

TC-ATA/SF-1784-HA-
Final rpt,
2

OFFICIAL FILE COPY

TEC

Opportunities for Industrial Investment

in Haiti

Industrial Economics and
Infrastructure Section

General Studies Division

Inter-American Development Bank

Opportunities for Industrial Investment in Haiti

TABLE OF CONTENTS

Preface	i
Executive Summary	iii
Basic Data for Considering Investment Opportunities in Haitian Industry...	xi
Chapter I. The Current Status of Industry in Haiti	1
Chapter II. Basic Resources for Haitian Industrialization	18
Chapter III. Government and Private Institutions Which Affect the Overall Nature of Haiti's Industrial Sector	34
Chapter IV. Agroindustries and the Agroindustrial Potential	43
Chapter V. The Evolution of the Import-Substituting and Assembly Export Industries	82
Chapter VI. Light and Medium Scale Construction Activity	115
Chapter VII. The Obstacles to Industrial Development	120
Chapter VIII. Public Policy Options and Private Sector Measures Which Might Reduce the Obstacles to Industrial Expansion	143
Appendix Industrial Parks and Industrial Decentralization	156

* * * * *

PREFACE

In August 1977, a Socio-Economic Report on Haiti, prepared by the Country Studies Division of the Inter-American Development Bank was distributed. This comprehensive survey of the Haitian economy and the discussions with the Government which it stimulated led Mr. Jorge Ruiz Lara, the Deputy Manager for Economic and Social Studies, to propose a follow-up effort to examine the industrial sector more fully. The terms of reference read, in part, as follows:

The survey of the industrial sector of Haiti will cover manufacturing industry and the small and medium-scale component of construction activity. The objective of the undertaking is to help identify investment opportunities that offer promise of being attractive in economic as well as financial terms and also, to attempt to discern any lines of activity that are economically unattractive while they are still in preliminary stages of consideration. A further objective is to draw particular attention to those favorable investment opportunities which would also contribute appreciably to employment objectives.

While a good deal of preparatory work was done in Washington, the support for the conclusions in the report comes basically from materials gathered in Haiti, especially from interviews and first hand observations of a Mission conducted in June 1978. Since some sector surveys never get off the bookshelf, it should be noted that follow-up actions to some of the suggestions contained in this report were initiated as early as July 1978, within days of the time the initial Mission Report was submitted.

The Mission received extensive assistance from others. International and bilateral agencies made numerous studies and reports on Haiti available

to us, including even drafts which were prepared as late as May and June 1978. In Haiti we received the full cooperation of both the public and private sectors, interviewing leading government officials, the Chamber of Commerce, bankers, and 80 industrial enterprises. Mr. Terence Glavin, the IDB Representative in Haiti, provided us with extensive support, and we were assisted to a considerable degree by all of the staff of the Representation as well, especially Mr. Fresnel Germain. While most of the time of the mission was spent in Port-au-Prince and environs, visits also were made to Cap Haïtien, Gonaïves, Les Cayes, Jacmel, Cavaillon, Fort Liberté, as well as to the leading manufacturing establishments between the capital and St. Marc.

Hugh Schwartz, ECG/IND, Mission Chief
Francisco Thoumi, Chief, ECG/SOC
Friedrich Mack, ECG/AGR

Executive Summary

The Current Status of Haitian Industrialization

Haiti, the country with the lowest per capita income in the Western Hemisphere, has a manufacturing sector which has been growing at 10-15 percent per year since 1970, and now accounts for 15-18 percent of GDP, though still only 6-7 percent of employment. Any appreciable increase in Haitian living standards is likely to depend primarily on a continuation of rapid growth in the industrial sector. Fortunately, the opportunities for further growth appear to be as good as in the recent past or better.

Agroindustrial output declined in the 1960's but registered a major recovery in the period following 1967, and new import-substituting industries have been established, particularly in the period since 1970. Assembly export industries have emerged as the most dynamic subsector, and have been particularly important in contributing to employment and export earnings. The impressive growth of Haitian manufacturing production has been attributable in considerable measure to an increased supply of domestic raw materials, the low cost and high productivity of Haitian labor, and the shift in government policies and attitudes towards industry, which have been highly favorable, on balance. Agriculture continues to account for three times as large a share of national income as manufacturing industry, however, precisely the reverse of the relationship in Latin America as a whole, despite the relatively more limited long term potential of crop raising and grazing activities.

Agroindustries once accounted for more than half of industrial production and the figure is still in the 35-40 percent range. The subsector can be divided into traditional products, those developed since the Second World War, and a group of recently initiated activities. The first include sugar and sugar derivatives, sisal and twine, essential oils, cotton and leather. In the twenty-five years following the Second World War, textile, flour, cigarette, cocoa, non-alcoholic beverages and beer, pasta, rice, beef and dairy production were undertaken. Within the last few years, attention has begun to be given to edible oils, vinegar, tomato processing and the canning of mangos, papaya and pigeon peas. The traditional products were based on existing domestic agricultural output, and many of the second group, on imported inputs. The success of the most recently initiated activities will be influenced by the ability to induce new domestic supplies of agricultural commodities. Many products in all three groups depend upon improved agricultural development, which will involve such matters as containment and reversal of the soil erosion problem, increased irrigation, fertilization, availability of storage facilities, access to credit, extension assistance and applied agricultural research, as well as greater surety of land titles and consolidation of minifundia operations. Government pricing and marketing regulations also are key factors for many crops.

Import-substituting industrialization (ISI) is primarily a phenomenon of the late 1960's and 1970's. Some ISI, such as cement, cement blocks, cotton clothing, and a number of agroindustries, are based on local inputs, but an increasing proportion has been based on imported raw materials. This is true of detergents, clothing using synthetic fabrics, paints, various metalworking activities, plastic goods, and even such products as matches and, to an increasing degree, furniture, as well as several agroindustries (flour and edible oils, e.g.). The Government has granted the benefits of investment incentives and protection against foreign competition on the basis of very limited studies. To date, the criteria used for ISI selection have related to the amount of foreign exchange spent on a product, and the possibility of manufacturing the product with local raw materials. Potential comparative advantage and the employment effects potential do not appear to have been given attention.

The assembly export industries are largely a phenomenon of the 1970's. They now account for about one-third of sector value added and two-thirds of manufacturing employment in factories (as contrasted with artisan workshops). Baseballs, garments and electronic equipment dominate the field, and backward linkages are minor except for baseballs. Exports are overwhelmingly to the U.S., with few efforts made to date to enter European markets. Profits are very high (30-50 percent annually on equity), but the most important product line to date, garments, faces very limited expansion due to a U.S. quota which has prevailed since 1974. Capital per worker in these industries is very low, \$700 to \$3,500, depending on the product. Most of the workforce is female, but not not so dominantly as in the Latin American nations. Ownership of enterprises is markedly more in local hands than elsewhere, though, in part, this is a reflection of the special characteristics of doing business in Haiti.

Construction has been growing at 14-16 percent per year, involving infrastructure primarily, but also the building of factories, offices and housing (the latter, primarily for the middle-to-upper income groups). Most building materials are expensive, with locally produced cement substantially above current international prices, wood increasingly scarce, and bricks not produced domestically since the early-to-mid 1960's. The leading construction companies are partnerships which include a substantial number of Haitian repatriates who have obtained training and/or experience abroad.

Handicraft industries employ 60,000-80,000 workers. Most are involved in a primitive form of manufacturing, but there is an increasing export-oriented component which now includes such items as bedspreads, sisal wallhangings, banana bark furniture, and various other products, some of which are prepared in workshops of several hundred and, in one case, 1,500 laborers.

The Basic Resources for Industrialization

Haiti's principal resources for industry are its land and non-metallic minerals, and its human resources, with capital first emerging as an important contributor to industrial development only in the last decade. The non-metallic resources utilized to date are principally those which have contributed to the development of the cement industry, but other resources awaiting exploitation include clay, marble, salt and stone. Agriculture, the basis for the agroindustries as well as unprocessed exports, still accounts for nearly half of GDP, and employs three-quarters of the labor force. Growth of the sector has been slow, however --at only a little better than 1 percent a year since 1960, and 1.5-2.0 percent since 1970. Crops aimed at providing domestic supplies of food have increased in relative importance and now account for 85 percent of all agricultural output. While much can be done to improve productivity, and some new areas can be added to the productive base if feeder roads and more irrigation facilities are constructed, Haiti's physical limitations seriously constrain what can be expected from agriculture over the long run. An important resource of Haiti which is only beginning to be effectively tapped is its human resources. High rates of unemployment and underemployment point up the low opportunity cost of unskilled labor, but it should be noted that Haitian labor is also unusually productive. Inexpensive and productive labor, together with a more favorable government disposition towards industry have been the key factors in the recent industrial expansion of ISI and export assembly industries, with Haiti's location close to the United States also an important factor for the latter. At the same time, it must be conceded that managerial and worker skills are particularly scarce in the country; there has been substantial emigration of both, moreover, though some repatriation has taken place in recent years.

Most vocational training schools are seriously deficient, though there are two exceptions, one private (scheduled to be turned over to the State within a few years), and the other a very new State entity, now receiving virtually the entire resources of the training tax levied on enterprises. Fewer than 500 students a year graduate from vocational education facilities in a population of 5 million or more. Management training facilities are in an even more incipient stage.

Government and Private Institutions Which Affect the Overall Nature of Haiti's Industrial Structure

The basic governmental institutions which deal with industry are the Planning Ministry (CONADEP), the Ministry of Commerce and Industry (DCI), the Haitian Bureau of Industrial Promotion, (which has functioned under DCI), and the Government's development bank (IDAI). There are not yet any professionals specializing solely on industry in CONADEP, and the number in the other government entities is quite small. Most studies of the sector are commissioned to be undertaken by others. DCI has devoted its energies primarily to the consideration of requests to

receive the benefits of Haiti's legislation on industrial incentives and/or to receive protection against foreign imports. The former has the effect of waving most taxation on new undertakings for periods of 5 to 15 years. IDAI is the only significant medium term lender in Haiti, but now accounts for only 5 percent of all loans outstanding. In addition to functioning as a development bank, IDAI also administers or plays a shareholder role in various enterprises, directs the Port-au-Prince Industrial Park, and acts as a quality control office for vetiver essential oil. At least as important as the specific incentives the Government provides has been the permissive and often encouraging attitude toward industry which it has demonstrated during the 1970's.

A second, and perhaps crucial institutional factor affecting Haitian industrialization is the importance of personal relationships. These are of even greater significance in Haiti than in most developing countries. Laws are written in a way such that they permit, and indeed, almost require the handling of matters on a case-by-case basis, and these negotiations frequently involve some of the highest officials in what are often minor details. The importance of personal relationships continues to the level of the enterprise, where ownership is seldom divorced from control and professionalism is not always present.

