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THE INTER-AMERICAN DEVELOPMENT BANK AND INDUSTRIAL DEVELOPMENT IN LATIN AMERICA

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INTER-AMERICAN DEVELOPMENT BANK

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I N D E X

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I.

THE INTER-AMERICAN DEVELOPMENT BANK AND INDUSTRIAL DEVELOPMENT IN LATIN AMERICA

INTRODUCTION

1. Industrial development is a key feature of economic growth and growth is a dynamic concept. Just as individual countries or private enterprises must concern themselves with planning, so too is the IDB concerned with the future, with the problems of development in the industrial field in Latin America, and what the IDB can contribute toward their solution.

2. It would be a relatively easy task to discuss the operations and contributions of the Inter-American Development Bank (IDB) in the industrial field since the Bank commenced its operations in October 1960. The role of the IDB in the industrial field, as summarized in this report, will illustrate how the Bank functions, what its general criteria are, what it has or is trying to accomplish, and what lessons can be learned from its experience to date. Where possible, concrete examples will be furnished to illustrate certain principles which may be helpful to those working in the industrial field, including potential borrowers.

3. The IDB is an interesting experiment in regional international banking where member countries control policies and procedures. Its purpose is to stimulate the economic and social development of its 19 member Latin American republics; and it is concerned with the many problems related to development, such as channeling savings into productive investments, exporter credit financing of intra-Latin American trade, planning, training, political and financial stability, and particularly promoting the economic integration movements. The present paper concerns primarily the industrial field, although one cannot isolate this sector of the economy for separate study.

4. Real industrial output in Latin America has not had an adequate growth rate in the last 5 years, and growth from 1960 to 1962 has been very disappointing. Even in Mexico per capita industrial growth slowed down to 3.5% in 1961. Latin American exports of manufactured goods in real terms did not increase from 1950 to 1960. The planning of the industrial sector appears weaker than in the other sectors. Such observations as these suggest the need for careful analysis of the problems of Latin American industrial development and of the related fields of economic and social development, and their solution.

The obstacles to growth have already been commented on by many observers. Therefore, the writer will try not to catalogue the problems, but rather will offer comments which appear to be pertinent, yet have in the past received too little emphasis.

5. These comments are based more on the writer's specific experience in industrial projects in Latin America, Asia, Africa and Southern Europe, rather than on a statistical or macroeconomic study. Published information in the field, including the industrial sector of the development plans, have also been reviewed. Thus, the approach is to try to draw generalizations from the particulars, rather than the conventional macroeconomic or top-down approach. The ideas expressed here represent those of the writer and not necessarily those of the IDB.

II

THE INTER-AMERICAN DEVELOPMENT BANK

A. Brief History

6. The IDB officially began operations in October 1960 and by February 1961 had authorized its first loan. The Bank utilizes its ordinary capital resources and its Fund For Special Operations to promote the economic development of its member countries in Latin America. In June 1961, it became Administrator for the US $394 million Social Progress Trust Fund, which the Bank holds and administers in trust for the United States Government. This Fund is used to promote the social development of member countries in Latin America. In addition to granting loans from these three resources, the IDB also extends technical assistance in member countries. In the industrial sector of the Latin American economies, one is concerned primarily with the ordinary resources of the Bank, and to a lesser extent: 1.) with technical assistance loans and grants in such areas as economic and industrial planning; and 2.) to the Fund For Special Operations for industrial or development bank loans for those countries having extreme balance of payments difficulties or for projects which do not otherwise qualify for loans from ordinary resources.

7. All IDB loans probably benefit the industrial sector since at least indirectly they are designed to promote economic and social development and stability. The Social Progress Trust Fund loans, for example, primarily thus far allocated to housing and potable water projects, provide increased market for many industrial goods. One could calculate, using appropriate multipliers, the total benefits to the Latin American national incomes of the IDB and IBRD loans and other external assistance, and if one wished, estimate the direct benefit to the industrial sector using input-output matrices, but this exercise would be of limited value. The benefits are probably more than offset by "leakages" or reverse multiplier effects resulting from fall in export prices, political instability, capital flights and loss of foreign direct investments. Since the source of approximately one-half of the Bank's regular funds comes from the Latin American member

countries (the other half from the U.S. Government) the Bank has an added responsibility to use the money even more effectively than the countries or the U.S.A. would have used the same money. Thus, the Bank must use its funds for the initiation and financing of projects or programs which will contribute most effectively to economic (and social) growth and maximize the contribution of others (private and public investors, private local and foreign banks, foreign governments), etc.. The latter is particularly important since the total available resources of the IDB (ordinary capital plus Fund For Special Operations) are limited to about US $550 million, plus callable capital of an additional US $431 million.

B. Analysis of Industrial Loans to Date

8. The following table summarizes the IDB industrial loans together with the total lending operations for comparison as of November 1962.

(Expressed in millions of U.S.dollars)

	Ordinary Capital		Fund For Special Operations		Total	
Industrial projects	(21)	47	(1)	1	(22)	48
Development institutions (for relending)	(12)	55	(8)	44	(20)	99
Sub-total of above	(33)	102	(9)	45	(42)	147
Total loans from IDB resources	(57)	212	(26)	87	(83)	299

(Figures in parentheses represent number of loans)

In addition, 46 Social Progress Trust Fund loans amounting to US $271 million have been granted, making a total of 129 loans.

9. Thus, IDB lending for economic purposes from its own resources and for social purposes (SPTF) are about equal. Of the IDB money lent from its own funds only 16% was for direct industrial projects whereas 33% was for lines of credit, primarily relending for industrial projects, making a total of these two categories of 49%. The low value of direct industrial loans was, in part, due to IDB's decision initially to consider only loans below US $5 million. (This policy has been modified and the percentage dollar value of industrial loans should be considerably higher in the coming year). It should be noted that almost one-third of the 83 loans made from the Bank's funds were for direct industrial loans, reflecting IDB's willingness initially to study and finance many small loans (as low as US $100,000). This policy may also be modified as IDB places greater emphasis on lines-of-credit for financing of small projects and as the institutions themselves improve and are better qualified to handle larger loans, partly through the aid of IDB technical assistance in reorganizing the development banks or improving services.

10. Of the 22 direct industrial loans, 5 were made in the capital goods sector (forgings, brakes and drums, chasses, gears, drilling bits, etc., all in Brazil and Argentina), 6 in agricultural processing (fish, meat, flour, citrus and vegetables, crackers, and fats and oils), 4 in the construction materials sector (3 cement, 1 prefabricated housing), 4 in paper and pulp, 2 in chemicals and related material (detergents and chemical specialties, synthetic rubber), and one in textiles (kenaf). All of these projects, with the exception of loans for agricultural processing, should be termed intermediate or capital goods industries which provide their products for other sectors or industries rather than directly to the consumer, and many of these loans will provide indirect benefits to production in other industries or sectors of the economy. This group, plus the individual IDB sub-loans, through its lines of credit, presumably give a reasonably good cross-section of the type of projects being studied and carried out in many Latin American countries. Those applications which IDB is currently studying reflect the same categories in general, with perhaps a greater number of projects in basic industries, such as iron and steel and chemicals.

11. The limited amount of direct IDB industrial lending reflects the small number of projects that are sound from the technical, economic and financial points of view rather than undue emphasis on social, infrastructure or agricultural projects. There is no doubt that there is a real lack of projects in the productive areas of industry and agriculture, particularly the latter. This comment is not limited to the IDB portfolio of applications but includes what is known of the government and private sector plans of almost all Latin American countries. However, one is struck by the small number of industrial projects under consideration by the IDB, when its philosophy is to study any sound project which significantly contributes to the economic development of its member countries. The absolute need is apparent for planning specific project developments, improving the investment climate, and broadening markets rapidly by making the integration movements more effective. These should be the joint responsibility of the Latin American countries, their private sectors, the international agencies such as the IDB and others.

12.- Almost half of the direct industrial loans went to two countries, Argentina and Brazil. This reflects both the greater degree of sophistication in the industrial field and larger markets in these countries, and also the lack of projects in other countries. In the case of Mexico, where the industrial and financial sectors are more active than in other Latin American countries, the Government apparently believes that adequate domestic or foreign financing exists for industrial projects, and therefore IDB activity in the private industrial field in Mexico has been de-emphasized. All of the IDB capital goods industry loans were made in Argentina and Brazil, certainly one of the most important sectors for Latin America's future growth, particularly because of the shortage of foreign exchange and the high level of capital goods imports of over 45% of total Latin American imports in 1960. Yet, the IDB has received from the other countries, at the most, only one serious loan application in this field.

13. The single industrial sector where the IDB has made its greatest contribution to date is the paper and pulp field, as will be explained later. Two projects involve new Latin American process developments in the field of mixed tropical hardwood pulping, and the IDB is particularly proud to have been associated with these new developments, which have potential application in other Latin American countries and lesser developed countries in the rest of the world. All three projects thus far financed represent large and significant expansions of pulp capacity in their respective countries at low production costs. The latter is believed to be of particular importance. In many cases, high production and selling costs in most Latin American industrial sectors inhibit consumption, market growth, exportation (particularly intra-Latin American trade) and lead to increases in imports in many cases, adding to balance-of-payments problems. The large amount of activity in the paper and pulp field is due in part to the dynamism of the private sector in this field in several countries, but much of the credit should be given to the excellent work of the ECLA-UN-FAO office in Santiago "Grupo Asesor en Papel y Celulosa", and its studies not only of each individual country but of the pulp and paper needs of Latin America as a whole. The IDB has been particularly happy with its close cooperation with this group, and firmly believes that such cooperation with the United Nations agencies in New York City, Mexico City and Santiago will be even more rewarding in the future.

14. The IDB, as will be explained later, places particular emphasis on the expansion of Latin American integration movements and the solution of their problems. The present foreign exchange crisis presents no practicable alternative. The IDB has made one US $16 million loan for a project whose product would be almost entirely for export to other Latin American Free Trade Area (LAFTA) countries. This one loan will increase intra-LAFTA trade directly by about US $17 million. Since the total intra-LAFTA exports of manufactured goods (all consumer durables, intermediate products, and capital goods) in 1960, was about US $42 million, this represents an increase of over 40%. Manufactured goods in these categories represent about 70% of total LAFTA imports, or a major drain on the limited foreign exchange earnings. The study of this project required a knowledge of the entire Latin American pulp and paper industry. The direction in which the IDB has been moving in is to consider more and more the entire Latin American picture in each industry which it studies (and usually the entire world picture) to consider the problem of comparative advantage. Each project is viewed, where pertinent, in the light of the needs of all of the Bank's members considered together, rather than the needs of any individual country. The IDB is working closely, for example, with the Central American Bank of Integration.

15. In view of its interest in the various Latin American industrial sectors, particularly the important and dynamic sectors, the IDB has found it desirable to collect information on these industries on a continuous basis, not only for Latin America but often for the rest of the world. The recent specific studies of the Industrial Development Divisions of ECLA (Santiago and Mexico, D.F.) and the United Nations

Center for Industrial Development have been particularly helpful. Other useful sources of data are the detailed industrial plans of the member countries and the studies of private associations of industrialists.

16. The IDB has started to work more closely with associations such as ILAFA and Brazilian capital goods producing associations, to assess the overall needs and bottlenecks of specific sectors such as those of the steel or capital goods industries. It is also studying methods of medium-term export financing of Latin American products in the intermediate-products, and capital-goods fields. Particular attention is paid also to the possibilities of integrated regional programs in the lesser developed sections of the individual countries such as the Northeast of Brazil.

17. Since this is a conference on industrial planning, many of the IDB loans will be treated in more detail to illustrate certain principles of industrial development or problems in project evaluation. The various "Industrialization of Productivity"1/ bulletins of the United Nations and of this seminar itself have in part been concerned with project analysis and the criteria for establishing priorities between projects. The next sections will be devoted to the IDB's policies and method of operation in the industrial field.

C. IDB Policies and Procedures

18. As the summary of loans in the previous section suggests, the IDB is willing to study and make loans for soundly conceived industrial projects which contribute to the economic development of member countries, individually or collectively. This includes not only direct lending but also the establishment of lines of credit which include industrial subloans. To date, direct loans between US $100,000 and US $16,000,000 have been considered with present emphasis on using development institutions for smaller loans. Direct industrial loans are currently made at the Bank's interest rate of 5-3/4%, plus a commitment fee of 3/4% on the undisbursed funds during the construction period. The IDB has found that profits are such that this rate of interest did not work any hardship in any of its projects to date. Rather, the period of the loan is more important than the rate of interest.

