you of people who are suffering the consequences of this kind of mistake.

As a part of the project, you have to make proper arrangements for the purchase of raw materials, fuel, power, water, etc. You have to make arrangements for the sale of your products. The price and credit terms have to be worked out. Sales organization has to be carefully worked out and prices and terms which are competitive as well as profitable have to be calculated. One thing we often neglect in less developed countries is the value of publicity. Sufficient care is not given to bringing the product to the notice of the public. I recently visited a factory which produced a good quality beer, as good as any imported beer, but all it did for publicity was to appeal to patriotism. Patriotism is a noble sentiment, but when it comes to selling your product such an appeal arouses a suspicion that the quality or price is not as good as the imported product. A new product is competing against established imports or domestic products and has to make a vast effort to make a place for itself.

In the construction stage careful costing for building, equipment, transport, insurance, interest during construction, and working capital will have been worked out with the help of engineers and consultants. You have to make sure you have all the money which is necessary for the whole project, your own money and what



you can borrow, until it can bring in sufficient revenue. And you have to plan so that this money is available as and when it is needed, gradually as the construction proceeds. The terms of loans have to be worked out in such a way that they do not overburden the business and can be repaid with interest comfortably out of the cash generated by the business. Just look around you; how many businesses that you see are in trouble because unsuitable terms for suppliers' credits or loans were accepted?

Working capital is often neglected and it is very important to make a proper estimate for it. The flow of goods and services in and out of a factory locks up a certain amount of capital in the production process. The amount needed depends on the volume and on the length of the production process. Workers have to be paid, raw materials, fuel, power, etc. have to be purchased before goods are produced and sold. Even then you have to grant suitable credit to customers. On the other hand, you can get some of your supplies on credit. All these have to be worked out carefully so as to ascertain the size of working capital. If you are producing sugar, you have to give credit to beet or cane growers and the whole production process lasts a few months. Sales, on the other hand, are spread throughout the year. If you make fertilizer, you produce the whole year round to sell in certain seasons. Proper arrangements have to be made with commercial banks to meet seasonal needs.

For the operating period careful forecasts have to be made of annual sales, earnings, expenses, taxes, and profits to make sure that cost generated will cover the fixed charges such as payment of interest and repayment of debt. To work out the break-even point you have to find the point at which earnings will cover the fixed financial charges. And bad years must be taken into account as well as good years.

A development bank which is contributing a large part of your required funds is at least as interested as you are in the success of the whole undertaking. Your



success is its security. The conditions which it imposes may seem irksome to you, but limitations on expansion, on further investment, on paying of dividends, maximum ratio of debt to equity, minimum debt service coverage, minimum ratio of current assests to current liabilities, proper supervision of operations and regular and prompt reporting on the progress of the project all protect your interest as much as that of the bank. If it does not insist on proper preparation of all aspects of the project, if it does not check all the calculations and facts, it will have endangered not only its own money, but your money as well and have lost your confidence in the bargain.

I recall vividly a conversation I had nearly ten years ago with a very high official who believed in pouring money into industry without wasting too much time with careful preparation and appraisal that I was insisting on. He said: "Even if 30% of the projects go sour, we have created 70% industry and that is worth the effort." I remember saying that it was not only the shameful waste of resources involved in the 30% lost, but the fact such a situation would burn too many fingers, frighten entrepreneurs, and set back industrial development for years. I wish my prophesy had not come true.





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of Bank Mithkati Israel Monthly Reports -

Speech - Knesset, A. O. - Sept. 28, 1963