Obstacles to Industrial Expansion

The path of recent industrial expansion has not been entirely free of obstacles and a number can be expected to worsen unless changes are undertaken. They are as follows:

1. The weakness of institutions, in particular government institutions relating to industry, and the paramount nature of personal relations, leads to dissimilar resolution of similar situations. Moreover, as the economy grows, the overall system becomes more unmanageable, with less time being left for each of the "necessary" discussions with the now increasing numbers of entrepreneurs who have special problems or plan new investments. The general institutional weakness has been compounded by the existence of numerous regulations, minor taxes and what seems to be an increasing activity of the Government with respect to the industrial sector;
2. Industrial priorities and the sector studies and preinvestment analyses which would implement those priorities and which are prepared by the Government or by consultants for the Government, do not emphasize activities of pronounced comparative advantage and do not indicate the differential employment consequences of alternative lines of production or alternative processes for the chosen lines of production;
3. Economic infrastructure in Haiti is weak. The inadequate availability of electric power, inadequate harbor and airport facilities, and other infrastructure shortcomings, seriously impede industries from locating outside Port-au-Prince, but there are limitations to the number of additional people which

Port-au-Prince, already faced with grave urban problems, can absorb in the near future.

4. Entrepreneurial, managerial and technical capacity in Haiti is still quite limited, and this is inhibiting the development of some ISI and some agroindustrial processes, as well as the backward integration of the assembly industries with the rest of the economy;
5. Medium term financing is extremely difficult to obtain and long term financing is almost unknown, which is biasing projects undertaken to those which can generate profits sufficient to enable repayment in three years;
6. The supply, quality and uniformity of agroindustrial inputs is substantially less than the potential for Haiti and this is threatening the success of several recently established agro-industries and inhibiting the establishment of others; and
7. Although the domestic market for many industrial goods would be quite limited due to the level and distribution of income, too little attention is paid to marketing, nonetheless. This neglect is even more pronounced for the export oriented industries, which leave too much to foreign partners or buyers. Haitians have particularly little familiarity with European markets, and Haiti is relatively unknown to European investors.

Opportunities for Industrial Investment

There appear to be many interesting investment opportunities in the industrial sector. To begin with, the future of Haitian-based assembly exports continues to seem excellent. Many of the existing companies plan to substantially increase the size of their operations and additional investors, both foreign and domestic, are weighting major new undertakings. Among agroindustries and ISI, the Mission found a number of project possibilities which warrant further consideration, among which were:

- a rice mill, corn mill and pork slaughterhouse complex in Les Cayes;
- vetiver acetate and artificial charcoal projects near Port-au-Prince;
- a citrus essential oils and fruit products plant, in Cap Haitien;
- a sisal and sunflower plantation and edible oil plant in Fort Liberté;
- an evaporated milk and carton and cardboard plant, to be combined later with a kraft paper plant in Gonaives;

- a brick factory in Cap Haitien and a dairy operation in the North;
- marble, building stone and salt projects in Gonaives; and
- ceramics tile, textile, agricultural implements and handicrafts projects in Port-au-Prince and in several other communities.

In addition, the Mission felt that it would be worth looking into possibilities of a major kiln for drying furniture, a central machine shop and stamping facility, and a foundry expansion.

In light and medium scale construction, there are substantial opportunities for the building of secondary and feeder roads, and for housing construction --though significant progress in the latter will depend upon the activation of the national housing bank.

Inasmuch as one of the objectives of the Report was to draw attention to any activities that appear unattractive in economic terms while they are still in a preliminary stage of consideration, special mention should be made of a proposal to establish a new 660,000 ton cement plant, even though the prefeasibility study has only recently been submitted and thus was not among the materials consulted in the preparation of this Report. Although such a facility would be capable of achieving lower unit costs of production than the existing cement mill, it should be noted that the existing 325,000 ton plant, which is by far the largest manufacturing establishment in Haiti, could increase its supply to the domestic market by at least 30 percent, and it would be several years before local demand would exceed that amount. The new cement mill would be aimed primarily at export markets, but given the current position of oversupply in the Caribbean area and the heavy foreign exchange requirements to construct a cement mill and then operate it in Haiti, the project seems like a high risk undertaking.

In order to facilitate the task of project identification in the future, increasing reliance might be placed upon sector and subsector analyses which could be undertaken by the Ministry of Commerce and Industry and other government agencies. The projects identified should, of course, then be subject to individual evaluation on the basis of serious economic criteria; cost-benefit analyses should be undertaken and they should be supplemented by consideration of the indirect employment effects and other key interdependency relations indicated in the sector and subsector studies. The latter studies also would be of particular value in signaling backward linkage opportunities for the assembly export industries, and in pointing up the technical skills which such industrial integration would require.

Public Policy Options and Private Sector Measures Which Might Reduce The Obstacles to Industrial Expansion

There are a number of public policy options and private sector measures which might help to reduce obstacles and expedite a strong and developmentally oriented industrialization.

1. To more fully delineate industrial priorities, a mid-Five Year Plan policy statement is urged. In this statement the Government of Haiti might summarize the evolution of the industrial sector in recent years, drawing attention to both favorable and unfavorable factors, and outlining how it seeks to modify the pattern of industrial development in the period ahead. A major role is recommended for sector and subsector studies; first, to help identify projects which are particularly advantageous in economic terms; second, to indicate which, among the most profitable projects, promise the greatest employment effects, taking account of indirect as well as direct effects; and, third, to help identify efficient relatively labor-using processes in all project areas under serious consideration. Once what appear to be suitable projects are identified, it is recommended that they be subject to economic evaluation criteria (see Report pp.145-148) to help assure the achievement of the country's industrial development objectives.
2. To overcome the institutional weaknesses noted, especially the dominant role of personal relationships, consideration might be given to depersonalizing the governmental mechanism or at least to a greater delegation of authority. More ongoing coordination between the agencies of government dealing with industry also would be useful. A modern law for corporations and partnerships is recommended.
3. To overcome the weakness of industrial infrastructure, particularly outside Port-au-Prince, and in so doing, overcome the bottleneck holding back a considerable inflow of foreign investment and repatriated funds, it is recommended that increased attention be given to socioeconomic overhead facilities, notably those for generating electric power. Consideration also is urged for unsubsidized low cost housing for industrial workers.
4. To aid in worker capacitation, caution is suggested on the turn-over of private vocational schools to the public sector. In addition, support is urged for management training institutes with trouble shooting, technical assistance programs for entrepreneurs, short, Haiti-based courses using foreign experts, and programs to encourage greater repatriation of Haitians with industrial skills.

5. To increase the supply of agricultural inputs for agroindustries, it is recommended that attention be given to irrigation, agricultural extension and credit and to a cadastral survey which would afford greater surety of land title. In addition, an evaluation of the costs and benefits of the various government price controls and marketing regulations affecting agroindustries is urged.
6. To overcome the difficulties of most entrepreneurs in obtaining financial support, especially for periods longer than three years, it is recommended that consideration be given to new banking law, and to several other measures which might lead to the extension of more medium term credit. Consideration also might be given to the possibilities of restructuring IDAI as strictly a development bank, without its current group of industrial enterprises and other undertakings.
7. To overcome Haitian deficiencies in the field of marketing, which are particularly striking with respect to Europe, it is suggested that trade specialists now being trained abroad be stationed primarily in Europe and that greater use be made of European marketing firms. It is also recommended that more use be made of International Trade Organization product specialists and that entrepreneurs undertaking new ISI be required to provide some indications of export possibilities within three to five years after the date of their initiation.
8. To facilitate exports of manufactures, and especially to enable Haiti to take advantage of demands for commodities which arise on short notice in the developed countries, it is recommended that the Government give consideration to the establishment of free zones. A section of the Port-au-Prince Industrial Park and sections of any future industrial parks might be designated as free zones.

Basic Data for Considering Investment Opportunities in Haitian Industry
(Currency expressed in US dollars)

Category	Data
Gross Domestic Product (GDP), 1977	\$ 1,000-\$1,200 million
Average Rate of Growth, 1970-77 (pct.)	4
Gross Domestic Investment as pct. GDP, 1974-76	14-20
Gross National Savings as pct. GDI, 1974-76	Low
Agriculture as pct. GDP, 1977	43-45
Average Rate of Growth, 1970-77 (pct.)	1.5-2.0
Pct. of Labor Force, 1977	70-80
Manufacturing as pct. GDP, 1977	12-18 (lower fig. is official est.)
Average Rate of Growth, 1970-77 (pct.)	7-14
Pct. of Labor Force, 1977	6-7
Population, 1977	5-5.5 million
Average Rate of Growth, 1970-77	1.7
Per Capita Income, 1977	\$200-\$240
Average Rate of Growth, 1970-77	2-2.2
Life Expectancy, mid-1970's	52
Literacy, mid-to-late 1970's (pct.)	20-25
Rate of Participation in Labor Force, 1970's	50
Unemployment Rate, mid-to-late 1970's	More than 25%
Minimum Wage Levels, 1978	\$1.60-\$2.00 a day
Shadow Wage Rate Estimates, 1978	
Port-au-Prince	\$1.00-\$1.25
Other Urban Areas	\$0.80-\$1.10
Rural Areas	\$0.50-\$0.75
Urban Population (pct.), late 1970's	23
Emigration, mid-to-late 1970's	35,000 annually
Repatriation, mid-to-late 1970's	Small but increasing
Exports as Pct. Imports, mid-to-late 1970's	60-70
Consumer Price Index, 1976	+ 9.4 percent

Note: The Table is provided only to give a general idea of the data relevant for considering industrial investment opportunities in Haiti. For this reason, figures have been rounded off, and the individual data sources are not cited, though most of the information comes from the Government of Haiti, the World Bank and the IDB, with a few items from other sources. The Mission is responsible for the following: the estimate that manufacturing accounts for 15-18 percent of GDP; the shadow wage estimates; and the comments on gross national savings and on repatriation.

CHAPTER I

The Current Status of Industry in Haiti

A. Recent Patterns of Industrial Growth

No report on Haiti can begin without taking note of the country's extreme poverty, poor health conditions, low literacy, high unemployment and pervasive underemployment. With these characteristics, the lowest degree of urbanization, and by far the lowest per capita income of all the countries in the Western Hemisphere, Haiti had, until quite recently, a very small industrial sector. In the 1950's and 1960's, nearly four-fifths of the labor force was engaged in agriculture, and manufacturing accounted for only a tenth of Gross Domestic Product (GDP). The sector was characterized by a few medium-size but not especially modern sugar mills, several sisal and twine facilities, a few small textile mills, bottling plants and essential oil plants, and a number of very small furniture producers and agroindustrial processors. Many of these operations were oriented as much at foreign markets as at the domestic market. Conscious import substitution also had gotten underway with the production of soap, kitchen utensils and plastic products. In addition, there was some activity in building materials. The low level of local brick production had ceased, but a small cement plant had been initiated and cement block production also was underway. In all, the industrial sector provided employment for only 5-6 percent of those gainfully occupied, and most of these were engaged in artisan activities rather than in manufacturing proper.