19. Loans from ordinary capital to date provide for complete repayment within 7 to 14 years and include a period of grace of about 1 to 3 years. In determining the period of the loan and grace period, consideration is given to the levels of profits and cash flow, life of the equipment purchased, length of construction period, size of the project, and the problems and risks involved in developing markets, foreign competion, price variations, etc. As an example, the

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1/ United Nations Industrialization and Productivity Bulletin No. 5. (and 1 through 4)

IDB has considered a longer loan in order to make possible a reduction in the selling price of the product where it felt that a low price was essential for adequate market growth. The total debt service capacity and balance of payments position of the country is also considered as a factor in determining the period of the loan and the period of grace. No fixed rules have been established but the Bank tries to establish the same conditions for loans of a similar nature. The IDB attempts to adapt its policies to the needs of the project and the country involved.

20. The Bank has established certain general restrictions in its industrial loans. In general, it does not engage in refinancing. Thus, it is the policy of the Bank not to finance expenditures or obligations of the borrower incurred prior to the formal signing of the loan contract. Its policy is not to finance working capital, with certain exceptions; such as the import costs of initial spare parts, catalyst, and chemicals required for the start-up of the plant. It will not finance projects which will increase the output of materials already in serious overproduction in Latin America. It does not finance projects which do not have a reasonable priority in the economic development of the member country. In general, an industrial project would be considered of low priority if it had all the following characteristics: (1) low ratio of value added by manufacturing per unit of investment cost; (2) high ratio of production cost to import c.i.f. price of the product, particularly the import price from other Latin American countries; (3) low multiplier effects; (4) low ratio of yearly net foreign exchange saving (or earnings) to net investment cost in foreign exchange; and (5) too low a financial contribution on the part of the others involved in the project such as the borrower. In the case of each loan the Bank makes a specific study of the effect of the project and the loan on the economic growth of the country or on Latin America including the integration movements. The indirect, regional, social, monetary (including inflationary, balance of payments, and debt-service capacity), savings-investment and other effects are also considered.

21. The Bank does not make loans where the borrower does not make a significant contribution to the financing of the project. In its private industrial projects it is expected that the borrower will contribute approximately half of the total cost of the project. The Bank does permit the borrower to include, as a part of his contribution, the necessary initial working capital and local costs such as land, and at times, initial raw materials, and the costs of related projects where they are needed for the success of the proposed projects. In the event of expansions of existing industrial plants that are already operating successfully, the Bank considers in some cases the equity minus debt position of the firm as a part of the local contribution. Thus the Bank has financed more than 50% of an expansion where the overall debt-equity ratio was still less than one-to-one. In the case of the lines-of-credit subloans in certain countries the Bank has permitted financing up to 60 to 70%

of individual projects. The Bank does not finance projects where, in its opinion, financing is available from private sources on reasonable terms. In some cases, especially in larger projects which it cannot finance with its limited funds, it has provided financing jointly with foreign supplier credits or inter-government loans. It has made one industrial loan jointly with the Agency for International Development of the U.S. Government and two with the International Finance Corporation.

22. The limitation of IDB to 50% financing, in general, or to a contribution no greater than that of the borrower in private industrial projects may appear to be severe to some observers, especially since equity capital is in short supply in all Latin American countries. The IDB has had to reject loan applications or to request additional equity contributions in a number of projects. Nevertheless, new projects are usually difficult to start, even under ideal conditions, and it is obvious that a high debt to equity ratio places an added financial burden on the enterprise. The IDB tries to assure itself that not only will each loan be repaid, which could be assured by the soundness of a guarantor, but also that each project will make a real contribution to the economy. Furthermore, the limited amount of IDB funds requires that the local contribution be maximized. Finally, one of the best ways for a potential group of borrowers to demonstrate faith in its own project is to finance a significant fraction of the total. In several cases recently where equity was lacking the IDB has studied projects jointly with the IFC, where the latter has provided partial equity either through underwriting, convertible debentures, or other participations (or direct loans) and the IDB has provided loan funds. This combination further promotes another of the IDB objectives of broadening the base of ownership of the enterprises that the IDB finances.

23. One interesting condition that the IDB has placed in some of its loans held by a small group, or family, or by a foreign corporation, is that a part of the stock of the enterprise must be offered locally for sale at reasonable prices within a stipulated period of time. Such a condition broadens not only ownership but also the entire capital market. This is an objective which the IDB considers particularly important in view of the basic problem in Latin America of adequately channeling savings into productive investment.

24. The IDB does not normally finance non-Latin American enterprises or subsidiaries because these firms can generally borrow from the private money markets or from such bilateral agencies as the U.S. Government, Export-Import Bank, AID, etc. The IDB charter prohibits the financing of projects where money is available from private sources on reasonable terms. The Bank will lend to mixed local and foreign enterprises in all countries. The IDB will consider the financing of wholely-owned foreign enterprises in countries where the climate for either local or foreign investment is poor or where the economic benefits resulting from the project are unusually great, but emphasis is placed on significant local participation, either at the time the loan is granted or at some reasonable future date. Due consideration is given to the weakness of the capital markets which

now exist in many Latin American countries. A number of the projects financed by the IDB do contain significant equity contributions by both local groups experienced in starting new projects in the country and foreign firms with the necessary operating experiences and know-how. This may become particularly important in the development of new and difficult industries within a country. Most of the IDB industrial loans, however, have been to locally-owned companies.

25. The IDB's charter permits the financing from its Ordinary Capital Resources local currency costs with foreign exchange only in "special cases", as follows:

> "...Only in special cases, particularly when the project indirectly gives rise to an increase in the demand for foreign exchange in that country, shall the financing granted by the Bank to meet local expenses be provided in gold or in currencies other than that of such member; in such cases, the amount of the financing granted by the Bank for this purpose shall not exceed a reasonable portion of the local expense incurred by the borrower."

In industrial projects the IDB prefers to use its hard currencies to finance the import of capital goods and, when available, its local currencies to finance part of the local costs. Incidentally, it should be noted that repayment of IDB loans is made in the currency lent with maintenance of value in terms of dollars required on all private local currency loans. Because of the large demand for the Bank's limited local currency for the financing of government infrastructure projects and global lines of credit, its local currency funds for industrial purposes are limited. The Bank has had to establish certain sidelines as to when it should finance local costs with dollars. It considers such factors as the percentage of the total local costs to be financed in hard currencies, the percentage of foreign exchange cost to total cost, the import component of the locally produced capital goods, the method of local financing of the project, and the economic benefit of the project itself. Different considerations must be given to projects in countries where most of the capital goods are manufactured locally, than to projects in countries where perhaps 70-90% of the capital goods must be procurred abroad. In most industrial projects, however, the IDB has been able to limit its 50% contribution to the financing of foreign exchange costs without difficulty. The IDB tries to be flexible in its approach to this problem particularly in its subloans when it has found in certain countries and types of projects that the need for local currency financing of productive projects is greater than that for foreign exchange. The basic lack of financial resources of both foreign and local currency, coupled with the balance-of-payments problems, require a flexible policy based on both need and local contribution to local costs.

26. The IDB follows several policies that will extend its limited resources. U.S. and European banks have taken participation in its loans

by financing some of the early maturities to the extent of about US $7 million. In addition, it requires in its industrial projects accelerated loan repayments in those cases where the total dividends since the date the project starts operations, exceed 50% of accumulated net profits, the excess of dividends above 50% is to be matched by accelerated loan repayment. The bulk of the additional funds for future IDB operations will have to come from bond issues backed by callable capital of the IDB and increases in its callable capital. The IDB is currently floating a US $75 million bond issue in the USA and it has already sold a US $25 million bond issue in Italy.

27. In order to help assure the financial success of its projects, the IDB places restriction on dividends during the life of its loans, as mentioned above. It also established a minimum level working capital (current assets less current liabilities), and of current assets to assure reasonable liquidity of the firm.

28. The size of industrial loans that the IDB has made varies from US $125 thousand to US $16 million. IDB prefers to establish lines of credit for the smaller loans in all countries. As of November 1962, it has loaned about twice as much to development institutions for relending as for direct industrial lending. It will, in general, only consider a loan of under perhaps 300,000 - 500,000 dollars if no such institution exists, and it may consider a higher limit in the larger countries. The IDB has only received one industrial application for a project whose total cost was so high that the IDB could not provide a major portion of the foreign exchange costs. In this case a combination of European and U.S. supplier credits and government loans might make IDB financing feasible. The IDB has already made several loans in which supplier credits and loans from European banks were jointly involved. Thus, in the industrial field the limited amount of IDB funds or the size of loans that the IDB is willing to make do not appear to represent any restriction, especially when its direct and indirect loans (for relending) are considered together. Rather the lack of projects, lack of know-how and entrepreneurship, and lack of local financial resources appear to be the bottlenecks.

29. The policies the IDB establishes in its lines-of-credit subloans are essentially the same as in its direct loans except that the size is limited to a lower minimum and maximum and a value is placed above which direct IDB approval of each loan is required. In its approval of subloans the IDB, of course, places considerable reliance on the analyses of the borrowing institution, and therefore studies only the more essential elements of financial, technical and economic analysis rather than the details. The primary work of the IDB in these relending operations is on the institutional side. Most local development banks have had poor records of lending in the past combined with limited contributions to the economic development of the countries. Much of the Bank's technical assistance, direct or through loans, has gone into reorganization, training, outside consultants, management and aid in project promotion and analysis.

Many of the requests for subloan approvals are not particularly well prepared or studied (the same can be said for many direct IDB loan applications). The quality, however, is improving.

30. As a final word on its lending operations, mention should be made of the IDB policy toward guarantees of its loans. The Bank normally requires that repayment of its loans be guaranteed by a government, or bank guarantee, or where these are not possible, by a mortgage. It requests the guarantee that is practical to insure that the loan will be repaid and the money used for new economic development lending, even in the event that adverse circumstances occur. However, the best guarantee of a loan is always the basic soundness of the project and the financial and managerial competence and reliability of the borrower.

31. So far, this section has dealt with the lending operations but this is only one of IDB's interests. The flexibility in its charter permits it to be concerned with almost all aspects of the economic development of its member countries. A large part of the work of the Bank is directed toward technical assistance. To date it has made loans and grants of about US $7 million for technical assistance. Substantially all of this went to economic development planning and training institutions and industrial development banks, and other areas which should be considered as preproject activities. Although no technical assistance has as yet been granted to the private sector, this is not precluded, and the IDB would consider sound proposals in this field in areas of high priority in the economic development of its member countries, particularly if the projects involve more than one country.

32. The IDB places considerable emphasis on common market developments and uses its direct loans to promote these operations wherever feasible. Its capital is inadequate to provide all the financing needed by industrial sectors of Latin America. It can merely act as a catalyst in financing a portion of high priority needs, either by itself or jointly with others. It must work together with the countries to find what these needs are and how they can be met. Perhaps a major function of the IDB should be in the future to improve its knowledge and understanding of the industrial sector of each Latin American country to the point where it can act as a clearing house and coordinating agency for the financing of significant projects and especially for the development of new projects. It is precisely in these areas where some member governments and the private sectors need help.

D. IDB Operating Procedures

33. Only a few brief words will be devoted to the operating procedures for loans since they are similar to those of other international lending agencies. All applications are screened, and for those where serious study is warranted, a Project Committee is formed consisting of a loan officer (the head of the committee), a lawyer, an economist, an engineer or architect, and a financial analyst. If, after study, the Committee recommendation is favorable,

a report is presented to a Loan Committee and then to the Directors for approval. Approval of the loan is followed by a loan contract which must be signed by the Bank and the Borrower and which contains the overall financing and a number of conditions prior to the first disbursement, covenants, agreements of mutual undertaking on the project, and a list of goods and services to be financed by the loan. This is followed by letters to the Borrower indicating the disbursement procedures to be followed by the IDB, and its requirements for quarterly financial and physical progress reports. Although a considerable amount of work is required in analyzing projects and granting loans, this actually represents a minor portion of the total work involved in bringing a project to successful conclusion and repaying the loan. In addition to project and post-project work, the IDB is devoting a good deal more time to preproject work, technical assistance and economic and industrial development activities, including promotional work on the development of new projects. The contribution of the IDB in these fields must be even greater in the future. Its procedures on non-project activities are informal and depend on the type of study being made. Its loans in technical assistance are handled in substantially the same manner as its project loans, as are its loans to Development Banks and similar institutions.

III.

COMMENTS ON CERTAIN PROBLEMS OF INDUSTRIAL DEVELOPMENT

34. It is not practical to discuss in this paper the major problems or obstacles to Latin American industrial development, such as monetary and political instability, low absorptive capacity, lack of entrepreneurship, low level of savings, lack of funds for investment, poor investment climate, limited size of markets, etc. A few are treated in another section of this paper on the dilemmas of industrial development. There are a number of excellent UN and OAS-ECLA annual surveys on the subject, particularly the World Economic Survey, 1961. The writer wishes to list here five problems which may not have received adequate thought in Latin America, and where those working in both the private and international industrial development areas might make a significant contribution.

A. Productivity of Investment:

35. Insufficient emphasis has often been placed on the production sectors of agriculture and industry with the result that the productivity of total investment and hence the GNP growth rate have been too low. The increased emphasis on social and infrastructure investments should be balanced with increased output.

B. Industrial Planning:

36. Detailed sector planning both by the government and private sectors could stand considerable improvement. More emphasis could be placed particularly on costs and prices, comparative advantage, and location economics.

2 United Nations, World Economic Survey, 1961 Sales No. 62 II. C.1

C. Individual Projects:

37. Financing appears to exist today in most, if not all, countries for any sound and well-prepared project with reasonable financial position (including equity contribution), reasonable capital-output ratio, reasonable foreign exchange savings to initial cost ratio, reasonable production cost, adequate markets and raw materials, reasonable cash generation and reasonable priority in the contribution to the economic development of the area, etc., - or at least financing exists for the foreign exchange costs thereof. There is a real lack of such projects in Latin America today. More thought could be given to projects aimed at the free-trade area.

D. Lack of Knowledge:

38. There appears in many countries to be a lack of knowledge on the part of both the private and government sectors of what could be done and how to do it efficiently and effectively. There is a lack of mutual understanding of the private and government sectors of each others problems and often of what the real problems are in the various industry subsectors. There is often a lack of knowledge of current technology, particularly of what is going on in other parts of the world such as Japan, India, Israel, Western Europe or even in other Latin American countries. There is a lack of knowledge, for example, of how to effectively use available external funds such as those of IDB, AID, or of how to work effectively with the multiplicity of agencies which now exist. There is often a fear in both the private and public sectors of the possible adverse effect of free-trade area competition with little understanding of comparative prices and competitive advantages. It should be noted, however, that there are a number of outstanding exceptions to the above as well as several significant new technological developments within Latin America, such as the Mexican HyL direct-reduction process for steel production or the pulping of mixed tropical hardwoods.

E. High Costs:

39. In a number of Latin American countries the government provides considerable protection to promote import-substituting industries to such an extent that prices are extremely high. In one country, for example, with a well-developed capital goods industry, prices are so high that sales are low and it is cheaper to import even with a very high duty, thus contributing to the balance-of-payments deficit. Thus, the basic problem is often one of local sales, not exports. The small size of the present markets is, of course, an important factor in producing these high prices. In addition, inefficiency, poor management and improper equipment often combine to yield high prices. High prices are caused at times by high input costs such as: gas or oil, power (in certain areas), steel, transport, labor money, and government services (taxes). More emphasis might be placed on the reduction of these costs in certain countries. High prices in certain countries may well inhibit the growth of the common markets, an essential development for Latin American industrial growth.

40. As is so clearly demonstrated in the European Common Market or in Mexico, success breeds success, a high rate of (industrial) growth aids the continuance of a high rate of growth. A successful and growing economy tends to promote monetary and political stability which in turn is needed for economic growth. The solutions to the problems listed above are not easy. They involve hard work and sacrifice for many years, and far more joint effort is needed than now exists; i.e., greater cooperation between engineers, entrepreneurs and economists, greater cooperation between governments and private industry, greater cooperation between local and foreign enterprises, effective cooperation between governments and international agencies, and particularly between these agencies themselves, on the working and planning levels.

41. There are examples of successes on the part of agencies such as IBRD, IDA, AID, UNTA, ECLA, Ex-Im, IDB, and others in working jointly with Latin American countries and completing specific programs, projects and technical assistance activities. None of these groups should really be satisfied with their efforts to date, efforts which are often so disperse that little progress is made toward the solution of the significant problems. In the industrial development area, we in the international agencies need to work more with each other and with the various governments and private sectors to define exactly what these significant problems are and what is their potential solution. Some progress is already being made, particularly in the planning area, but one should not be satisfied with the planning to date, nor with the more difficult operation of implementation of plans. Encouraging work is being carried out in the Industrial Development Divisions of CEPAL and the UN, and the general program of the new UN Industrial Development Centre holds considerable promise. It is not enough to write reports on the Capital Goods Industry of Argentina or Brazil, if these reports do not lend to concrete improvements in these sectors.

42.- The IDB, in its two years of operation, believes that it has made a real contribution to the industrial development of its member countries, but it must certainly make a more significant contribution in the future. As an example, let us consider its loans to development banks or lines of credit. In many cases, the amount of subloans has been discouraging. There have been many institutional problems and a considerable portion of the IDB efforts have been devoted to overcoming these with encouraging results in some cases. But a development bank needs the best economists, engineers, financial analysts and administrators available in a country. The work of the development banks in promoting, analyzing and helping in the execution of sound programs and projects is not easy. We in the international assistance area must learn how to work more closely with these banks in providing guidance, training and both preproject and project aid, and yet we must avoid the error of dispersing our efforts to such an extent that we make no real overall contribution. Constructive suggestions as to how to carry out our work more effectively would certainly be welcomed.

IV

DILEMMAS OF INDUSTRIAL DEVELOPMENT

43. Decisions in the field of industrial development are frequently difficult, from the assignment of priorities to either the overall industrial sector or to specific industrial projects or programs, as well as the establishment of the policies needed to promote industrial growth. These are usually complicated by political and social factors, but even where the problems appear to be largely economic in nature, economic theory is often inadequate to provide a clear-cut answer. In this section a few of the dilemmas will be listed to illustrate the type of problems encountered in the work of the IDB in this field. As stated previously, however, the basic problem is to find reasonably sound projects or programs, rather than optimum or highest priority projects, The use of reliable "shadow" or "accounting" pricing techniques(reflecting the true equilibrium of factor inputs and uses, including foreign exchange for the proposed investment program),based on long-range sectoral planning, would simplify investment decisions in some cases, and should be encouraged. Nevertheless reliable data are seldom available and therefore decisions will continue to be made by a country on a qualitative, empirical, or even on a political basis. A brief discussion follows of a few conflicts inherent in industrial development in connection with the major areas to which these conflicts relate.

A. Overall Investment Level

44. The overall investment level must be increased, and yet it is difficult to increase savings and to decrease consumption and current government operating expenses. Consortium-type financing appears needed.

45. An increase of government revenue is needed to increase the level of infrastructure investment particularly, but such increases often work a considerable hardship in different areas.

46. The total investment level is most effectively increased by foreign borrowing (long-term preferably), but the increased debt-service may so adversely affect the balance of payments that private local and foreign capital investment may decline and/or capital flight occur, thus reducing the investment level.

47. Military expenditures in some countries could obviously be decreased, and a higher portion of the military budget might go into investment and productive activities. (A shift to the U.S. Corps of Engineers type of operation would appear to be desirable).

48. In most Latin American countries one main problem appears to be the effectiveness or productivity of investments even at the present level, but this would require more investment in agriculture and industry; yet the infrastructure and social needs are so great that a proper balance is required. In the absence of comprehensive overall and sectoral programs, meaningful evaluation of sectoral priorities is difficult.

B. Industrial Sectoral Investment Level

49. A minimum growth rate of the industrial sector of perhaps 10% per year is probably required in most Latin American countries for a per capita growth rate of about 2%; yet neither money nor specific projects are forthcoming. For this rate of growth even larger infrastructure investments are required in some countries (e.g. power and gas in Argentina).

C. Government Monetary and Fiscal Policies

50. Industrial growth is hindered by either highly inflationary monetary policy or by deflationary policies lending to stagnation; yet it is difficult to avoid one of these extremes since monetary instability (on either current or capital accounts) often requires one or the other solution. Governments are often unable to control their budgetary and balance-of-payments deficits (through rigid import or exchange control restrictions, etc.).

51. One of the main factors contributing to investment and the future rate of industrial growth is the present rate of industrial growth itself; yet the monetary policies required to maintain a high rate of growth (i.e. low interest rate, cheap-money policy, availability of working capital, etc.) may lead to excessive inflation. It is difficult to provide effective selective controls of the money supply, to channel funds to the priority needs of the agricultural and industrial sectors and to the priority subsectors.

52. A fiscal policy geared to promote industrial investment such as income tax-free benefits may rob the government of needed sources of revenues. It may be better to permit and tax a profit than to give excessive subsidies and other tax benefits. Import and export taxes may seriously hamper the industrial sector, and yet no other major source of revenue may be available. Selective import restrictions and tax benefits for particular industries or commodities, while often desirable (i.e. low fertilizer duties), are difficult to legislate and administer and, because of political implications, to keep decisions on an economic basis.

53. A government budget in Latin America usually must minimize its current expenditures, maximize its investments, and provide some money for investment and working capital loans to the private sector, since inadequate resources (either in foreign or local currency) are available from the private or foreign sectors. If the productivity of investment and thus the rate of growth were sufficient this might be feasible. Alternatively one way to do this is to resort to the printing press. Most countries have not yet been able to channel available savings into investments properly to achieve a high rate of growth even with inflation; and in certain countries inflation is occurring simultaneously with stagnation and even depression. On the other hand, the curtailment of current expenditures may inhibit growth and may mean inadequate attention to education with adverse repercussions on the capacity of the labor force and productivity.

D. Government Planning and Policies

54. It is obvious that detailed short and long-range planning and the development of a shelf of sound projects and programs are needed if each country is to use effectively available local resources, and to obtain the foreign resources available from international and private lending institutions. Unfortunately, industrial planning in Latin America is still weak. Furthermore, the absorptive capacity for foreign capital in most Latin American countries is still too low and more money is available than is now being utilized.

55. The negative effects of political instability, military intervention, capital flight, etc. lessen the effectiveness of any planning, and adversely affect growth rate, investment, the level of economic activity, and benefits from foreign loans, etc..

56. Although macroeconomic planning, linear programming and input-output analysis are important tools in present growth theory and offer considerable attraction to economists and engineers alike, a more immediate and significant problem appears to be in effective detailed sectoral analysis leading to specific programs.

57. Planning in the agricultural and industrial (productivity) sectors, perhaps the most important of all sectors, is certainly the most difficult. Traditionally, Latin American governments have left the bulk of planning in the industrial sector to private industry, and the low rate of growth may be the effect of poor planning as well as of a poor investment climate. In the existing economic development plans both the agricultural and industrial sector plans appear to be the weakest. It is far easier to develop an overall power program or a transport system for a country. Although industrial planning is difficult, it is essential; goals must be established, raw material sources developed, the private sector aided, new processes and investment opportunities found and promoted, markets broadened, etc. This cannot be achieved, however, unless the planning agency works closely with the private sectors.

58. It is difficult but important to achieve a proper balance between growth in the developed and backward areas of a country. Where a present or future comparative advantage occurs with specific projects in the lesser developed section, a decision is easy. However, it is often more economical to locate the plant in the developed area. In this event, some sort of a regional shadow pricing technique might be employed to justify projects in the lesser developed areas, but rigid criteria would be difficult to establish. The new theory of growth at the poles (i.e. in São Paulo, Buenos Aires, Santiago, etc., or even at raw material sources), particularly in heavy industry and in capital goods, with secondary effects throughout the rest of the economy, has considerable merit, and growth at the poles cannot be neglected. But one cannot forget the needs of the other areas, just as one cannot neglect the economic growth problems of underdeveloped countries. Nevertheless, if industrial planning is difficult in underdeveloped countries, planning in the lesser developed sections of these countries,

is even more so. The general approach to date appears to be to allocate a portion of the investment budget or to offer subsidies and tax benefits to the underdeveloped areas, but an even greater effort must be made to develop investment opportunities in these areas with a real, long-run comparative advantage. Perhaps too, even greater effort should be placed on diversifying and improving agricultural productivity in the lesser developed regions.