The situation began to change in the late 1960's and early 1970's. Agroindustrial output, which had declined in absolute terms in the first

half of the 1960's, again showed signs of recovery. New import-substituting industries (ISI) were established, some aimed at local production of agro-industrial products, but most involving other commodities. Some of these were based on local inputs, most notably the now expanded cement plant, but increasingly these ISI were based on imported inputs. Most consequential in terms of their contribution to the growth of industrial output and employment, however, were the assembly export activities, in which primarily imported inputs were put together and then reexported in only moderately altered form. As a consequence of the developments in these three groups of industries, the sector grew at a rate during the 1970's which even official indices register to be 7 percent a year, but which was surely in the 12-15 percent range, the difference being explained by the fact that the Index of Industrial Production is based on a sample of those manufacturing activities in existence in 1955-59, and therefore fails to capture much of the ISI production and virtually all of the assembly export manufacturing output. The latter alone has attained a level which the Mission, using the data of the U.S. Embassy in Haiti, estimates to be between 3 and 4 percent of the GDP. Thus, while official data still attribute only 12 percent of GDP to manufacturing, the figure may be half again as high, and certainly is in the 15-17 percent range. Employment including artisan activities ranges between 120,000 and 150,000 (between 6 and 7 percent of the labor force), with the modern sector of manufacturing accounting for 60,000 to 70,000, three times the number registered on social security roles.^{1/} Nor is all of this a phenomenon that

^{1/} The U.S. Embassy in Haiti, which surveys assembly export activities and light industry based on local inputs rather closely, concluded in a recent report that the work force in that group is approximately 40,000. The IDB Mission estimates that agroindustries and the increasing range of import substituting industries employ at least 20,000 and possibly near 30,000. The remaining 60,000 to 80,000 for artisan activities represents an admittedly conjectural figure, but totals in that range are alleged by various writers familiar with Haitian life.

has come to a halt. Despite a series of problems noted below, manufacturing output was continuing to expand at the time the mission was undertaken in June 1978, and it appeared that, the backlog of new projects and project ideas was somewhat larger than a few years before.

B. Bases of the Recent Industrial Expansion

Several factors underlie the recent industrial expansion.

1. Increased Supply of Domestic Raw Material Inputs

The most traditional manufactures of Haiti have developed on the basis of proximity to supplies, especially those which are relatively perishable and those which require a relatively great elimination of unusable materials to obtain the substances desired. The revitalization of agroindustries in the late 1960's was attributable in large measure to an increase in domestic supplies. Most of the increase was due to better weather, but in some cases, the new supplies appear to have been stimulated by government policies (as in the initial activities in the cotton industry, from the mid-1960's through the early 1970's, at which time the Government tended to offer growers prices somewhat higher than had previously prevailed in the country, or which then prevailed internationally). In still other cases the establishment or expansion of private agroindustrial processing facilities were the key elements in stimulating the increase in agricultural output (e.g., the expansion of what became the Caldos Sugar Corporation and that firm's provision of truck transportation from the small private plots to the mill). Finally, the rise in world prices played a key role in other cases, notably vetiver essential oils, though here, high government taxes did not permit the full effect of the supply incentives to reach Haitian producers or processors.

2. The Impact of Government Policies

While not all government activities favored industrialization, on balance, the changes in the late 1960's and early 1970's were clearly and strongly positive. To begin with, the Government initiated a number of important infrastructure projects. The improvement of the airport at Port-au-Prince was undertaken with local resources and the construction of the Péligre Dam received assistance from the Export-Import Bank of the United States. Then the IDB, and afterwards, the World Bank, USAID and other multilateral and bilateral agencies provided major inputs, rehabilitating the Port-au-Prince harbor, expanding and upgrading the city's electric generating facilities and embarking in a major way in roadbuilding. In addition, the Government fostered industrialization: (1) by amplifying the legislation favorable to new industrial undertakings, providing for substantial elimination of duties on imported inputs and substantial elimination of income and property taxes for 5-10 years (now up to 15 years for plants located outside Port-au-Prince); (2) by extending protection from competitive imports to most ISI; (3) by making a measure of medium term credit available to businessmen, including some not in the most prominent group; and (4) by establishing an industrial park with rental facilities so that Haitians with limited resources and skeptical foreigners could experiment with manufacturing in Haiti without risking large amounts of capital. In addition, the Government provided a disguised fiscal subsidy by not enforcing strictly the collection of excise taxes and by overlooking, for the most part, much employer evasion of fringe labor

benefits. Of still greater consequence, perhaps, was the change in the Government's general disposition to industrial expansion, reflected in the everyday details of doing business, and in the way in which such government attitudes were perceived by businessmen at home and abroad. Many have indicated that this influenced their basic decision to invest or the extent of their investments. These changes took place in the context of exchange rate stability and an assurance of free convertibility which also appears to have been conducive to a favorable entrepreneurial response.

3. The Low Cost and High Productivity of Haitian Labor

Haitian labor, long low cost, became relatively even lower cost during the 1950's and 1960's as the growth of per capita income (and the rise in prices) lagged behind that of most of the rest of the developing world. Two other factors helped transform that low cost labor into a powerful new force for Haitian industrial expansion. The first was the successful example of the assembly export activities in Asia and Mexico. Second, there was growing awareness of Haiti in U.S. business circles in the period after 1971. This refers to an increased awareness, first, of the country itself, second, of the low cost of Haitian labor, which combined with the local tax incentives, made Haiti among the more attractive locations for assembly operations, and third, of the fact that this desirable production site was only two to five hours flight time from leading U.S. cities, should any problems arise requiring immediate attention. Moreover, the low cost labor, while not always literate, proved to be dexterous, hard

working and highly productive. In addition, with the exception of those in a few of the largest plants, the local workers were not inclined to organize and were not usually resistant to management directives. Furthermore, there was a substantial group of experienced Haitian expatriates in the U.S., Canada and Europe who were more or less ready to return, thus reducing the need to depend upon foreign managers, which was most fortunate, given the need to supervise workers in Creole.

These factors helped established Haiti as a good place to locate manufacturing --ISI and agroindustries as well as assembly export activities. Many new industrial investments appear to have yielded a 30 to 50 percent return on equity. Moreover, the economic rates of return were also quite high, in at least some cases, even higher than the financial rates due especially to the fact that the wages paid generally exceeded shadow wage rates (the opportunity cost of labor) by appreciable amounts.^{2/}

C. Agroindustries

Agroindustries represented nearly half of industrial output in Haiti in 1960, but account for perhaps only 35-40 percent at present. This sub-sector is comprised, first, of a group of products traditional to Haiti (notably sugar and sugar derivatives such as clarin and rum, sisal and twine, essential oils, cotton and leather), second, products developed in the period since the Second World War (textiles, flour, cigarettes, beer

^{2/} Although the minimum wage rates in 1978 ranged from \$1.60 to \$2.00 a day (plus fringe benefits which amounted to another 40-50 percent, only half of which was generally paid), the Mission found indications that shadow wage rates were generally much lower.

and non-alcoholic beverages, cocoa products including liqueur, pasta products, beef, dairy products and rice), and, third, a group of recently established agroindustrial activities (edible oils, vinegar, tomato processing and the canning of pigeon peas, mangos, guava and papaya). While the first group of products utilizes only domestic inputs (except for years of very poor harvest), many of the activities established since the Second World War have drawn on imported raw materials for part, or in some cases, all of their supply. This is true of textiles (to the extent permitted by the Government), cigarettes (although to a decreasing degree), beer and non-alcoholic beverages, dairy products, tomato products (though perhaps temporarily), and it is especially true of edible oils (manufacture of which is likely to continue to depend upon imports of soybeans even if cotton and sunflower production expands), and flour, which will continue to be completely dependent on imports of foreign wheat. On the other hand, the new fruit and vegetable processing enterprises reflect a very different phenomenon. Represented at this point by four plants, (with additional facilities under consideration), they are expected to lead to the processing of such commodities as mangos, a large portion of which now just rot in the fields) and to the increased production of several other fruits and vegetables, primarily through more productive farming operations. New agro-industrial exports are anticipated, though such a phenomenon might not prevail over the long run as domestic consumption rises.

The success of the new agroindustrial exports will depend in part on increased irrigation facilities, increased use of fertilizers and greatly expanded agricultural extension activities. Current plans for increased

irrigation (and the recent increases in storage facilities) also should prove a major boon to the relocated and more fertilizer-dependent new cotton crops, and thus to the local textile industry. Whether or not these factors will prove enough to offset the often adverse pricing policies of the Government, which monopolizes the purchase of raw cotton (offering less than the world prices in recent years) and the sale of ginned cotton (charging more than world prices), remains to be seen. With some of the improvements already planned, however, and elimination of the adverse pricing regulations affecting several crops, the construction of more feeder roads, the initiation of cadastral surveys to provide the landowners with greater security and thus more of an incentive to invest, greater availability of agricultural and agroindustrial credit, and better coordinated support for the agricultural sector, agricultural output should be able to be increased. Promising pilot projects are currently underway in the Cul-de-Sac, the Gonaives Plain, the Plain of Les Cayes, and the Petit Goave area, and these are already encouraging plans for new processing facilities. Additional activity is underway in the region around Cap Haitien, and, a considerable potential exists in the long run for the Central Plateau. Further opportunities for stimulating greater agroindustrial output from domestic inputs may arise as a consequence of second stage processing of essential oils and in the establishment of perfume and soap industries based on the oils, and in the use of the residues of vetiver, sisal and other plants. With all these developments --with all that the productivity of Haitian agriculture can be improved-- the long term future of the sector is certainly limited. Current obstacles such as severe erosion, lack of storage facilities, lack of irrigation, use of

less efficient production methods, and lack of secure title to the land can be overcome to a degree, but it must be recognized that three-quarters of Haiti's approximately five million people gain their livelihood on very small and often separated plots, which together with the arable land not currently in use, amount to an area only one-third the size of the State of Maryland.^{3/}

D. Import Substituting Industries

Import-substituting industries (ISI) tend to evolve throughout a country's history, but they have become important in Haiti only in the 1970's. The ISI fall into two groups, those based primarily on local inputs and those based primarily on imported inputs, both of which include some agroindustries. Those based on local inputs have been relatively more important in the past, but this may change in the period ahead (unless a second major cement plant is established).

ISI Based Primarily on Local Inputs

Based on Agricultural
Inputs

Furniture
Cotton yarn
Spaghetti products
Canned fruits, fruit
juices and vegetables
Cigarettes
Unsweetened chocolate
Vinegar
Canned pork products

Based on Mineral
Inputs

Cement
Cement blocks

^{3/} The major recent source on Haitian agriculture is Clarence Zuvekas, Jr., Agricultural Development in Haiti. An Assessment of Sector Problems, Policies and Prospects Under Conditions of Severe Soil Erosion. (U.S. Agency for International Development, Washington, May 1978.)

ISI Based Primarily on Imported Inputs

Based on Agricultural
Inputs

Flour
Edible oils
Matches
Beer and malt nutrient
Non-alcoholic beverages

Based on Mineral
Inputs

Clothing
Footwear
Plastic products
Paints
Pharmaceuticals
Metal products
Paper bags
Steel (reinforcing bars)
Agricultural implements

Furniture, originally based on local wood, depends more and more on imports and any major expansion will have to be based on imported materials due to the serious problem of soil erosion and deforestation. Cotton clothing has been a traditional industry, but increasingly, clothing production has come to include synthetic fibers. Canned tomato products, and other canned fruit and vegetable production depends on imports to an extent at present, but the inputs for Haitian industry should be entirely locally supplied within two or three years. The expansion of local cotton, sunflower and perhaps palm oil production will reduce, but probably not eliminate the need for the edible oils industry to resort to imported inputs (principally soybean).

The nature of ISI in Haiti vary tremendously, and include activities whose product prices include a major element of local value added (cement, furniture, cotton yarn, and among those with predominantly imported inputs, clothing, metal products and agricultural implements), others of a more intermediate nature (matches and some plastic products, for example), as well as many simple operations calling for no more than repackaging or the addition of water.

Perhaps because this step in the industrialization process is so new to Haiti, both the public and the private sector seem to have been caught somewhat unprepared and have responded to what seem to be very great opportunities in a way which is not yielding Haiti nearly as much gain as is possible. In deciding whether to grant a franchise for an ISI, the Government considers first, whether the product represents a major item of foreign exchange expenditure, and second, whether the product could be produced with local resources. Present or potential comparative advantage are not a primary concern, nor is production in a facility of sufficient size (and at a level of utilization sufficiently great) so as to assure costs as low as, or within some percentage of world prices. This is true even if the exports that might be required to sustain such a level of output would be internationally competitive. The first changes in this approach, the first efforts to select products in which Haiti might be able to compete, and processes to help achieve that end, are coming from a few private entrepreneurs, and not so much to maximize their profits as to minimize the risk of financial calamity should the Government remove its protection of their industry.^{4/}

At least as serious as the lack of attention to the comparative advantage of the activities selected (which admittedly is not easy to project), is the inattention to employment effects. There is no search for profitable product lines which promise relatively great employment

^{4/} The potential of identifying comparative advantage ISI activities is so manifest that in spite of the neglect in attempting to single out such activities, a few lines of profitable export already have been developed even without seeking out special processes or process modification, notably in metal fabricating products where the internationally dominant process is relatively labor-intensive.

effects, direct and indirect, nor any rejection of projects of only intermediate level returns which promise low employment effects.^{5/} Moreover, there is little effort to examine process alternatives to see if there (or any that are particularly energy saving) are less capital-intensive techniques/which are also highly profitable, even in financial terms. Use of shadow wage rates, if for no other reason, to determine which projects should get the various disguised subsidies of the Government's investment incentive programs, also is not undertaken.

Mention already has been made of the low level of technical skills in Haiti, but there is perhaps no group of industries where the need of technicians and engineers is so great as the high value added ISI. These industries have had to supplement the supply of local technicians and repatriates by sending people abroad for special training and by bringing in experts to offer on-the-job training in other cases. What is already a problem could soon become a serious obstacle to growth if the quantity and quality of locally produced technicians does not take a sharply upward turn in the near future.

F. Assembly Export Industries

The assembly export industries now account for 30-40 percent of the value added for Haitian industry, and nearly two-thirds of employment in the factory component of Haitian manufacturing. Although backward linkages with the economy remain small, they are no longer insignificant; approximately 15 percent of the inputs are now locally produced, 70 percent being

^{5/} It must be acknowledged that any rigid application of such procedures might endanger the repatriation of some capital and even professional skills.

imported from the United States or other country of origin, and 15 percent being imported from third countries, notably Taiwan. There has been a tendency for the proportion of value added in Haiti to rise, with perhaps half of the export price of baseballs and softballs now corresponding to the local contribution. The fears of footloose industries have been reduced; inexpensive and highly productive labor and high profits (of the order of 40-50 percent on investment in the most successful group of operations) have led many foreign or joint ventures to move from rental quarters to self-owned structures. Ownership of the approximately 200 plants is two-thirds Haitian and 25 percent joint ventures. Fewer than half of the employees in the assembly industries work for companies that are wholly foreign owned.

The assembly exports began with baseballs, textiles and garments, but now extend to a number of other fields, notably electronics, a wide range of sporting equipment, toys and furniture. The product diversification would seem to be a highly desirable development, although it was doubtless fostered by the establishment of a United States quota for Haitian garments, and the fact that Haiti already finishes 90 percent of the baseballs and softballs used in the United States. There still is little market diversification, however. Haitian entrepreneurs, who originally wrote to hundreds of United States manufacturers and distributors to make their contacts, have made no similar effort with respect to Europe and have been known to even discourage European requests when they seem relatively more complicated than the work they are already familiar with.

The capital investment per worker ranges from approximately \$750 in some assembly plants to approximately \$3,500 in the most "capital intensive" of these activities. This compares to figures in the \$20,000-\$35,000 range in some agroindustries and ISIs currently being undertaken or planned. Although the backward linkages of the assembly industries have been developing only slowly, their contribution to employment appears to be substantially greater per dollar invested than the indirect as well as direct employment resulting from other industrial activities. Moreover, they have been by far the major source of new employment in the industrial sector. While they employ a larger proportion of men in Haiti than in the rest of Latin America, most employees are, nonetheless, female. Whether this is a factor behind the continuing large exodus of young males, particularly recent vocational school graduates, is difficult to assess. The exodus is being partially offset, in any event, by the return of Haitians who have both technical training and experience, and may be further stemmed in the future as government vocational school funding has become destined primarily for the Institut National de Formation Professionnelle, which deals with employed adults and younger students attending under employer sponsor arrangements.

Unlike the situation in many other countries, the assembly export plants are not located in a free zone and are not based on a system of temporary imports and tariff drawbacks. The result is that each prospective assembly export operation requires a special franchise granting it the exemptions from import and export duties, income taxes and property taxes

which new industries can qualify for. This need for individualized, case-by-case treatment and the frequent hassle of getting goods through customs, along with unpredictable prosecution for the widespread violation of fringe benefit tax provisions all make the day-to-day business of operating an export assembly plant more difficult than in many other countries --but not sufficiently so as to offset the high profits which can be earned. Most assembly exporters, foreign as well as Haitian, seek to substantially expand their operations in the next few years.

G. Light and Medium Scale Construction Activity

Construction has been growing at an average rate of 14-16 percent per year since 1970, and while much of this has involved major economic infrastructure, the growth in light and medium scale construction activity has been appreciable as well. Prospects for the latter, which include single unit housing, small to medium factories and secondary roads (both construction and / maintenance) appears strong for the period ahead. This holds for demand from both the private and public sectors, with the latter now emerging with some projects for very low cost housing to attempt to alleviate the severe problems of slums in Port-au-Prince. The housing component of construction expansion would be still larger, of course, if the National Housing Bank were funded, and the demand for most construction activities would doubtless be greater if the Government-authorized price for cement were closer to international levels.

Haiti's existing cement plant can produce at least 30 percent more for the local market so no supply bottleneck exists for that raw material, and even less so for cement blocks, though the latter may be obliged to use somewhat higher cost sand. Brick production was closed down in the 1960's, but there are two projects in the idea stage for the establishment of new manufacturing facilities. Since both cement and modern brick facilities are heavily fuel intensive, and various additional building materials would require direct imports, an expansion of this sector will involve relatively heavy foreign exchange expenditures.

H. Handicraft Industry

Artisan activity employs 60,000 to 80,000 in Haiti. Most of this activity is a primitive form of manufacturing, and as in other developing countries, will tend to decline in importance as the sector advances. Some, however, is of relatively recent origin, and appears to have attractive opportunities for expansion. Haitian basketweaving and wood-carving have been of interest to tourists and to foreign curio shops for a generation or more, but a new impetus is now being given in various other products --bedspreads, carpets, cotton and sisal lampshades and wall hangings and banana bark-iron bar furniture which fetches a higher price than wicker in fashionable U.S. outlets. Artisan workshop centers employing several hundred, and indeed, up to 1,500 already have been established, and more can be expected, both large and small, as the result of both IDB and AID handicraft projects. The IDB program, initiated in late 1978, with a \$541,000 grant to the Ministry of Social Affairs, will establish pilot training centers at Port-a-Prince and several rural locations. The workshops will focus on textiles (dressmaking, handloomng, silk screening and toy making), rugs (rugs, carpets and tapestries) and ceramics.

CHAPTER II

The Basic Resources for Industrialization

As in all countries, human and natural resource availability and capital or the access to capital, condition the possibilities of Haitian industrialization. Metallic mineral resources in economically exploitable quantities appear, at this time, to be limited to bauxite, though geological explorations related to copper continue and may well lead to follow-up activity. In both cases, though, there is not a strong argument for extending operations to refining due to the fact that electricity is likely to remain relatively high cost in Haiti.

Non-metallic minerals are more abundant, and have served as the basis for the cement industry. In addition, there are exploitable deposits of clay, marble, stone, asphalt, salt, and a few other substances, all of which appear to support possible projects for mining and at least a measure of industrial processing. In the case of clay, several projects are currently under consideration.