E. Industrial Priorities

59. Since there is a shortage of capital with labor in surplus supply, there is a need for labor-intensive industries, but it is difficult to find an economic advantage of labor-intensive over capital-intensive methods, particularly in the dynamic industries. As a result, capital-labor ratios are very high in most industries and direct employment benefits of most investments are small. Indirect benefits are greater, but even a high rate of industrial growth is unable to solve the employment problem.

60. Since a poor distribution of income is a real problem in all Latin American countries, projects resulting in a better distribution warrant priority consideration (high ratio of wages to profits, large number of small stockholders, etc.), but this might well lead to greater consumption and less savings and reinvestment. Distribution of income appears to be a qualitative factor for consideration in priority assignments rather than a quantitative one.

61. Investment in consumer goods, particularly luxury goods, is generally considered of a lower priority than capital goods, often for political and social reasons. The long range effect on the GNP and balance-of-payments position, including multiplier effects, might be better criteria, however. After all, the end-use of the economy is consumption. Nevertheless, necessary goods should have some prior claim on scarce resources.

62. The relative weight to be placed on the benefits of the project on the long-run balance-of-payments position and on the GNP is perhaps the problem most frequently faced in industrial priority studies. Obviously a project with an annual foreign exchange saving to initial cost of 0.3/1 and an increase in GNP/initial cost of .3/1 would receive a relatively high priority, but what about a project with a zero foreign exchange savings or even a loss and a .5/1 ratio of GNP increase to initial cost? Even shadow pricing techniques are of limited value since they would merely give a somewhat higher foreign exchange savings ratio. Here a realistic model (based on reliable development plans) such as the one developed by Chenery[3] for Israel can throw light on the relative needs of foreign exchange and GNP growth.

63. Most countries in Latin America lack both foreign exchange and local currency; i.e., total resources. Generally foreign exchange is available for the foreign exchange costs of sound, priority industrial

[3] Chenery, H.B. and Bruno, M., Development Alternatives in An Open Economy
The Case of Israel, Economic Journal, London, March (1962)

projects through international lending or foreign supplier credits, but only for import costs. Local currency costs are often raised by inflationary means. This, in turn, usually means a higher level of economic activity, more imports, and an even greater balance-of-payments deficit. Yet often, particularly in the agriculture processing sector, projects with a small foreign exchange component yield both a high output/capital ratio and a high foreign exchange savings/foreign exchange cost ratio. Governments and international lending institutions must jointly decide when local costs should be financed locally (and by what means) or by foreign borrowing with the accompanying increase in the debt service obligations. The beneficial affects of a given program may be more than offset by the adverse effects of the latter, particularly if debt service is already much above 10% of foreign exchange earnings and if reserves are low. In other cases, however, foreign financing of local cost of high productivity projects would appear to be sound, but so might local financing.

64. One dilemma that seldom arises in the underdeveloped countries of Latin America is the general decision whether priorities should be placed on export industries, on import-substitutions industries, or on domestic capital-goods industries. Since there is a real lack of all three type of projects, all should be promoted simultaneously, as indicated in the UN "World Economics Survey, 1961 [4] .

F. Investment Decisions

65. A number of Latin American governments have adopted the route of government ownership and operation of some industrial facilities. There is no doubt that in a number of cases there is no real alternative. There are several examples in Latin America of successful government operations and the IDB has made loans in this field, but there are also examples of outstanding failures. Governments beset by political instability or by a lack of trained personnel have had particular difficulty. Government development of new projects that are demonstrably of high priority is perhaps easiest where the private sector is unwilling to enter, because estimated profits are too low, because equity capital requirements are too high (i.e. a million ton-per-year basic steel mill), or because the risk is too great. Care must be exercised not to carry out sub-marginal projects that will continually represent a drain on the federal budget. The projects must be conceived, carried out, and managed well, and projects have been successful only where this has been done. Governments have also been attracted to industries where high profits are visualized (i.e. petroleum refineries, mining, etc.). In some cases, particularly where industries have been nationalized, profits have been disappointing due to an inability to run the operation with the necessary degree of efficiency. The general dilemma appears to be the following: Governments lack the financial

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4 Op. Cit.

resources necessary to carry out the needed infrastructure (power, water, transport) and social investment. Their investments in industries would impose a burden on the budget, thus reducing debt capacity for infrastructure investments. This also may reduce private investment directly and through a deterioration in the investment climate. Some governments have been successful (i.e. CORFO in Chile) in starting new projects, operating them successfully and selling them to the private sector and reinvesting the proceeds. Adequate planning can help to establish the appropriate place for the government in industry. Whether or not a government wishes to build certain industries, there is much it can do to aid the private industrial sector.

66. Another difficult area is often that of foreign investment, and there is considerable sentiment against foreign investment in certain countries; yet there are insufficient resources available in Latin America or in existing international lending institutions to provide the necessary investment funds, and so foreign investments in some fields should be not only accepted but actively invited. Mexico's control of foreign investment, through minority ownership by foreigners and other controls, appears to have had considerable success in combining the know-how and financial resources of foreign capital with increased local savings channeled into productive investment, thus minimizing the political complaints against foreign private investment. On the other hand, this control may be partly responsible for the recent falling off of investment in Mexico. The resentment against foreign capital is a powerful factor in some countries, but there is obviously a real need for these investments. The IDB has financed a number of joint foreign-local enterprises with considerable success to date, and its main efforts in promoting private foreign investments continue to be in this area. Tax benefits to encourage reinvestment of profits of foreign-owned investment would appear to be more feasible than limitations on dividends sent abroad. Perhaps, since it is an Inter-American institution, the IDB can make a contribution in the area of mutual understanding between the private sector and governments in certain troublesome areas. There is no doubt that many mistakes have been made in the past on both sides. The development of a more realistic climate for both local and foreign investment must be a primary objective of the IDB.

67. With the limited markets existing in Latin America, economies of scale dictate fairly large plants for the production of many commodities, often leading to monopolies or oligopolies. However, there is considerable social sentiment in favor of the small producer, even though relatively inefficient, particularly if a number of small producers already exist and especially if they are located in underdeveloped parts of the country. Yet, more and more, as free trade areas come into being, a large efficient plant is necessary to compete either in the internal or export markets. In some industries, then, since there may be no practical alternative, countries will have to learn how to regulate monopolies or to enforce competition through trade within the integration area. In addition, it may be more difficult to regulate a local monopoly than a foreign one.

68. Insofar as plant size is concerned, the economies of scale may dictate an optimum size plant that is larger than the local group can finance (i.e. steel mill). Usually a compromise must be reached, but this is one area where foreign loans or partial equity financing may be helpful. Often, however, the wrong size plant is built because market misestimations are made.

69. It is often desirable to finance small firms or those with a large number of stockholders or new and inexperienced groups with limited entrepreneurial ability for social (or political) reasons. Yet it may be far wiser, and it is certainly easier, to finance firms that have already established themselves in the field or at least in carrying out successful new enterprises. The bulk of foreign financing goes to the latter type of firm because of the greater certainty of loan repayment and of project success. If the project is unsuccessful and a loan to the local development bank is not repaid, no one is benefited. On the other hand, industrial estates can play a role in the economic development of Latin America.

G. Wages

70. Unfortunately many industrial projects, particularly those in the dynamic sectors such as chemicals and steel provide limited direct benefits to the workers since the capital/labor ratio is high. Thus, direct benefits of industrial development are frequently not filtered down to the labor sector. The remedy of a higher level of investment and more industries is not easy to achieve. Industry does, however, provide a large increase in high-quality employment of technicians, skilled workers, engineers, etc.

H. Education

71. Often absorptive capacity (technical skills, entrepreneurship) limits industrial investment rather than a lack of financial resources, yet the most effective type of education may be "on-the-job training" either for labor or for management. Governments might consider direct support for this type of educational effort in order to upgrade jobs, improve technical efficiency and lower costs of production.

I. Prices

72. High prices may be needed to insure profits and hence new investment and industrial growth, but high prices discourage consumption and can lead to excessive imports and adversely affect growth.

73. Similarly, high protection for one industry (i.e., steel production) may have an induced negative effect on all steel-consuming industries (i.e. the entire capital goods industry). Conversely, new industries with reduced costs and prices may have not only direct production benefits but also induced effects that are socially important as well.

74. Similarly, high costs and prices inhibit the development of the Common Market areas; yet it is difficult to see how general industrial growth in Latin America can continue to occur unless the free-trade areas can be made truly effective. The "autarchical" forces favoring protection will not be easy to overcome, however.

J. Summary

75. Even if complete macroeconomic and sectoral planning existed, the problems listed above would not be capable of quantitative solution. Accordingly, and since each project is different, the IDB has not developed formulas for its project evaluations. Its lack of a sufficient number of projects to permit comparisons is likewise a factor for this decision. Thus as stated before, one of its main characteristics is flexibility, and this is permitted by its flexible charter. It does have certain limitations or restrictions, and it certainly cannot solve the major problems of any Latin American country. The solutions depend primarily on the individual countries. Where a basis of mutual cooperation can be achieved, however, the IDB can certainly furnish important assistance.

V

INDUSTRIAL SECTOR PLANNING

76. In the planning field in Latin America, there appears to be lacking, in general, detailed "dynamic" analyses of the industrial subsectors with emphasis on the key sector-key project approach and on production costs and comparative advantage, as well as on target quantities and on investment levels.

A. Growth Analysis, Sector Allocation and Shadow Pricing

77. There is room, however, for macroeconomic or growth theory analysis, model building, linear programming and shadow pricing, although these appear to be of lesser urgency than sector analysis. Macroeconomic analysis made for various target assumptions is particularly valuable in estimating total savings and investment levels and the need for both local and external resources during the planning period of perhaps 5 years. Simple models of the type projected for Israel by Chenery[5] can be used to estimate relative resource requirements of labor, local currency and foreign exchange for various targets. This should permit the calculation of the shadow prices of these three items using a model based on all sectors of the economy rather than the single sector analysis used in the UN Industrialization and Productivity Bulletin No. 5.[6] In order to use this approach one must make arbitrary investment allocation estimates between the productive sectors

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5. Op. Cit.

6. Op. Cit

(agriculture and industry) and the others (infrastructure, services, and the social sectors). These allocations are usually based on experience or judgment, and no really reliable method has been developed for this allocation. Certainly reliable capital/output ratios are difficult to calculate in the non-productive sectors. A preliminary correlation of the growth rate data for underdeveloped countries suggests that there is a minimum percentage or amount of total investment that must go to the productive sectors if appreciable growth is to occur. This is obvious since the capital/output ratio is (very approximately) 2 or 4 in the productive sectors and 10-20 in the non-productive ones. Much more work needs to be done on this subject however. Another area for further work might be the integration of the monetary equations into the planning operation. This appears to be particularly important for certain "disequilibrium" economics of Latin America where monetary factors have all too often been disregarded.

78. Another interesting technique that has found wide application in Latin America, but limited use, is input-output analysis. The consolidation of subsectors into the relatively small number of sectors needed for input-output analysis and its basically static nature certainly reduces its utility for detailed analysis of the industrial sectors. Perhaps the best uses are: 1.) in establishing individual import co-efficients to determine the effect of changes in the investment pattern (i.e. the effect of a shift to more capital goods production) on the balance of payments; and 2.) in estimating intersectoral relationships. National Income Accounting projections are probably of greater value with the emphasis on factor payments (wages, interest, profits, taxes, etc.). Too little attention has been paid to factor payments and yet this is one key to both growth analysis and to establishing growth and project criteria.

B. Sector Analysis

79. Industrial sector analysis requires hard work, experience, both broad and specific knowledge and detailed understanding of prices, production costs, alternate processes and potential and actual raw materials. It requires an ability: 1.) to comprehend the essential rather than the details; 2.) to see clearly the principal problems and bottlenecks of each industry and to postulate practical solutions; 3.) to understand and project market trends and prices and to cross check the results by methods such as those of Chenery[7], or other common-sense methods; 4.) to maintain proper balance between short range and long range objectives, as well as between regional and industrial center needs; 5.) to work closely with and to aid the private sector; 6.) to work with outside experts when necessary; 7.) to understand thoroughly project criteria and project analysis; 8.) to recommend areas for further work or research; 9.) to establish the objectives of the planning operation, and come up with a realistic investment and growth plan; 10.) and to

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7 Chenery, H.B., The Role of Industrialization in Development Programs, Am. Ec. Review, Proc., 40-57 May (1955)

help formulate appropriate government monetary and fiscal policies necessary to carry out the plan. It may be necessary not only to plan but to help to promote specific key projects or programs and to implement these programs. The total number of programs or projects should hopefully be far more than can possibly be financed, so that there is always a backlog. This has the advantage that foreign or local, private or public capital can finance what is easiest for it. This type of planning facilitates macroeconomic and growth analysis, and, as stated previously, this in turn aids in the estimation shadow prices, which are valuable in proper allocation of abundant and scarce resources within the industrial sector, Dynamic sectoral analysis requires taking account of the changes with time of material prices, markets, technology and the effect of the growth rate itself or of political and monetary instability, devaluation and depression. In this paper, the writer can do no more than stress the need for this type of planning, and for competent personnel. It is suggested, however, that considerable insight and knowledge can be obtained from a study of growing economics such as in India, Yugoslavia, Israel, Japan, etc. including their method of sector study, the type of projects promoted, and the way in which these government planning agencies aid the private sector.