The traditional economic resources of Haiti have been the land and those who worked it. Agricultural production has been the basis of much Haitian industry, and will continue to be of considerable importance. Haiti's unskilled human resources have shown themselves to have a new potential in manufacturing because of the dexterity and hard-working nature of the Haitian laborer, and the singularly low cost for which that combination can be obtained. Even as this has been occurring, however, it has become obvious

that more skilled manpower now takes on an increasing importance as the key input for a more vertically integrated and diversified industrial structure, and as a significant factor in realizing the full potential of the existing agroindustries and import-substituting industries as well.^{6/}

A. Agriculture

Though its role has declined somewhat, agriculture is still by far the largest sector of the Haitian economy, accounting for 44 percent of GDP during the years 1975-77. Thus, while manufacturing industry amounts to three times as much value added as agriculture in Latin America as a whole, in Haiti, where the potential of agriculture is so limited, the proportions are reversed; three times as much value added is produced in agriculture as in industry. Haitian agriculture employs approximately three-quarters of the labor force and generates over 60 percent of foreign exchange earnings. Growth has been erratic and has averaged only slightly more than 1 percent during the period since 1960. The share of export crops in total sector output fell from more than 14 percent in 1960-62 to under 11 percent in 1970-72, while that of industrial products declined from just under 5 percent to little more than 4 percent. At the same time, the contribution of domestic consumption crops rose from somewhat less than

^{6/} The capital resources of Haitian industry are relatively small, but have been expanding rapidly in recent years. The potential for obtaining capital stock obviously far exceeds the country's limited level of savings. Both foreign capital and repatriated funds constitute an extraordinarily large source of potential resources. For the projects of those with a past record of business achievement and those with good connections, capital financing is quite accessible, though even for this group, it is not always easy to obtain funding for projects longer than three years. But the market imperfections are very great and for smaller and less well known entrepreneurs, it is exceedingly difficult to obtain financing, even for what seem to be relatively promising projects. For a further discussion, see Chapter VII.

81 percent to more than 85 percent.^{7/} It is probable that rising population, lack of availability of new land and declining fertility on existing plots, combined with rising food prices, induced a shift out of export and industrial commodities into foodstuffs for domestic consumption. It appears that this trend has been continuing over the last years.

The question arises as to whether Haitian agriculture can provide a dependable basis for a sustained and significant growth of its agroindustrial subsector. As indicated in Chapter IV, the situation is complex and varies from crop to crop. While an in-depth analysis cannot be provided in this report, the most important problems should be mentioned. The issue of an integrated development strategy for foodstuffs, export crops and industrial crop production needs to be considered jointly with that of agroindustries.

The most important factors underlying the poor performance of Haiti's agricultural sector and leading to the fluctuations in the production of agroindustrial and export crops, have been:

- the scarcity of arable land and the over-cultivation of most land under production;
- the severe erosion caused by the uncontrolled felling of trees for inexpensive fuel (charcoal), and the sharp changes in the weather that result in either prolonged periods of drought or in heavy floods;

^{7/} Zuvekas Clarence Jr., op.cit. pp. 16-18,

- the high degree of land fragmentation and the relative absence of plantations of larger land holdings,
- the need to import all modern agricultural inputs, which adds to production costs;
- the lack of modern storage facilities in all but a few locations, with the resultant heavy losses because of the inadequate storage of agricultural crops;
- the high incidence of traditional production methods leading to yields quite low in comparison to other countries;
- the lack of irrigation;^{8/}
- the lack of agricultural credit, with funds extended by IDAI (notably for cotton and other industrial crops) and those granted by the Bureau de Credit Agricole (BCA), amounting to less than one half of one percent of total net domestic credit;

In addition, special note must be made of the pricing policies pursued by the Government. The Haitian farmer responds rather sensitively to price incentives. Changes in the price-structure for agricultural products cause rapid adjustments by farmers in shifting production from one crop to another. Haitian production of cotton, sisal and sugar cane has been dependent on

^{8/} Irrigation systems have been installed on 70,000 hectares, however inadequate maintenance and operational problems have limited effective irrigation to less than half of this area. Further expansion and installation of new irrigation systems is particularly feasible in the Plaine du Nord, the Plaine de Gonaives, the Cul-de-Sac area, and the Plaine du Sud near Les Cayes. To substantiate the potential for expanding agricultural production with an adequate supply of irrigation water and an adequate extension service, the following example should be mentioned. The installation of tube wells and an extension service supervised by expatriates in the Cul-de-Sac area permitted an increase from one, and occasionally two crops a year, to an average three crop rotation, accompanied by a doubling to tripling of yields. Moreover, farmers in this area are currently attempting to manage a four crop rotation per year.

fluctuations of world market prices and on the prices which government institutions have allowed farmers to receive.

The list of factors reveals the complexity of the situation confronting Haitian agriculture. However, it also suggests that a solution is possible by overcoming some of the key constraints --modernizing production techniques, increasing the availability of irrigation, consolidating landholdings and strengthening the status of land titles, improving the access of small farmers to agricultural credit and formulating consistent and production-oriented policies to deal with crop prices, soil erosion and a number of other agricultural concerns. These measures would improve overall agricultural performance and could be combined with specific goals such as raising coffee, cocoa and other export crop production, and increasing the output of specific food or agroindustrial crops.

Agroindustries can play an important role in achieving a sustained progress in agricultural development in Haiti. Traditionally they have provided production incentives to Haitian farmers, as in the case of sugar cane, vetiver root and cotton. With increasing competition from food products for the scarce arable land, however, new strategies are required from the agroindustrial entrepreneurs. It would appear advisable to focus on price policies oriented at increasing the quality of output, and on extension service for introducing improved production methods. Since Haitian farmers respond well to price incentives it would seem advisable for Haitian agro-processing enterprises to consider the prices paid to the farmer for industrial crops, not only as a cost element, but also as an output incentive given to the producers. It may well pay to raise the

price above the minimum level acceptable to the producer and get as a return, a larger supply and greater dependability in delivery. (It would appear that the price policies maintained by IDAI-SEN over the last few years have had a detrimental effect on cotton production.) Moreover, the prices paid should discriminate according to the quality of the product delivered to the processing plant. Quality standards can easily be introduced in the case of sugar cane, e.g., by measuring the sugar content, or in the case of vetiver roots by taking into consideration the time in which the roots have matured in the fields. Price policies should be accompanied by an effective extension service, aimed at improving the quality and quantity of yields, and should include the introduction of new varieties and/or crops where necessary. While extension work is usually regarded as a government responsibility, it will usually be in the interest of private agroindustrial enterprises to make comparable efforts as well.

Once successful examples of sustained improved industrial crop production have been established, they can serve as demonstration areas which may affect significantly other crop production (food crops and export crops). In that way agroindustries can exert a certain pull-effect on agricultural development in Haiti.

B. Human Resources for Industrialization

Industrial development requires, first, entrepreneurs, and second, a supply of intermediate level managers, shop-foremen and skilled workers.

The availability of those with industrial experience and an entrepreneurial mentality is quite limited in Haiti. Moreover, at the time of the Mission, training facilities for the modern manager were extremely limited. The Institute of Advanced Commercial and Economic Studies offered a part-time college level program emphasizing accounting, and the National Institute of Management Administration and Advanced International Studies offered a four year undergraduate program, with study area concentrations on the private sector, the public sector, and international relations. The program had an enrollment of 145 students, but all but one of the forty faculty members taught part time. An expanded program with support from the Canadian International Development Agency was anticipated, however. In November 1978, a third management institute was initiated.

More attention was given by the Mission to the situation relating to shop-foremen and skilled workers. Manufacturers constantly complain about the scarcity of such skills in Haiti, but while there is a shortage of qualified workers, it has not been a constraint such as to discourage investment.

The supply of skilled personnel has come from three sources: training institutions in Haiti; on-the-job training; and the immigration of Haitians who had left the country, gained experience and education abroad, and are now attracted back to Haiti by rising salaries for people with their skills due to the growth of industry, and the substantial decrease in "political problems."

To estimate some of the elements of the supply of skilled workers, the Mission visited all the vocational schools of Port-au-Prince, and a school in Cap Haitien so as to obtain some basis for judging provincial facilities. The institutions vary a great deal from one another, producing graduates in different fields and with great variation in their skill levels.

Most of the vocational schools are publicly owned. The few exceptions are the schools supported by religious groups, some of which are also to become publicly owned in a few years inasmuch the Government requires that all schools be or become public property. When these transfers occur, the religious orders which direct the school will keep some control over them by supplying some of the directive staff of the schools.

The public sector schools are dominated today by a new institution, the Institut National de Formation Professionnelle (INFP), which was established two years ago in the outskirts of Port-au-Prince, close to the industrial area, with the support of the United Nations Development Programme. INFP was built with grants from the French Government, which is also providing most of the instructors for a few years until the Haitians can take over. The Haitian Government also supports the operation of INFP by means of a training tax (2 percent of the payroll of industrial and commercial enterprises), all of which is earmarked for INFP. However, the current tax collection of approximately \$25,000 a month falls short of the \$30,000 which, according to the directors of the Institute, is required

for its adequate operation. It seems likely that if the widespread evasion of this tax were to be eliminated, much more than the \$5,000 a month gap would be raised. This is particularly significant because all of the current revenues from the vocational training tax have been given to INFP with the result that government support for the other vocational schools has declined appreciably.

INFP is headed by a qualified graduate of SENAI, the Brazilian technical training institution. At INFP five main courses are offered at present: general mechanics, automotive mechanics, plumbing, sheet metal work, and construction. These courses enroll approximately 250 students, a number which was expected to grow to 500 by the end of 1978.

INFP offers a basic three-year program, and also more specialized coursework. The former includes two years of courses and one year of paid, on-the-job training at an industrial plant. To enroll in this program it is necessary for the student to have a sponsor who will employ him at the end of the two year formal study period. INFP directors claim that given the shortages of skills in Haiti, prospective INFP students have not had any difficulty finding sponsors.

The other type of INFP courses are designed for adults and employees of productive units. These courses are either short courses (1 to 3 months) during which the employer sends the worker to school for a very specific course, or the somewhat long courses (9 months) during which the participants

work half time and study half time. In both of these types of courses, the student is paid a full salary by his employer while attending the course.

The INFP courses are patterned along the line of those other successful Latin American programs such as SENAI in Brazil and SENA in Colombia. Expansion plans include programs in cabinet making, radio and electronics, and refrigeration. These courses are expected to begin in the coming year. INFP's building and equipment are brand new and allow for a very fast growth; the number of students could easily increase three- or four-fold when the institution uses all of its infrastructure. INFP's first promotion produced 68 graduates this year. Students are currently limited to 20 per class.

The emphasis of INFP on adult education and the requirement of current employment or the sponsorship of a business or industry in order to join the course, coupled with the earmarking of the training tax (to INFP and away from other institutions) is likely to aggravate the financial crisis of other government supported institutions, and is also likely to make it more difficult for those segments of the population without access to industrial sponsorship to obtain an education. This last phenomenon is bound to be more relevant in the provinces. It can, however, be said in favor of this program, that the work and sponsorship requirements lower the probability that the students emigrate from Haiti upon graduation; the short life of INFP does not provide a basis to evaluate the importance of this factor, however.

The equipment of INFP is all new and its building is quite spacious and expensive. Visiting INFP's installations one can only hope that the institution does not become a beautiful symbol of development with very little social productivity; it is at least questionable whether the particularly scarce education resources of Haiti should be spent on such elaborate installations.

The other two vocational public schools visited in Port-au-Prince were J.B. Damier and the Salesian Brothers. The former was always a public institution. The latter was originally private, and later became state property, though, the Salesian Brothers still head the school.

The Salesian Brothers school appears to be the better of the two. It has courses in general mechanics, electricity, cabinet making, and tailoring. Students start a four year course at the school immediately following six year primary school cycle. The first year is used as an orientation, and the students begin to take vocational courses only in the second year. Besides the professional disciplines, the curriculum includes courses in history, grammar, mathematics and other subjects.

Currently, the school has 450 students and historically, a high drop-out rate, as only slightly more than 35 percent of those who enter the first year complete the course. The last promotion included 64 graduates out of 150 who began, which shows a decline in the drop-out rate. That class included 22 electricians, 21 mechanics, 9 tailors and 5 carpenters.

The high-drop out rate is attributed to the low qualification of the graduates of the elementary school cycle, but it is, nonetheless, rather stunning inasmuch as the school has a very large pool of prospective students from which to choose. In order to lower the drop-out rate, the school is making the entrance examination more rigorous and this year expects to have a class of only 130 students, chosen from slightly more than 1,000 candidates. In addition, more attention is being given now to vocational guidance during the first year.

The school plans to add approximately 100 students by opening new programs of electronics and automotive mechanics. This expansion, which will cost approximately \$300,000, will be financed by donations from Catholic institutions and a few foreign governments which have aided the school in the past.

Most of the graduates of the Salesian Brothers School emigrate to the United States, Puerto Rico, the other Caribbean Islands and even French Guyana. The ones who remain in Haiti obtain their first jobs with a salary of approximately \$120 a month. Most of the graduates work in industrial plants, although the tailors tend to self-employment.

A serious problem of the school is its low level of operating resources. This is making it very difficult to maintain its former number of quality instructors. Their salaries range from \$90 to \$220 a month, while technicians of comparable experience can make over \$300 a month working in the private sector. Previous attempts to develop electronics

and automotive mechanics programs failed because of the school's difficulty in competing in the open market for qualified teachers. School resources for equipment and building can be raised abroad, but international donors normally do not finance payrolls.

The other public school visited in Port-au-Prince is J. B. Damien. It has 262 students enrolled in a four-year course which also follows the six years of primary school. The school offers courses in general and automotive mechanics, electricity, plumbing, cabinet making, construction and tailoring. The current equipment of the school is very old and sometimes in useless condition. The Government has not allocated funds for plant and equipment for at least 20 years. As in the Salesian Brothers' School, the payroll is also very limited and this creates problems in hiring quality teachers as the growing manufacturing sector's salaries increase. The electricity course is likely to be closed in the near future because of the lack of equipment. The head of the school attempts to keep the place running by making furniture for the public and sending the automechanics students to practice in private repair shops. He longs for the good old times of the '50's and early '60's when the school's equipment was newer and there was relatively larger government support. In those years the reputation of J. B. Damien was such that a degree from the school was sufficient to enable its possessor obtain a U.S. visa. Many of the graduates of J.B. Damien continue to emigrate, but now they are likely to go to other countries, notably those in the Caribbean.

In even more adverse straights is the public vocational school at the Cap Haitien. A substantial proportion of the school's equipment is 50 years old and salaries are lower than average even for other institution in Haiti. The curriculum is also four years in duration. It has 300 students and the last promotion of 49 students was distributed as follows: 25 tailors, 12 general mechanics, 6 shoemakers, 5 auto mechanics, and 1 carpenter. The high drop-out rate appears to be attributable primarily to student discontent with the low quality of the facilities and the almost complete lack of employment possibilities in the Cap Haitien area. A private vocational school is slated to open in the community in 1979.

The last three schools discussed all have problems of lack of budgets in general, and of low salaries for teachers in particular. Teachers moonlight to increase their earnings, and quite a few of them leave the school after a couple of years of work. In a way, they look at teaching as a "post graduate program," after which they can demand higher salaries in the domestic market.

A private vocational school in Port-au-Prince (Canad ) was also visited. This school is run and financed by a Catholic church order. The school is headed by a French Canadian priest who has lived over 20 years in Haiti. In the Haitian environment Canad  is a remarkable place. The vocational component of the school has 600 students, who enter after the primary cycle. The school's facilities and its organization are excellent. The programs include electricity, electronics, air conditioning, and auto and general mechanics. The school pays high salaries to its teachers and its graduates are in great demand.

The school's problems are quite different from those of the other schools visited. Its expansion possibilities are limited by problems of space around the school and, more importantly, the fact that the Government is going to take over the school within 3 years. This worries the directors of the school who are afraid this school might follow the steps of the publicly owned ones. They particularly fear that the Government's emphasis on the development of INFP is going to dry up government funds even more and thus seriously damage the institution and its programs.

To summarize, vocational training in Haiti is very limited and most of the schools have serious problems of quality and financing. The Government does not appear to have been able to maintain even the former level of most public vocational institutions and the tendency to nationalize the private schools appears to lead to their deterioration. The development of INFP, an institution which serves a segment of the population different from that served by the other vocational schools, is likely to further aggravate the financial situation of the previously existing vocational schools.

The market for vocational school graduates presents an apparent paradox. While the private sector complains about lack of adequate supply, school trainees find the domestic demand inadequate and many tend to emigrate. This apparent paradox may be explained as follows: first, it is true that many graduates are not ready to be very useful in industry upon leaving the school, since it normally requires some on-the-job training

to learn how to work in an actual production process rather than in a classroom situation. As the private sector identifies skill with the ability to perform and to learn on the job, they perceive a shortage of those workers. Given the low level of literacy and the lack of industrial tradition in Haiti, one should not be surprised that a substantial number of vocational school graduates find it difficult to take over skilled and supervisory positions in the Haitian manufacturing sector.

Second, as long as Haitians find ways to emigrate, legally or illegally, they will be able to find manufacturing positions in countries where the sector is more developed. There Haitians can not only obtain better paying jobs in their specialty, but closer supervision and an easier environment in which to learn on-the-job, since their initial responsibilities would be lower, those countries already having a substantial group of qualified industrial workers. In other words, in other countries the Haitian vocational trainee can find better paying jobs at levels lower on the job ladder, but which are less demanding initially, and more suited to their formal skills. One should note that these Haitian workers are appreciated abroad not just for their formal skills, but for their hard working habits and highly cooperative nature which often makes them more productive than the native workers of the countries to which they migrate.

Given such a vocational training system and labor market, the manufacturing sector has to rely upon, first, on-the-job training in Haiti, and second, the supply of high paid repatriates for tasks which cannot be learned on-the-job in Haiti, or for which it is very expensive from

the plant's point of view to do so. These repatriates are needed mainly in jobs in which new technologies are being used, and in positions in which personnel supervision is important. Given the rapid rate of manufacturing growth in Haiti, the private sector tends to find it more expensive to have on-the-job training than to hire repatriates. It can be said that, in a way, the fact that Haitian migration has been so large, is providing Haiti with a way to cope with the unprecedented growth rates in the manufacturing sector. One should note that many other countries, at a stage of industrial development similar to Haiti, also have difficulties obtaining qualified personnel. Those countries, which are located mainly in Africa, are relying on a supply of foreign European expatriates. In Haiti, however, the role of those expatriates is being played by Haitian repatriates.

CHAPTER III

Government and Private Institutions which Affect the Overall Nature of Haiti's Industrial Sctructure

Just as physical and human resources condition Haiti's industrial structure, so too, do the country's institutions, both public and private. This chapter outlines the role of two of the leading institutional factors, on the public side, the framework of government directly affecting industry, and, on the private side, the Haitian manner of approaching business relationships, whether between a private entity and the Government, between two or more private enterprises, or within a private organization.

A number of government offices influence only one or two branches of industry; these are mentioned in other parts of the Report. The discussion here focuses on the primary institutions affecting the sector, the Planning Ministry (CONADEP) and the Ministry of Commerce and Industry (DCI), with note taken as well of the government development bank (IDAI), at least in its banking function. (IDAI also runs the Port-au-Prince Industrial Park and operates a number of industrial entities.)

The Planning Ministry has two divisions which give attention to industry, one dealing with sectoral planning and another focusing on projects. There are not as yet any specialists in the Ministry who deal solely with the industrial sector, however, although an IDB technical assistance operation

will provide two advisors who will concentrate on industry in the future. CONADEP coordinates the preparation and implementation of the national plans. The 1977-81 Five Year Plan designated industrial decentralization as the nation's number two priority, though most of the attention was given to industrial infrastructure, with less than 3 percent of development funds slated for industry proper. (This relatively small amount was designated for the establishment of an industrial park at Cap Haitien, government participation in a textile mill, increased support for IDAI, and for activities such as standards and quality controls and industrial promotion.) CONADEP also participates in various ad hoc commissions which are established to deal with major problems that arise concerning the industrial sector.

The Ministry of Commerce and Industry is the major government body which deals with the industrial sector.^{9/} Its main responsibility at present appears to be the approval of franchises for the various privileges permitted by law (described below), but more comprehensive responsibilities for the Ministry are under consideration, a modification which has been urged by a number of foreign and also domestic observers. Studies of certain branches of the sector regarded as having investment potential have been prepared from time to time, as have various prefeasibility studies. These studies and those dealing with industrial projects which have been undertaken by consultants for CONADEP, utilize the data prepared by the Haitian Institute of Statistics, usually without indication of the nature of the adjustments which those data may require. (The studies have other limitations as well, as is indicated in Chapters V and VII.)

^{9/} Handicraft industry comes under the supervision of the Division of Artisan Affairs of the Ministry of Social Affairs, however.

The Haitian Bureau of Industrial Promotion functioned under DCI until recently, and was charged with project identification and promotion. This office had limited funds and staff but, nonetheless, has initiated some interesting work, in part, it would appear, due to the presence of a very active advisor furnished by the German Government. Now the entity is a separate institution and presumably will include a soon-to-be established investment office in New York, which is being given technical assistance by UNIDO. At the time of the IDB Mission in June 1978, there appeared to be approximately fifteen economists and engineers working in DCI staff positions, including those assigned to the Haitian Bureau of Industrial Promotion. Very few of those officials had personal experience in industrial (as contrasted with commercial) enterprises.

The Government Development Bank, IDAI, is the only significant medium term lender in Haiti, but the level of its operations have not risen as fast as the increase in overall credit, and it now accounts for only about 5 percent of all loans outstanding, and more than half of those are held by the manufacturing and servicing activities it controls or participates in.

DCI rules on the applications from entrepreneurs for the benefits authorized by the legislation favoring industrial expansion which were passed in 1960, 1963, 1969 and 1977-78. These measures involve the substantial elimination of import duties on machinery and raw material inputs used in new enterprises (or new expansion activities), five-to-ten year exemptions from property taxes (the period of exemption increasing according

to the size of the investment), and the exoneration of substantially all new industrial undertakings from the income tax --fully for the first 10/, 11/ five years and partially, on a decreasing basis for the next five years.