80. Too much emphasis cannot be placed on the need for detailed preproject studies, as an aid to planning, to the economy as a whole, and to growth rate. The IDB has placed particular emphasis on planning in its technical assistance operations, and it is hoped that even greater contributions can be made in the future by the international agencies in this area.

VI.

PROJECT CRITERIA AND PROJECT ANALYSIS

81. Annex 1 presents a brief outline of some of the essential elements of project analysis, including the criteria used for evaluation. The subject is treated more fully in the UN Manual of Economic Development Projects, Part I [8] (Part II requires revision). A brief review of Annex 1, particularly Section 6, "Evaluation" suggests that there is a multiplicity of criteria needed to evaluate projects. This is perhaps fortunate. The science of economics has not progressed to the point where a single formula is adequate. The IDB has adopted the flexible approach of viewing each project or program using numerous criteria as guidelines to determine whether the project provides a reasonable benefit to the economic development of the member country or to Latin America as a whole. No attempt has been made to weigh quantitatively the various criteria: first, because planning is not sufficiently far advanced to establish the proper weights; and second, because such a small number of economically desirable projects are available for IDB's study that the problem is not one of establishing priorities but of finding "reasonable" projects. Adequate planning in the member countries, with more cooperation between the IDB, the member countries and their private sectors, and

8 United Nations, Manual of Economic Development Projects, Sales No. 58. II, G.5

with a more thorough study and understanding of the country's industrial sectors and their problems would improve not only the criteria for evaluation but also IDB's contribution in the Industrial field and the private sectors; and it is hoped it would contribute more substantially to the growth of its member countries and to the solutions of their basic structural disequilibrium.

A. Considerations of Criteria for Assignment of Priorities

82. The shadow pricing technique goes part way toward resolving the inherent conflict between: 1.) production theory or microeconomic analysis on the one hand with its concepts of equilibrium analysis, and the theory of the firm and profit, and its emphasis on comparative advantage, opportunity costs, and resource allocation; and 2.) growth theory combined with dynamics and macroeconomic analysis where factor prices are not equal to opportunity costs or to actual prices at the moment, but depend on longer-run relative scarcities. In growth theory all variables such as income, consumption, optimum plant size, and factor costs are not constant but change with time, and emphasis is placed in establishing criteria for project evaluation on both the long range and short range increases in the GNP. Thus "social" value added by manufacture per unit of money invested, including both direct and indirect benefits, appears to be the best criteria developed to date, if adequate allowance can be made for the appropriate shadow prices of foreign exchange and labor. But this, or the even simpler criteria of value added, is difficult to use for many reasons, such as 1.) Indirect benefits, backward and forward linkages, and multiplier effects are difficult to evaluate and even the effect of induced investment depends on whether the country is short of projects or short of money; 2.) Some arbitrary method of discounting must be adopted in order to compare future with immediate benefits to GNP or to the balance of payments. 3.) Positive direct benefits may be more than offset by negative indirect effects such as political and monetary instability, regional unemployment due to failure of a competing industry, inflation, etc., or vice versa. In addition, so little is known about the application of the basic Keynesian macroeconomic equations that it is not obvious whether or not GNP increase is greatest if one tries to maximize disposable personal income, investment, total consumption, wages, or profits for reinvestment. Hirschman's phase of "Strategy of Economic Development"[9] appears to be most appropriate.

83. As indicated in Annex 1, projects should be evaluated in terms of a number of criteria. From the point of view of the individual enterprise one must look at: 1.) profitability in terms of total investment, equity, sales, and c.i.f. price of the product and in allowing for adverse events and changes in input prices and markets with time; and 2.) cash flow(profits plus depreciation in relation to debt service) or discounted cash flow. From the point of view of the economy, yardsticks should be used not only of value added, or of foreign exchange value added (annual foreign exchange earned or saved less annual foreign exchange cost per unit investment cost or per unit of initial

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9 Hirschman, A.O., The Strategy of Economic Development Yale U Press, New Haven

foreign exchange cost), but also of the overall effect of the project on the economic development of the country or area, as suggested in Annex 1; i.e., the present and future effects on debt service, balance of payments, monetary stability, employment, national income, public finance, income distribution, regional development, social benefits, profits for reinvestment, strengthening of capital markets, maximization of financial contribution of owners, utilization of resources (especially under-utilized resources) and, particularly the multiplier, indirect or induced effects of the project on the rest of the economy. The dynamic growth possibilities of the industry in general and the firm in particular are also important criteria for evaluation. Finally, extremely important criteria in determining the desirability of a project are the firm's experience record, technical and managerial capabilities, credit worthiness, and ability to finance and carry out the project and the reliability of the preproject studies and cost estimates. Thus priorities can be assigned by looking at each project from at least three points of view, the private, the social-economic, and that of a banker. One might describe the work of the IDB, or any development institution for that matter, as schizophrenic, but unless a project is carried out and placed in successful operation, unless it provides a significant contribution to the development of the area, and unless it provides a profit for its owners (or some significant benefit in the case of government-owned project), then it should not be started in the first place.

B. Project Analysis

84. Project analysis involves the evaluation of projects or programs using the criteria just discussed or similar ones. Annex 1 suggests that it involves technical, economic, financial, legal, and perhaps social analyses. Often these can not be separated. For this reason joint analyses by persons of different disciplines appear to give better results than isolated studies. The emphasis in the IDB is on dynamic analysis to try to evaluate properly future favorable and adverse events such as the effect of future competition, devaluation and inflation, and changes in selling prices (often a very important variable), input prices, sales volume, construction costs (particularly local cost increases due to inflation), and start-up difficulties. Considerable importance is placed, in addition to the usual evaluation of technical, financial and economic soundness on cash flow analysis, unit-production cost analysis, comparison with c.i.f. prices, comparative advantage, the foreign exchange savings analysis (since almost all Latin American countries have a difficult foreign exchange problem), and on the economic benefits of the project to the area. Other tools often used by the IDB in its analyses are: 1.) break-even point analysis; 2.) minimum and optimum plant size calculation; 3.) location theory calculations; 4.) calculations based on several assumptions of devaluation and inflation; 5.) cross-checks of market analyses by independent methods; 6.) detailed study of effects of competition within the free-trade area, and from countries outside the area; 7.) study of export possibilities, particularly to other Latin American countries; and 8.) study of use of domestic raw or intermediate materials from other Latin American countries in the framework of regional integration.

85. In order to make a broad and dynamic study of the type indicated above the IDB has adopted the philosophy that it should try to know as much as possible about technology, production costs and markets in the important industries and commodities in Latin America and where possible in the other countries of the world. If the IDB is as well or better informed than its private borrowers, project analysis is simplified and a contribution can sometimes be made to the successful completion of its projects. This is, of course, difficult in many cases and impossible in others. It involves trying to keep abreast of important technological innovations, and to learn what is going on industrially, and to understand the industrial problems and bottlenecks in each of its member countries. It hopes continually to extend its connections and cooperation with government institutions and the private sectors in these countries and in the developed countries. This cooperation is important in all of IDB's work, in loan evaluations, in project promotion, in technical assistance and preproject work and in its broader economic interest of common market promotion, export and local financing, etc..

86. In summary, project analysis is difficult, and clear-cut directives are not always available. One's techniques are improved only by hard work on detailed project analysis and by slowly increasing knowledge of of the Latin American industrial world. Perhaps the qualities most important in this work are humility and open-mindedness for one is constantly learning on each project being studied.

87. For those interested in a little more information on the minimum data desired by the IDB on its loan applications, a copy of its "Informal Guide" is furnished in Annex 2.

VII

REVIEW OF IDB LOANS TO ILLUSTRATE CERTAIN OBSERVATIONS

88. It might be of considerable interest to the conference to review the analysis involved in each of the IDB loans, but since this information is confidential one can only use the results to illustrate certain principles already discussed in this paper. The loans will be discussed in relation to the general fields of industrial activity.

A. Pulp and Paper

89. As suggested previously, IDB's greatest contribution to industrial growth in Latin America, in its direct lending, is probably in the pulp and paper field, particularly kraft pulp, and this contribution is due in no small part to the joint activities of the CEPAL-FAO-UN group and to a strong and experienced private sector in this field. The total annual foreign exchange savings should be about US $ 35 million and the total GNP contribution should be about US $37 million for the four loans made to date, for a total foreign exchange cost of the projects of US $35 million and a total cost of US $73 million.

90. Two projects employ new technology of mixed tropical hardwood

pulping developed in Latin America, thus bringing a new raw material into effective use. Two projects will use primarily sawmill wastes. In all four projects pulp production costs were unusually low, due to low input costs and economical size of operations (3 were in 40,000 to 140,000 tons per year range). Value added and foreign exchange savings ratios were high. Three projects involved integrated pulp and paper operations, thus appreciably reducing unit costs by spreading overhead and utility costs over at least two operations and reducing pulp costs by taking more profits on the paper products where the profit margin in Latin America is considerably higher.

91. One project involved backward integration from paper by adding a small pulp plant to prove out the new process, and using already existing utilities and services. Particular attention should be made to the philosophy of the group in building up the industry on a sound stepwise approach, thus permitting more reasonable selling prices than if a single large investment had been made. The same company has a high growth rate of sales of its containers and cartons because of its rather outstanding departments of design and customer sales and its ability to aid its customers in the packaging field. The project is an excellent example of a joint U.S.-Latin American undertaking. In addition, the initial work on development of the new pulp process was carried out by the government development institution so that this phase of the project is now equally owned by all three groups, again an excellent example of a cooperative venture.

92. One of the projects involves almost entirely the export of long fiber Kraft pulp to other Latin American countries within the LAFTA common market. This is perhaps the most important integration project financed by the IDB to date, and benefits will be achieved both in the exporting and importing countries. The project also illustrates the advantage of long-range planning of pulp raw materials area, although planning in areas of other uses of wood was not as effective. The project also illustrates the advantages of employing, at least in the dynamic industries, foreign consultants with the latest information on technological improvements, even though the Latin American operating company had had considerable experience in the field. As a matter of fact, foreign consultants were used to advantage on all four of the paper and pulp projects.

93. In more than one of the projects, very large firms or monopolies of some sort or other were involved. There may be no alternative if a low cost industry is desired and if the common market is to become a reality, because low costs and large plants are needed for competition, particularly in the pulp and newsprint fields, which represent almost all of Latin America's pulp and paper imports. The solution may be to enforce competition through the common market rather than to protect each plant.

94. These studies illustrate that projects must be viewed in the light of the total Latin American picture, and often the world picture, rather than that of the country alone. Furthermore, one must understand the problems of the entire pulp and paper industry and not only of the particular products to be produced. Market studies must take into account

future events and price changes in each country, and this is obviously difficult particularly since there are many different types of both pulp and paper. In one case, the IDB financed two large competing projects in one country because it was satisfied with overall market projections.

B. Capital Goods Industries

95. The IDB has financed several projects in Argentina and Brazil in the capital goods field, particularly in automobile parts such as brakes and drums, gears and chassis. These projects are reasonable ones, but it is not at all certain that they are really significant within the overall needs of these sectors in Brazil and Argentina. Both countries are faced in this sector with the problem of low sales, high costs, high protection, and loss of considerable foreign exchange because imports are cheaper. An excellent start has been made by CEPAL and several governments on sectoral studies of the capital goods industry in these countries, but these studies are necessarily directed more toward markets than to costs and prices. More work needs to be done in this important sector in establishing the real needs, bottlenecks and priorities. Perhaps the IDB might consider in the future the possibility of a sectoral line of credit to the capital goods industry if sound plans are available in these areas because the priority is obvious; however, the solution to the problems is not.