In the case of the assembly export industries the special privileges are supposed to apply only if all production is exported. For those industries producing for the domestic market, increased and usually full protection against the competition of foreign goods became another important measure of support, and one, the duration of which, was not clearly limited.

Certain of these incentives were important but all of the businessmen interviewed maintained that the Government's general disposition toward industrial expansion was of still greater consequence. Since the early 1970's the Government has had a much more receptive attitude to industrialization, with the result that the legally authorized investment incentives were more likely to be granted. Equally as important, long bureaucratic delays were less likely to turn up, particularly for those of Haitian citizenship. The lack of trust between the Government and many

10/ The Income tax exemptions were subject to the following restrictions:
A. If enterprises established already produce less than 25 percent of local consumption, new enterprises are entitled to the advantages stated above;
B. If those enterprises produce or will be able to produce shortly 50 percent of local consumption, any new enterprise contemplating the same kind of activities, will have the said benefits only for two years or the remaining period of exoneration enterprises already established are enjoying. When that period of time expires, taxation will be as follows:

First year, 15% will be taxable;
Second year, 30% will be taxable;
Third year, 45% will be taxable;
Fourth year, 60% will be taxable;
Fifth year, 80% will be taxable.

For enterprises located outside the Greater Port-au-Prince area, exemptions of up to fifteen years were granted in 1978.

11/ In addition, the Government provides a disguised subsidy by undertaking only occasional enforcement of regulations calling for fringe benefit payments and various minor taxes.

in the private sector began to dissipate. With these subtle but very real changes there was less inclination to send profits abroad and more willingness on the part of Haitian entrepreneurs to take advantage of investment opportunities at home, which were by then, usually more profitable than those which they could find overseas. The changes in the intangibles of government policy, which served to reduce risk, seem to have had more effect in inducing industrial expansion than many of the legal incentives --which suggests that the Government is probably giving up more revenues than necessary to obtain a given level of industrial expansion.

This shift in official attitudes has been of great importance, but something must be added about an underlying set of institutional arrangements that remain, and that continue to affect all business transactions in Haiti, namely, the importance of personal relationships. In the case of the relationships with the Government, it is not merely that the need to rely upon many personal, as contrasted to institutional arrangements tends to raise the cost of doing business; it is that there is a limit to what can be done when even small matters cannot be handled by delegated authority or regularized institutional mechanisms. The time of the highest officials is limited, and, indeed, more absorbed by multilateral and bilateral aid officials now than at the start of the recent industrial expansion. Yet as the size of the sector grows, even maintaining the same rate of growth will involve an increasing number of personal interventions. As a consequence, fewer of the necessary decisions will be able to be made, and the quality of those made can be expected to decrease. But the phenomenon and significance of personal relationships extends still further.

While it is true in every country that personal relations help, in the Haitian environment they are of the utmost importance. The nature of personal relations may well be the most striking characteristic of manufacturing industry, and indeed they pervade all economic activity in the country. Haiti is a society in which it is essential to have adequate personal connections to operate a business at a profit.

Consider, to begin with, the legal framework in which economic activity takes place in Haiti.

First, laws are frequently written in a way that either allows a great variety of interpretations --which put a fair amount of discretionary power in the hands of an individual or group of individuals-- or which do not adapt to the changing and modern environment in which manufacturing plants operate. For example, the land law requires a foreigner to have one year of residence in the country before he can purchase real estate. The law does not mention whether this would apply to either foreign corporations or mixed capital firms, however. Another example is provided by the requirement to obtain a franchise to waive import and export tariffs on components before an assembly operation can be established. In both cases, the law does not produce a rule which specifies what may or may not be done in a general way, but creates a system in which individuals can take discretionary decisions about what may or may not be done. In other words, the law does not draw a general policy guideline, but establishes a system by which decisions are made, or as with the land law, leads to situations in which the law cannot be used to set policy. Thus it becomes necessary for a group or an individual to do so in a discretionary way.

Second, the actual implementation of the laws and policies depends on the bureaucracies of the various government branches. As in many other countries, these bureaucracies operate more or less efficiently depending on the personal relations of those involved. For example, a particular commodity can clear customs in one day or two months, depending on who the importer is. In order to do business successfully, it is necessary to be able to work with the bureaucracy, that is, to make sure that the bureaucracy does not become an obstacle to production and management in a plant.

Third, political and economic power tend to be complementary to each other in all countries in the world. This complementarity is particularly striking in Haiti. As the legal system and policy implementation give great discretionary power to various elements within the Government, these elements can exercise both political and economic power to their benefit. Any private enterprise stands to gain a great deal by obtaining the capability of affecting the decisions of the Government and its bureaucracy, and any politician and government employee also stands to gain by establishing a connection with the private economic sector. In this environment, where the implementation of policy and the interpretation of a law cannot be predicted accurately, the private sector enterprises, in order to minimize their risks, seek a connection with the political power structure, so that they can guarantee that the interpretation of the laws and the policy implementation will benefit them, or at least, so that they will not become an obstacle to the private firm's growth.

The need that private entrepreneurs have to be linked with the political power structure introduces some very interesting complications to the art of being a successful entrepreneur. First, as profits depend very greatly on the Government's policy interpretation and implementation, a successful entrepreneur has to devote a large part of his time to dealing with those elements. Explicitly, a successful entrepreneur is characterized not necessarily by being an innovator in the Schumpeterian sense, but by being a person with the appropriate connection to the power structure operating in the capital market and in the government bureaucracy; that is, economic success is associated with appropriate connections, not with risk taking and innovation. Second, as connections in a country with an elite as small as that of Haiti depend heavily on family relationships, managers also build their connections around their families. This leads to a manufacturing sector with the following rather special characteristics:

1. There are no corporations in an operational sense in Haiti, as there is no organized stock market. Thus, a private citizen cannot buy into a firm.
2. Almost all private sector firms owned by Haitians are family enterprises.
3. There is a tendency to keep management within the family of the plant owners. Thus, the growth of a firm can be limited

by the lack of available managerial talent. A family with many young males can expand its business at a much faster rate than a family with no young males. Remarkably, sons-in-law are not perfect substitutes for sons, as they are not always trained properly to undertake managerial roles; however, the Arab business and industrial minority does consider managerial potential as one of the positive characteristics of a potential marriage candidate, particularly when he is a new or potential immigrant to Haiti. The Mission found very few private sector Haitian owned plants in which ownership and management were separated, i.e. that were run by a professional manager. Most of the professionally run Haitian firms are new, a fact which is indicative of the change which is taking place in Haitian society.^{12/}

4. Most of the foreign manufacturing firms in the country operate in partnership with a Haitian, who uses his connections to eliminate problems. Not surprisingly, among the assembly operations visited, the ones which are having the most problems in getting materials through customs and which are being sued for labor code violations were enterprises run by professional American managers with no ties to Haitian groups.

^{12/} The cliquish nature of some of the non-family owned plants is also quite noticeable; for instance, when an entrepreneur was questioned about the nature of the relationship with his partner, he answered plainly: "he is like my brother."

The characteristics of the Haitian manufacturing sector indicate that personal relations in the Haitian economy actually create a bottleneck for the economic growth of the sector. In order for Haiti to develop and modernize, it might be desirable for economic relationships of the country to become depersonalized. To achieve this goal, a number of policies could be suggested:

1. Many laws could be written specifically in terms of the needs and institutions of a modern society. This is true of tax laws, tariffs, income tax legislation, etc.; and
2. Laws and policies could be designed to minimize the discretionary power of government officials. The generation of rents through government restrictions could be abolished, tariffs could be set at reasonable levels and actually be collected instead of being set at higher levels and then waved for some people, etc. In general, once policy is set, the market forces and not the government official might decide what resources are allocated to which ends.

CHAPTER IV

Agroindustries and the Agroindustrial Potential

A. Haiti's Agroindustrial Base

Agroindustrial production accounted for 45 percent of Haiti's manufacturing output in the early 1960's, but only 35-40 percent in the mid-to-late 1970's. In spite of an unsatisfactory growth rate, agroindustrial production remains a very important segment of the Haitian economy. It continues to have favorable prospects for growth, moreover.

Three groups of agroindustrial activities can be distinguished -- first, Haiti's traditional agroindustries, some with a particularly long historical trajectory, second, those developed in the period since the Second World War, and finally, the branches of processing which have emerged in the last few years.

1. Traditional Agroindustries

Based on the prevailing climatological conditions and historical background, the crops to undergo agroindustrial processing traditionally in Haiti have been sugar cane, sisal, cotton and vetiver and lime for essential oils.

a. Sugar cane

There are numerous small plants producing crude raw sugar, mainly for local consumption by the poor rural population. Recently, IDAI became active in promoting model mills of this type. In addition,

sugar cane is processed and refined in three large sugar mills. One is located in the north near Cap Haitien, one in Port-au-Prince and one in the Southwest near Les Cayes.

Sugar cane also provides the raw material inputs for a large number of distilling plants which produce alcohol for local consumption. The principal product is clairin, a Haitian type of rum. The most important plants are located in Port-au-Prince, with a number of smaller facilities in Les Cayes and Cap Haitien. Exact production figures are not available, but there seems to be a growing demand for clairin which has led existing distilleries to expand their capacity.

Approximately 95,000 tons of refined sugar were produced in 1972-73, which dropped to 52,500 tons in 1975-76. In 1977, 10,000 tons were imported by a country which is normally a net exporter. Analyzing the causes of the decrease in sugar production in the period since 1974, the following factors can be identified:

- Dependency on supplies from small producers.

Most of Haiti's sugar cane comes from small producers, who respond strongly to incentives of alternative production activities, disincentives from low sugar cane prices and/or rising production cost. Since 1975, particularly, food prices have been rising rapidly in Haiti, making it attractive for the small cane-producer to pay more attention to food crops. Prices for sugar cane have risen at

a modest pace while production costs (particularly fertilizers, insecticides, pesticides, gasoline and diesel) have been rising rapidly. Consequently, the total deliveries to the mills have decreased.

- Drought

The unusual drop in production of sugar that occurred in 1977, can be explained by a severe drought that reduced overall agricultural production in Haiti significantly. This points to the need for irrigation.

- Lack of quality incentives

The sugar content in the cane delivered to the mills has tended to decline over the last 5-10 years. This can be attributed to a large extent to the fact that no price differentiations are made in Haiti according to the sugar content of the cane delivered.

b. Sisal

Haitian sisal has traditionally been used for the production of binder twine, coffee sacks, artisan products and ropes. Three types of raw fiber serve as material inputs for these processing industries. The highest quality fiber is obtained by machine decortication. Manual decortication results in two lower quality fibers, "telle" and "battu."