C. Agricultural Processing

96. The IDB has financed one large citrus and vegetable processing project even though essentially no market study was available. The project was justified, however, by the dynamic growth possibilities of the local and export markets. At a selling price equivalent to the c.i.f. price, the break-even point was less than 25% of the normal operating capacity of the plant. Thus a smaller market was needed to justify the project. The potential market also justified the inclusion in the project of a large vacuum flash drying unit for producing completely dehydrated citrus products, Many other products such as vegetables, tea and even milk might eventually be processed in this equipment.

97. Another large project was for a tuna fish processing plant with fish meal and oil as a minor phase of the project. This is essentially an export project and market studies were difficult. The technique used was to establish high, low and medium selling prices and costs to insure that the project was economical even under the most pessimistic assumptions. This is a project being carried out by the government in order to foment a new industry and the industry will be offered for sale to the private sector when it is placed in successful operation. The government has also carried out an integrated fishing port development program to help promote the development of this industry.

98. Several other projects have been financed in the agricultural processing field such as corn flour, bakery products, meat processing, textiles and fats and oil. A number of others have been studied in addition. In several cases there was a problem of growing adequate

quantities of raw materials and in developing markets for the products. In one project, the main benefit appeared to be indirectly in maintaining a uniform price of the agricultural group. Perhaps the greatest economic benefit was achieved in the fats and oil processing field. The one small textile loan represented a backwards integration into the processing of kenaf and other fibers. As the ECLA studies show, the problems and needs of the Latin American textile industry are great.

D. Petroleum, Chemicals and Petrochemicals

99. Two chemical projects have been financed, synthetic detergents and synthetic rubber. In both, the main problem was in establishing the real comparative advantage of the processes, especially in view of potential competition within the two common market areas. In one case the borrower, a government enterprise, associated itself with a recent and outstanding U.S. development of polybutadiene production that promises a superior product to the ones currently on the market. In the other, a new sulfur trioxide sulfonation process was employed. The one loan to an oil refinery involved primarily the upgrading of by-products.

100. Of all the industrial loans under study today by the IDB, and there are very few, the most interesting are in the fields of basic iron and steel (including special steel), metallurgicals and chemicals, the more dynamic sectors of the Latin American economies. The chemical field includes a number of inorganic products such as sodium sulfate, sodium carbonate, caustic, chlorine and fertilizers and the organic products include various petrochemicals and plastics. A number of additional projects in the chemical field that the IDB has been following closely will probably be submitted for its study within the next two years. Here again, the ECLA studies have been useful. The chemical industry is a field where common market agreements are particularly important since the minimum economic plant sizes are large and investment costs are high, as are existing production costs and selling prices. However, Latin American countries have the resources available to produce at low cost their chemical requirements. Further efforts to lower tariffs rapidly within the LAFTA area would appear to be desirable. In addition, markets for fertilizers, insecticides, weed killers and agricultural chemicals need to be developed through subsidies, tariff reductions, education, demonstration projects and other government aid.

E. Construction Industry

101. Perhaps a final word should be said about the IDB loans to date in the construction industry. These complement, in a way, IDB's extensive work with its Social Progress Trust Funds in housing loans. One loan involved a plant to produce prefabricated houses using a French technique, with the high monthly interest rate of 2 to 4% prevailing in the country. The project could be justified in the saving of construction interest on houses alone. Far more work needs to be done on establishing housing standards and in planning for the construction industry, however.

102. Three cement plants have been financed, one of which is government-owned. The cement industry is well established in almost all countries and can usually provide its own sources of financing for expansion except in the marginal geographic areas. The IDB financed one cement project in the only Latin American republic which lacked such a plant. Efforts had been underway for many years to build the plant in the country, and the need for the project was obvious.

VIII

LAFTA AND INDUSTRIAL DEVELOPMENT

103. The year 1962 appears to have been a year of serious economic deterioration in Latin America; characterized by a large loss of foreign exchange, a flight of capital, an appreciable decline in both foreign and total investment, a slow down of the growth rate of national product, probable increase in unemployment, and political and monetary instability. For the 7 large countries (Argentina, Brazil, Colombia, Chile, Mexico, Peru and Venezuela) total foreign debt exceeds US $6 billion, annual debt service exceeds US $1.2 billion or 20% of total imports, and investment income sent abroad annually exceeds US $1 billion. Faced with a decrease in: 1.) rate of import substitution; 2.) foreign investment; and 3.) foreign loans, Latin America, if it wishes to progress, must reverse these trends and increase significantly its intra-zone trade.

104. There are two schools of thought on the direction that Latin America can take, the autarkical, protectionist, or self-sufficiency school and the integrationist school advocating free-trade within the zone. The present LAFTA agreement represents a compromise between these schools but tends to favor the former with its five basic concepts: 1.) emphasis on gradual trade liberalization on those items now traded within the zone; 2.) bilateral or multilateral treaties of complementarity for those items not traded; 3.) special tariff protection in underdeveloped countries for limited periods particularly to aid the establishment of new industries; 4.) special protection for agriculture, and 5.) escape clauses for industry or for countries undergoing balance-of-payments difficulties. The latter three concepts appear to be essential. To date, some progress has been made on trade liberalization, and a few treaties of complementarity have been signed. But the available evidence suggests that there is no alternative to extensive tariff reductions within the LAFTA area in manufactured goods, particularly in the dynamic growth industries, as suggested by Dr. Prebisch, by the Brazilian delegation to the second LAFTA negotiating conference, and by others.

105. Let us examine first the potential benefits and then look at the problems to be encountered if most tariffs on manufactured goods are eliminated or reduced appreciably. A study on exports and imports in 1960 of 7 Latin American countries and their mutual trade (Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela) can be summarized as follows, with all figures in US $ millions.

		total	mutual trade	%mutual trade
exports		6,930	612	9
imports		5,915	560	9
exports	capital goods, intermediate products, consumer durables	731	46	6
same	excluding copper and copper products	215	44	20
imports	capital goods, intermediate products consumer durables	4,185	52	1.2

Thus there is a gap of about 4 billion dollars of capital goods, intermediate products and consumer durables, representing a large potential foreign exchange saving (about 3/4 of total imports) if Latin America could import from itself rather than from outside the zone. If all these materials were produced within the zone the present output of the total manufacturing sector of these countries could be increased by almost 1/3 from its present level of US $12.7 billion, even with no allowance for growth. In the capital goods field alone, it is estimated that Latin America now produces only 10% of its needs.

106. Of course, it is not practical to replace all of the US $4 billion of imports of capital goods, intermediate products and consumer durables. Nevertheless, a 25% or even a 10% replacement (US $400 million) by intra-zone trade, plus the accompanying benefits such as greater foreign investment, would go a long way to solving the basic foreign exchange problem of Latin America, and possibly permit it: 1.) to achieve monetary stability; 2.) to arrest capital flight; 3.) regain a high level of foreign and local industrial investment; and 4.) achieve an adequate growth rate. In addition, a large reduction or elimination of tariffs in intra-zone trade would permit plant location on the basis of comparative advantage and both foreign and local investment climate rather than decisions by supranational agencies or bilateral negotiations. Furthermore, future plant sizes would undoubtedly be larger (thus lowering costs), total investment would increase, the idle capacity that now exists in the capital-goods industries could be utilized and specialization would occur, providing competition plus some degree of complementarity. The high level of current prices in capital goods, intermediate goods and consumer durables would be reduced through competition. The process of intra-zone trade expansion could be aided considerably by the export financing schemes now being developed for this trade. Tariff benefits will be needed to make these schemes truly productive, however, since Latin American manufactured products are in general not now competitive on a price and quality basis with U.S., Japanese and European exports, particularly in the capital goods and consumer durables fields.

107. In order to insure that harmful effects of extensive tariff-reductions are minimized, escape clauses might have to be broadened to include such concepts as voluntary restrictions on exports where excessive harm occurs, and concentrated effort by governments with positive trade balance with the rest of the zone to increase imports from the zone, as Mexico has done in 1962. The underdeveloped countries would still berequire special tariff concessions, and the five Central American countries might wish to enter LAFTA as a bloc. The Central American integration movement has clearly demonstrated the advantages of extensive tariff reductions.

108. In order to convince countries that the idea of a true free-trade area is acceptable it may be necessary to make several specific studies, each involving detailed analysis of each of the major sectors of industries. The studies would involve data on inports, exports, production and idle capacity (exportable surplus) and costs, prices, minimum economic plant size, etc.. (Such studies would also be valuable for national planning whether or not reductions were brought about). Emphasis would have to be placed, not on which items could be added to the negotiation lists, but on which items or industries could not be placed on the free-trade list, and the amount of protection needed for the latter items. An excellent start has been made for one industry in the ECLA study of the Chemical Industry.[10]

109. Economic integration in Latin America appears to be inevitable--the question is when? The sooner this occurs, the sooner can Latin-American regain stability with an adequate growth rate. The economic and monetary conditions may well deteriorate further. It could probably be demonstrated that no tariffs reductions (if employed with adequate safeguards) would harm any country to the extent that enforced stabilization has hurt Argentina and its industry in 1962, or to the extent of the recent unprecedented inflation and devaluation in a number of countries.

IX

SUMMARY

110. The IDB believes that it has made a contribution in the industrial field, particularly in the private sector, in its first two years of operation. The work of the IDB in the industrial field and its policies, procedures and methods of analysis have been traced in this paper. Since project completions are essential if a continuing contribution to the economy is to be obtained, it should be noted that substantially all of IDB's direct industrial loans are well advanced and that engineering and construction progress appears to be satisfactory. Although in new development institutions, loan authorizations normally run far ahead of disbursements,in the case of the IDB industrial loans the total of disbursements plus guaranteed letters of credit exceeds 50% of the total loan authorizations. Furthermore, several projects have already been completed in the two-year period since IDB made its first loan.

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10 ECLA "la Industria Quimica en America Latina", Volumes I and II (E/CN. 12/628, Nov., 1962)

111. This paper has suggested also that there is a need for more detailed sectoral planning, and for the development of specific projects. There is further needed better understanding of the industrial problems in Latin America, and more cooperation between the private sectors, the government sectors, the various international agencies, and foreign governments and private groups, as well as better cooperation within each of the groups. It is not enough to talk about the lack of projects or absorptive capacity or investment climate or the presence of structural disequilibrium and monetary instability, but positive solutions must be found. There must be more work of the type sponsored by the ECLA Industrial Development Divisions and the UN Industrial Development Centre, including the latter's Centre for available information on industrial processes, activities, and consultants. But studies, however helpful, must be followed up with concrete projects. One of the areas where the international institutions might concentrate even more is in the development of significant projects. Particular emphasis might be placed on projects with high direct plus indirect foreign exchange savings (or earnings) ratios per unit of investment cost, because the foreign exchange crisis (and the accompanying effects) is perhaps the major economic problem today in Latin America.

112. In the viewpoint of the writer the creation of an effective low-tariff Latin-American free-trade area would do more toward solving this basic problem than any other single activity. It would also do more toward furthering both industrial and economic development in the Latin American countries and in creating a spirit of effective co-operation. This economic integration area is a second one where the IDB plans to increase its activities.

113. Considerable work is needed in many areas other than planning, project development, and economic integration. Ways must be found to improve the contribution of the local development banks and perhaps the planning agencies in the various countries. Realistic attitudes and improved and uniform incentives are needed toward both foreign and local investment, particularly in the area of joint enterprises. There are obviously problem areas of export financing, local cost financing, financing of local sales, taxation, high prices, investment guarantees, monetary stability and inflation, lack of growth, and many others. These must be studied and effective solutions determined. Obviously the IDB (and for that matter the other international institutions) can help resolve only some of these problems. The IDB believes that it must make a far greater contribution in the next 5 to 10 years, if dynamic growth in Latin America is to be achieved. International cooperation is a third area in the industrial field where the IDB will place emphasis, such as in consortium financing programs being developed by the IBRD for Chile, Colombia, Mexico and other countries.

ANNEX 1

INDIVIDUAL PROJECT ANALYSIS

1. Analysis of borrower

   a. Type of organization, analysis of stockholders and ownership.

   b. Financial record of firm, profit record, debt repayment, dividend policy, etc.

   c. Breadth and capacity of technical, managerial and sales organizations.

   d. Experience in similar projects, especially in new projects.

   e. Complete analysis of firm's history, strengths, weaknesses, etc.

   f. Assurances of repayment, even if new project fails.

   g. Ability of firm to raise additional money in the event it is needed later.

2. Technical analysis

   a. Preproject studies, experiments, process selection, etc.

   b. Complete review of principal engineering features, equipment, process, etc.

   c. Review of auxiliary engineering features (power, water, shops, etc.)

   d. Review of all major engineering, equipment and supplier contracts.

   e. Experience of the firm, or consultants, or equipment suppliers in engineering aspects of project.

   f. Experience of the firm, or constructors in construction or operation of the project.

   g. Capacity of the firm to start-up, operate, and maintain the facilities and sell the product.

   h. Need for outside assistance in e, f, or g.

   i. Need for training of workers or technical assistance.

   j. Analysis of reliability of total investment cost estimates including analysis separately, local and foreign exchange costs.

1. How was estimate made and who made it?

2. How were individual costs determined?

3. Review of local costs (often underestimated because many items are left out).

4. Allowances for contingencies, effect of inflation, devaluation, etc.

5. Review of foreign exchange costs.

6. Comparison of costs per ton of capacity with information on similar projects.

7. Analysis of all costs including details of working capital calculation, inventory, construction interest, all construction costs, etc.

k. Review in detail of reliability of all items in the production costs estimate (i.e. number of workers, organization costs, management and sales costs). Comparison with unit costs on similar projects.

l. Review of operating program for the project: sales, procurement, maintenance, spare parts, budgets, etc.

m. Detailed review of integrated financial-physical progress schedule during construction and start-up periods.

n. Review of reliability of all items in Economic and Financial Analyses.

3. Financial Analysis

a. Review of all items of past and future (projected) balance sheets, profit-and-loss statement and appropriation-of-profits accounts (reconciliation of surplus and application of profits account). Accounts should be certified by a public accountant. Particular attention should be paid to evaluation and reevaluation of fixed assets and inventory, and analysis of depreciation, accounts payable and receivable, short-term and long term debts, taxes, profits and profit distribution, and the rate of exchange used.

b. Analysis of the firm's past and future accounting ratios, debt-to-equity, current ratio, turnover ratios, etc.

c. Review of complete financing plan including assurances of contributions of funds from all other sources and from the firm itself.

d. Review of effect of project on company's earnings, liquidity, accounting ratios (i.e. debt equity), ability to pay dividends and ability to repay loan.

e. Analysis of cash flow statement (all items)

1. Number of times debt service covered by net profits after taxes plus depreciation.

2. Number of times net profits after taxes cover interest.

f. Ability of borrower to repay loan (from project itself or other sources.

g. Study of guarantor and reliability of guarantee of repayment in event of adverse events (bank guaranties, mortgages, government guarantee)

h. Analysis of all elements of risk involved in event loan is made (political, technical obsolescence, competition, prices, borrower's ability to carry out project successfully and continue in successful operation.

i. Proper consideration of the time value of money.

j. Allowances as alternate financial projections for likely (or unlikely) adverse or beneficial events (e.g. cash flow statements might be made for high, low and medium selling prices).

K. (Optional) Differential cash flow analysis for existing operation expansions (cash flow with and without the proposed project, and the difference between the two).

4. Legal Analysis

a. Complete study of relative government legislation, borrower 's organization and statutes, ability to carry out project, ability to borrow money, etc.

5. Economic Analysis

a. Cost of production

1. Cost of manufacture.

2. Unit cost of production, unit inputs, unit prices.

3. Calculation of costs as function of output to establish break-even point (income sufficient to cover debt service). Calculation of optimum plant size.

4. Allowances for variation in input prices and estimation of future price trends.

5. Review of other costs, overhead, sales, transport, storage, taxes, subsidies, financial costs, etc.

6. Allowances for inflation, devaluation etc.

b. Markets and prices

1. Past history, production, consumption, imports, exports.

2. Review of projected growth estimates and their reliability.

3. Quantitative evaluation of present and future competition (within country, within common market area, with other foreign countries).

4. Possibility of project being adversely affected by establishment of other projects at a better location or with lower input costs or better economies of scale.

5. Detailed analysis of past and proposed selling prices, effect of the project on prices, etc.

6. Comparison with actual c.i.f. prices, world prices and the possible lowering of these prices in the future.

7. Effect of present and future common market tariff agreements and benefits.

8. Allowances for variations in selling prices.

9. Dynamic growth possibilities.

c. Raw material economic study.

d. Labor requirements and skills.

e. Economic study of plant location.

f. Study of economies of scale (present and future)

g. Consideration of time value of money

6. Evaluation

a. Profitability Calculation

% profits on investment cost including working capital.

% profits on equity capital.

% profits on sales.

% profits based on c.i.f. price rather than present sales price.

Allowances for events which could adversely affect profits. (i.e. profits as function of price, %capacity, inflation, devaluation, etc.)

b. Cash generation analysis (See Financial Analysis) Number of times after-tax profits plus depreciation covers debt service (Allow for adverse events as alternatives)

c. (Optional) Discounted cash flow analysis rate of return on investment which discounts all future earnings during life of project to be equal to the total investment cost. (Not needed for industrial project analysis where the construction period is relatively short (1 to 3 years) and where the return are relatively constant over the life of the project.

d. (Optional) Benefit-cost analysis where annual benefits should exceed annual costs.

e. Value added by manufacture per dollar invested (total sales less taxes, subsidies, cost of power, and cost of materials (imported or local) divided by initial cost. Thus, value added equals payments in wages, salaries and profits.

f. "Social" value added by manufacture per dollar invested. Evaluate inputs at opportunity cost or shadow price rather than actual cost (i.e. labor or waste lumber might be given a very low value and foreign exchange a high value.)

g. Foreign exchange analysis. Annual foreign exchange savings or earnings. Export f.a.s. price for exports or c.i.f. price for imports, less: all annual foreign exchange costs including foreign debt service, imports of raw material and supplies (at c.i.f. value), foreign payments (patents, contracts, profits sent abroad, and opportunity cost of local raw materials used which could be exported.

h. Direct and indirect employment analysis.

i. Analysis of comparative advance of project.

j. Optimum allocation of resources analysis.

k. Effect of project on economic development of the country, or on Latin American integration, etc.

1. Multiplier effects (i.e. due to backward or forward integration)

2. Regional development benefits (especially in backward areas of a country).

3. Comparison with the universe of projects available.

4. Strengthening of domestic capital markets, and stock markets (Savings-Investment problem).

5. Maximum ratio of investments of participants, local and foreign banks and other sources of funds in relation to IDB funds.

6. Analysis of net profits that could be reinvested in this or other projects.

7. Other indirect benefits of project, social.

8. Effect of project on country's balance of payments and debt service positions.

9. Effect on countries' monetary problems, inflation, etc.

10. Net effect of project on long-run and short-run growth of GNP (or total disposable income)

7. Summary

a. Synthesis of above.

b. Recommendations for or against loan.

c. Recommendations for conditions of loan and loan agreement.

d. Proposed method of carrying out project including disbursement procedure, schedule and conditions of payments by the IDB and all others, integrated physical progress and financial schedule, method of IDB (controls (i.e. outside accounting audits, IDB periodic reviews and field inspection, need for local inspectors, etc.)

INTER-AMERICAN DEVELOPMENT BANK

UNOFFICIAL GUIDE FOR INFORMATION NEEDED ON INDUSTRIAL PROJECTS

Introductory

A brief historical and background statement about the prospective borrower should be provided giving, if applicable, the name and the address of the borrower, the date and place of establishment, the purpose for which established and its position in the country or region served; whether the borrower is a corporation, either government owned or non-government owned; the type of company or agency should be described, a copy of its charter or organic law should be furnished; the principal stockholders should be disclosed. The names of the principal officials should be given and an organization chart should be supplied. If shares have been sold or are to be sold the amounts authorized and sold should be given. A complete financial picture of the organization should be furnished including balance sheets and profit and loss accounts for the past five years and details of dividends paid in the same period. If a new enterprise, these can be proformas. The amount and nature of outstanding debt should be given and the type of security, if any, described. Similarly, if the borrower is a government department, full historical, organizational and pertinent financial information should be given. If the proposed borrower does not plan to execute the project details of the arrangement and a description of the organization to have this responsibility should be furnished. Bank and trade references should be submitted.

A. Commodity Situation

Submit detailed quantity-value-unit price data on the 5-year imports, exports, domestic production and consumption of each item to be produced or each competitive or closely related product, and estimate quantitatively the future trends of each for a similar period. Show the relationship to the world and regional supply and demand situation for the commodity. Indicate the per capita consumptions and compare with other countries. For each major present or prospective competitor in the area furnish the name, location, present and future possible production rates, costs if known, and selling prices. Indicate the regulations under which the industry operates and summarize pertinent import and export duties, tariffs, quotas and restrictions.

B. Market Survey

Submit an analysis of the market for each major product including market reports by you or others. The analysis should also contain c.i.f. and domestic price studies, regional aspects of domestic markets, foreign markets by country, and consumption therein, volume and value of business by competition, distribution costs and methods, duties and regulations for exported goods in major foreign markets, effect of quotas and restrictions, and effect of items listed in previous section. Include an analysis of all existing or potential users of the product and the status of the latter.

C. Existing Operations

The nature of the existing operations should be presented in sufficient detail so that the operation may be clearly understood. The information on the subsidiaries or plant companies should be furnished as well as on the existing business. The present production capacity should be furnished by each product line and the sales volume and value for the past several years should be presented with separate figures for each main product line and for domestic and import sales. The trends in the domestic prices and export prices, f.o.b. mill for the given products should be furnished for the past few years. The organization of the existing business should be furnished and an indication made whether there are any changes in management during the past few years.

D. Description of the Project

This should specify the location and furnish a detailed description of the engineering features of the overall project, with detailed information as to the type and size of major equipment items and structures and their functions. The project should be described in sufficient detail so that the exact nature of the existing operations can be understood. A plant layout and a process flowsheet should be furnished. The path of the various commodities through the plant should be traced. Any pertinent engineering and project reports should be supplied. Layout drawings and general engineering drawings should be given. The proposed operation of the project in conjunction with existing or other proposed projects should be described. The prospective capacity and estimated average output after completion of start-up should be indicated. The estimated percentage of plant capacity should be furnished for each of the first few years of operation.

Complete information on patents, licenses, know-how or management fees and the like should be furnished.

E. Present Status of the Project

This should include the status of investigations, feasibility and market studies, surveys, borings, engineering design, the extent to which contracts have been awarded (documented by tabulations and evaluations of principal bids thus far received), whether such awards were based on international bidding, and the progress of physical construction to date, if any. Submit summaries of quotations on major items of equipment. Submit summary of evidence of ownership of the plant site.

F. Organization for Engineering and Supervision of Construction

This should cover the organization and procedures which have been established or are proposed for engineering design, preparation of specifications, appraisal of bids, awarding of contracts, and the supervision of constructions. Special mention should be made of consultants and of their responsibilities in both the design and the construction phases. Any special problems or circumstances which might cause difficulties, such as scarcity of materials, transport bottlenecks or difficulty to obtain import licenses should be mentioned and the measures proposed for overcoming them.

G. Estimated Cost of the Project

This should include an up-to-date statement of the estimated cost of the project, broken down by principal items and into foreign exchange and local expenditures. The basis for the preparation of the estimates should be stated. The extent to which allowances are included for contingencies and price increases should be described and such amounts shown separately. Where contracts have been awarded, necessary details should be given and copies of major contracts supplied. Interest during construction should be shown separately. If any expenditures have been made, these should be shown by years and included in the total cost. Include all costs of the project, such as freight, start-up, installation, vendors' services, management, available construction material, etc. Where a number of products are to be produced, breakdown costs separately for each major intermediate or final product. Furnish full details regarding expenditures on intangible assets, such as good will, patents and licenses, process know-how, etc. Indicate all necessary items of cost that are not directly related to the project but that must be expended, such as housing, roads, etc.

Foreign currency and local currency expenditures should clearly be differentiated into two categories: those incurred to the present date and those still to be incurred.

The working capital requirements should be itemized in detail as indicated in the following table. The working capital requirements should be estimated for the end of the construction period and for the end of the first year of operation.

	End of construction period	End of first year of operations
Current Assets		
Raw and auxiliary materials		
Goods in process		
Finished goods		
Receivables		
Cash on hand		
Total		
Current Liabilities		
Suppliers		
Banks		
Other		
Total		

Indicate any marked seasonal peaks in working capital requirements and the method of financing of such seasonal peaks.

H. Arrangements for Construction

A statement should be given describing the plans for executing the construction work and the extent to which the work would be done under contracts, by force account, and by equipment suppliers. The type of (proposed) arrangements should be described, and the reasons therefor stated. State whether the construction equipment will be furnished by the owner or contractor, and the arrangements for rental, salvage, etc., where pertinent.

I. Schedules of Construction and Expenditures

An up-to-date and realistic construction schedule, broken down by major items with a corresponding schedule of semi-annual expenditures in foreign and local currencies should be submitted. A bar chart should support the construction schedule given. The procurement and delivery schedules for equipment should be included, or shown in a supplement. The extent to which the work will be performed by the borrower or by the contractor should be clearly differentiated.

J. Operating Organization

Description of the organization (existing or to be created) which will manage and operate the project should be included. This should include an organization chart, and experience records of key management and technical personnel. The organization's insurance practices should be explained.

K. Sources of Funds

The sources and availability of funds to cover local currency expenditures and foreign currency should be established. The amount and terms of the DIF loan requested should be indicated. Furnish details of the investment incurred to date and investment still to be incurred. What assurance exists that the funds will be made available? Specify the extent to which any capital contribution has been or will be made in a form other than cash.

L. Technical Feasibility

Sufficient information should be submitted to clearly indicate the technical feasibility of each phase of the project. The reason for the choice of each major process should be described and rationalized if alternative processes are available. The basis for the operating factor used (days per year of operation or number of shifts/day). Evidence should be submitted that all available preliminary engineering studies are complete and that all of the problems that might adversely effect the project have been studied or are under investigation. If the preliminary studies are not complete or if major problems have not been investigated in detail, indicate what steps are being taken to obtain these studies.

Attach copies of the detailed technical reports, cost estimates, list of major items of equipment, and plans showing locations of proposed facilities, etc.

M. Plant Location

Submit a summary of the plant location study showing the basis for your choice of a location and the advantages over alternate locations considered. Furnish a map of the general area showing pertinent facilities such as transportation, power and water, etc.

Where location is an important factor, indicate other sites considered and economics of proposed location as compared with others, including transportation costs.

N. Raw Materials

The source, specifications, availability, local and foreign exchange cost, range of cost variations, and customs duties of all raw materials should be stated and supported. In the case of mineral projects, the quantity of proved reserves should be indicated and supporting data or engineering studies should be furnished to verify the reserves. Where a raw material must be obtained from only one or two suppliers, indicate the arrangement that can or have been made with the suppliers, including preliminary agreement on prices. Where a major raw material must be obtained from another plant, furnish sufficient data or reports to indicate the technical and economic feasibility of the other plant. If the other plant is not yet in operation, it will generally be important to furnish essentially the same information on the related project as requested by BID for this project.

If alternate sources of raw materials are available, indicate why the proposed raw materials were chosen.

Indicate how each raw material (and intermediates) will be transported, handled and stored, and the major costs thereof.

If foreign exchange is required for raw materials, spare parts and other imports on a continuing basis, indicate source and availability of foreign exchange.

Furnish pertinent details of any major contracts pertaining to future supplies or major raw materials.

O. Utilities

Indicate requirements, source, availability, cost and reliability of all utilities (power, water, steam, fuel, etc.). Indicate factors taken into consideration in the selection of each utility and the pertinent data on the

major features of the utility systems. Furnish to the extent possible a steam and fuel balance showing quantities to and from each major steam or fuel use. Show the electrical system by means of a simple single line diagram including major power uses. Furnish a water balance for the plant, where applicable.

For power, furnish peak demand KW and total requirements in KWH per year for present and future requirements. Indicate present and prospective sources of power.

Indicate pertinent details and reasons for purchasing outside utilities vs in-plant production of same.

Indicate any water effluent problems or any other noxious or dangerous plant effluents and show the steps that will be taken to overcome these problems.

P. Labor

Indicate number, type, and availability of labor required for each major section of the plant. Submit information on the training requirements and program for key operating and maintenance and supervisory personnel. Indicate whether adequate housing is available within a reasonable distance of the plant. Submit data if available on labor rates in the area for comparable operation. Labor rates used in the production cost analysis should reflect probable rate increases that may result as an effect of the proposed project.

Q. Products

Will the project benefit from any government subsidiaries, tax exemptions, free services, or other special forms of assistance? If so, furnish qualitative details. Will prices be subject to government control? How are the products disbursed?

R. Production Cost and Selling Prices

The estimated cost of production for each of the major intermediate and final products should be stated separately and supported by detailed calculations. The itemization of unit requirements, unit costs and costs per pound of product should be furnished as shown below (where practical):

	Unit Requirement per Unit of Product (e.g. per pound)	Unit Price	Cost Per Unit of Product	Annual Cost
Raw material (itemize each material employed)				
Labor				
Etc.				
Fixed charges				
Interest on BID loan				
etc. (include all costs as separate items and show production cost as a subtotal separately from selling costs, profits and income taxes)				

Notes:

1. Where the official and effective exchange rates differ, summarize the calculations on both bases to show the effect of the exchange rate.

2. Indicate basis for each major unit cost in table if not furnished elsewhere.

3. Cost data should clearly indicate whether costs are local or foreign exchange.

If the existing facilities are producing similar products, furnish the above data for the existing operations.

Where wide fluctuations in any major items of cost exist, indicate effect on the production costs.

Indicate production and import costs and selling prices of competitive commodities where this is important (i.e., textile, paper, plastics, etc.)

Indicate exemptions with respect to (a) any general or specific taxes on production, (b) corporate private taxes, (c) local taxes, and (d) depreciation allowance for tax purposes.

S. Economic Justification

A detailed comparison of production costs (without selling costs or profit and c.i.f. prices should be made for each product (or major intermediate where applicable). In addition, a profitability calculation should be submitted showing return on total investment. All items of cost including all interest and taxes should be included. An analysis of the proposed selling prices should be furnished and compared with the comparable cost of imported goods. All items of the latter should be furnished including customs, transportation, warehousing, docking fees etc.

The foreign exchange savings resulting from the project should be analyzed and supported by detailed calculations.

The effect of the project on the economic development of the country or the economy of the country should be analyzed.

The present and proposed tariff protection for each product should be clearly stated.

T. Estimated Financial Results

Estimates of income, expenditures, and net profit during the construction period and for at least five years thereafter should be made for the operating

agency responsible for management and operation of the project. Projections of the cash position should be made for the same period, and a pro forma balance sheet obtained showing the position of the borrower upon completion of the project.

A form generally used for the projection of the cash position, or "cash flow" is attached.

ANNEX 1

FINANCIAL POSITION OF THE BORROWER

Attach comparative balance sheets for the past four years, according to the following breakdown:

Assets

Current Assets: Cash
Marketable securities
Receivables (show separately amounts by subsidiaries, directors or shareholders or their families or agents, or any sums which do not represent normal commercial debts)
Inventories
Other

Investments in subsidiaries, etc.

Fixed Assets: Land
Buildings
Machinery and Equipment
Other

Less: Depreciation reserves

Intangibles (describe)

Other Assets (describe)

Total Assets

Liabilities and Capital

Current Liabilities (due within one year):

To banks or other financing agencies
To holders of long-term debt for maturities due within 1 year
To commercial creditors
Other liabilities (describe)

Long and medium-term debt (1 year or more) (describe)

Capital: Paid-in capital
Revaluation surplus
Earned surplus or deficit

Reserves (describe)

Note: Under liabilities show separately amounts owned to directors or shareholders or their families or agents.

Total Liabilities and Capital

ANNEX 2

COMPARATIVE PROFIT AND LOSS STATEMENTS

Attach comparative profit and loss statements for the past four years according to the following breakdown:

Income

Net Sales
Other operating income
Other income (describe)

Total Income

Expenditure

Manufacturing cost
Depreciation
General, administrative and sales expenses
Interest
Taxes, including income taxes
Non-operating expenditure

Total Expenditure

Net Profit for Accounting Year

Disposition of Net Profit
- Dividends
- Legal reserves
- Surplus reserved for special purposes (describe)
- Unallocated balance to earned surplus

ANNEX 3

FINANCIAL INFORMATION

1. Capital Structure (present and planned)
   Authorized Capital
   Issued Capital
   Subscribed Capital
   Paid-up Capital
   Capital Surplus (if any) arising from asset revaluation

2. Distribution of Shares

	No. Issued	Total Nominal Amount	Total Paid-up Amount	No. of Votes per Share
Ordinary				
Preference				
Deferred				

3. Indicate number and type of shares held by any individuals and/or group controlling more than one-fifth of the votes. Indicate relationship of such individuals and/or group to the company. If held by a holding company or other industrial enterprise, provide balance sheets, profit and loss statements, and capital structure information. If held by individuals, provide general and financial information.

4. Outstanding debentures (terms of issue and redemption, interest rate, etc.)

5. Outstanding mortgage and other long-term debt (terms of issue and repayment, interest rate, etc.)

6. Bank borrowings. Give details of amounts owed, interest rates, terms, renewal arrangements and of unused credit limits.

7. Pending litigation either by or against the company.

8. Contingent liabilities, guarantees or endorsements.

9. Method of valuation of inventories. Note any departure from stated procedure affecting past profits as shown in attached statements.

10. Book value and estimated current market value of inventories for the past four years.

11. Give the book value of fixed assets for the past four years according to the following breakdown:
    Book value of fixed assets at beginning of year (describe basis of valuation)
    plus acquisitions during the year, at cost
    minus retirements during the year, at book value
    minus normal depreciation

minus extraordinary depreciation or write-offs (or plus any shortfall below normal depreciation)
plus revaluation of fixed assets
Book value of fixed assets at end of year
State normal depreciation method and rates used by major categories of assets.

12. (a) Give the average annual amount written off on bad debts during the past four years;
(b) Give the total amount of claims overdue as of the date of the latest balance sheet and percentage of nominal value at which these claims are recorded in the balance sheet.

INDUSTRIAL PROJECTS - FORECAST OF EARNINGS, RECEIPTS, AND EXPENDITURES

	Present Operation			Construction Years			Operative Years		
	1957	1958	etc.	1960	1961	etc.	1962	1963	etc.
A. Sales (Separately for each major product)									
1. Annual Production, T/Y									
2. Selling Price									
3. Gross Sales (1 + 2)									
B. Earnings									
4. Gross Revenues									
5. Other Income (Specify)									
6. Total Income (4 + 5)									
Operating Costs									
7. Operating Costs									
8. Taxes (Specify)									
9. Depreciation (Show basis used)									
10. Non-Operating Expenses									
11. Total Cost (7 through 11) ex Interest									
12. Net Income (6 " 11) Before Interest on Debt									
13. Interest on Long-Term Debt									
14. Net Profit (12 - 13)									
C. Sources and Uses of Funds									
Sources									
15. Net Profit before Interest on Debt (12)									
16. Depreciation Allowance (9)									
17. Increase in Share Capital									
18. Borrowings									
a. BID loan (existing, if any)									
b. BID loan proposed									
c. Other borrowing (specify with separate line for each long term loan and indicate terms)									
d. Short term loans									

19. Other Receipts (specify)
20. Total Sources of Funds (15 through 19)

Uses of Funds

21. Construction Expenditures
    a. BID project
        (1) Foreign Currency
        (2) Local Currency
        (3) Total
    b. Other Construction Expenditures (specify)
    c. Total Construction Expenditures
22. Current Assets (minimum expected) (Change in)
23. Other Fixed and Intangible Assets
24. Debt Service
    a. Amortization of principal
        (1) Existing BID loans, if any
        (2) Proposed BID loan
        (3) Other borrowing
    b. Interest
        (1) Existing BID loans, if any
        (2) Proposed BID loan
        (3) Other borrowing
25. Other Expenditures (specify)
26. Total Expenditures (21 through 25)

D. Cash Flow

27. Annual Cash Surplus or Deficit
28. Cash to Dividends
29. Cash to Reserves
30. Cash Balance, End of Period

E. Balance Sheet End of Period

31. Current Assets
32. Investments
33. Fixed Assets
34. Minus Accumulated Depreciation
35. Net Fixed Assets
36. Intangible Assets
37. Total Assets

38. Current Liabilities
39. Long-term Debt
40. Reserves
41. Share Capital
42. Surplus
43. Total Liabilities