In 1976, sisal production in Haiti declined to a new low of only 6,000 tons, of which 3,000 tons were machine decorticated fiber. Production remained essentially unchanged in 1977 and is also forecast at about 6,000 tons for 1978. Haiti is no longer a significant supplier of sisal or sisal products to the international market. During 1977, sisal exports totaled only about 2000 metric tons (only 1,000 tons in 1976), compared to 9,400 tons in 1974 and close to 17,000 tons in 1970. Imports were required in 1976 (1,200 tons), when local producers and distributors of sisal fiber located export markets which offered higher prices than those of the domestic industries. No imports took place in 1977, and none are forecast for 1978.

The key problem in the decline of sisal fiber and sisal products output is the lack of plantation production and machine decortication. Small producers refuse to harvest and undertake the laborious process of hand decortication if the prices fall beyond a certain acceptable level. In addition, it should be noted that the hand-decorticated fiber which is of inferior quality, yields a lower price.

The situation of low prices for sisal fiber and sisal baler twine appears likely to persist in international markets. Brazil and Mexico built up a large production potential during the sixties and and their governments are subsidizing private producers to make them

competitive in international markets. Approximately 95 percent of U. S. imports now come from these two countries, with Haiti supplying only the remaining 5 percent.

c. Cotton

Once a major export product, cotton now needs to be imported on occasion to satisfy the demands of local textile producers. Even though production increased substantially in the early seventies, reaching a new post 1930's peak of 5,300 metric tons in 1973, it leveled off in 1976 and dropped sharply in 1977. Cotton fiber is now only a minor export item, and exports of cotton cloth (primarily denim) have come to an end. Only a relatively low level of exports of carpets, bedcovers and miscellaneous cotton products remains.

The problems of decreasing production can be viewed as revolving around two factors; the production policy measures of IDAI-SEN, (Institut de Developpement Agricole et Industrial - Société d'Equipement National), and the response of small producers.

IDAI, through its branch SEN, operates a cotton processing complex in Gonaives which includes a cotton gin, a delinter, an extraction press for cotton seed oil and a cotton spinning plant. Most of Haitian cotton is ginned and processed in this complex, and seed cotton is transported up to distances of 280 km. to the plant. Apart from that, a small cotton gin operates in the south near Jacmel. All cotton produced in Haiti is bought by and sold through IDAI.

Through its branch organization, SERPA (Service d'Etudes et Realisation de Projects Agrícoles), IDAI extends technical assistance material inputs and financing to the small producers of cotton. These activities proved successful during the early seventies and cotton production increased reaching a new peak in 1974. However, in spite of rising cost of seed, fertilizer, insecticides and pesticides sold to the farmers, IDAI maintained a policy of only modest increases of prices paid for cotton to the producers. IDAI justifies its policy by reference to the rising cost of ginning and in terms of world market competition. The narrowing profit margin came at a time when food crop prices were rising, which led farmers to slacken their cotton production efforts and shift increasingly to the food crops.

There have been also complaints that technical assistance services and delivery of material inputs were incomplete or not in time. A breakthrough in overcoming the recent stagnation in cotton production may be on the horizon with the forthcoming completion of irrigation projects in the Gonaives Plain and in the Cul de Sac. Still remaining, though, would be the matter of the quality of IDAI's thread production. Several local purchasers complain that the thread delivered by the Gonaives plant does not meet the standards of similar thread categories available in the international markets at even lower prices.

d. Essential oils

Vetiver and lime production provide raw material for some 45 essential oil distillers, most of them located in the south. Essential

oil production increased steadily in the early seventies, rising from 5.2 million gourdes in 1970 to 10.0 million gourdes in 1974. The value of exports nearly doubled from 2.5 million US\$ in US\$ in 1970 to 4.9 million US\$ in 1975. Preliminary data through 1977 show that essential oil production declined in 1976, but regained the previous year's level in 1977.

The extraction of essential oils from citrus fruits is concentrated in the Cap Haitien and Jacmel-Les Cayes area. The main products are lime and bitter orange oils, mostly exported to the U. S. A new plant for the extraction of lime oil started production this year in Jacmel, with a capacity to process 45 tons per day, which could be doubled if demand develops accordingly. Equipment has been purchased for the initiation of another lime essential oil and lemon peel facility in Port-au-Prince. In addition, an integrated citrus processing complex is planned in Cap Haitien, though lack of adequate medium- and long-term financing has delayed the project since mid-1977.

In the case of vetiver oil, Haiti practically has a virtually unlimited market in Europe and U. S. A serious problem of vetiver root supply from small producers has developed in the last few years, however. The governemnt flour mill enterprise, La Minotrie, started operating a new plant for vetiver oil extraction in Montrouis with a total capacity of one third as large as current national production. Even though the plant does not yet operate at full capacity, the extent of its purchases have led to a decline in quality of the roots

supplied in Haiti because many producers no longer leave the roots in the ground for the 18-24 months required for full maturation. In the future La Minotrie intends to obtain its vetiver roots from the surrounding area by implementing an extension and production program for small producers on 1000 carreaus (1290 hectares).

An additional problem in vetiver extraction is that in most of the smaller plants the technique applied for the extraction is outdated and the equipment and installations are often in poor condition. Even though the new plant in Montrouis has a very fine design and is neatly set up it still applies the traditional steam technique of extraction, through on an improved level. More efficient and refined techniques, however, are available today, according to specialists interviewed.

2. Postwar Agroindustrial Developments

During the postwar development a set of new agroindustrial activities were started in Haiti, some of which have achieved great importance within Haiti's agro-industries subsector.

a. Flour-milling

Though based on imported inputs only by now one of the most important agro terms of value added. The mill, established as a private firm by Ca.

owned by the Government, though it is operated in a joint venture with the Canadian milling firm, Maple Leaf. Production of flour has grown rapidly since 1971, and present capacity is 6000-6200 sacks (100 lbs.) a day. As a by-product, 2000-2500 sacks of bran are produced daily. Present production satisfies local demand, except for periods of peak demand such as the Christmas and Easter holidays. With present plans of doubling the production capacity of the mill, a net surplus for exports to other Caribbean islands may easily result in the future.

b. Tobacco

Present tobacco production provides about 30 percent of the raw material inputs of an important cigarette manufacturing industry. Comme Il Faut, the locally produced cigarette dominates the national market. Present forecasts for the 1977-78 harvest give an estimate of 950,000 compared to 765,000 lbs. in 1976-77. Comme Il Faut has been very successful in establishing a local production program combined with an extension service for small producers. Tobacco is mainly grown in the Cap Haitien and Cul-de-Sac area and in the Les Cayes region on the south coast.

c. Alcoholic beverages

In the field of alcoholic beverages the establishment of a local beer factory greatly contributed to value added by the

agro-industrial subsector. Principally based on imported raw materials it now supplies nearly the total national market and also produces a variety of non-alcoholic beverages including a non-alcoholic malt nutrient.

d. Pasta

Based on the increasing supply of locally produced flour, several pasta plants began operating in the Port-au-Prince area in the 1970's. Their main products are various varieties of spaghetti and noodles.

e. Cocoa

The processing of cocoa has been undertaken by the Haitian Manufacturing Specialty Co. (HAMASCOSA), a private company, however, which until late 1978, enjoyed certain monopoly privileges including the right to be the sole exporter of cocoa. The principal product up to now is a concentrate for the production of cocoa liqueur, which is exported to the U. S. HAMASCOSA also produces unsweetened chocolate, cocoa butter and cocoa oil for local sales and exports. The company is the production of chocolate candy.

f. Beef, Dairy and Leather Products

HAMPCO (Haitian American Meat Company) operates a modern slaughterhouse in the Port-au-Prince area and exports beef to the United States. Beef is produced only by small

producers in a traditional manner. In 1977, the company received a loan of \$750,000 from the Overseas Private Investment Corporation of the U. S. (OPIC) to initiate a project for the production of pork, sausage and rabbit both for the local market and for export to other countries in the Caribbean.

There are also no modern dairy farm operations in Haiti. For the most part, dairy cattle are held in subsistence operations by the small farmers. However, IDAI-SEN operates a modern dairy plant in Les Cayes which produces pasteurized milk, chocolate milk and butter. Their program of extension service to secure an adequate supply of milk to the plant has been only marginally successful. The plant in Les Cayes processes some 3000 liters a day at present, which is about half of its capacity, and it operates at a loss. Another small dairy is run by the Ministry of Agriculture experiment station at Damien.

Roads and transport facilities are a major problem for the Haitian beef and milk processing industries. Even though the major highways have been almost completed, there is still a lack of smaller and feeder roads connecting these highways with the adjacent and more distant agricultural production areas. Inaccessability to milk producers during bad weather severely hampers the daily supply of milk to the Les Cayes plant. In the case of beef, transport of cattle is still

done primarily driving the cattle to market along the main highways, sometimes over distances of up to 200 km.

The recent expansion of beef and dairy output has helped promote increased production of leather products. Two tanneries undertook expansions in 1977-78 with the assistance of loans and/or insurance support from OPIC.

g. Rice-milling

With the increase in rice-production a large number of small rice-mills were set up in all of the rice producing regions of Haiti. These are private mechanically operated mills, with less than a ton per day capacity in most cases, undertaking mostly custom milling for small producers (quantities sometimes as small as a kilo or two). An attempt to establish a large rice-mill in the Artibonite area in the late fifties failed. Problems of management and input supplies are cited as the main causes; with respect to the latter it should be noted that ten different varieties of rice are grown in this region, whereas a large mill needs two or three standard types for operation.

3. Recent Agroindustrial Developments

In the last two to three years several agroindustrial activities were initiated in which Haiti definitely has a potential, but whose success still remains to be proven. These fields are tomato processing, canning (fruits, fruit juices, vegetables), vinegar production and edible oil production from inputs other than cotton seed.

a. Canning and tomato-processing

An important canning enterprise started operating in June 1978. The Conserverie Nationale, S.A. (CONASA), a Haitian owned shareholding company set up a plant in Cap Haitien to process mangos, guava, papaya and pigeon peas. It intends to sell 40 percent of its products in the local market and 60 percent in export markets. CONASA's supply of raw material will come from the surrounding northern plain, and will be provided by small producers. The plant managers are optimistic that the farmers will respond very favorably to the production incentive given by an attractive price and guaranteed price, and an extension program in the case of papaya.

FACOLEF, an enterprise involving several prominent Haitian businessmen, began operating a several million dollar plant for the production of tomato paste at Cavaillon near Les Cayes. The plant has also facilities to can pigeon peas. At present it is plagued by serious supply problems and, as a consequence, is operating at a very low level of capacity, canning fruit juices based on imported concentrates. It hopes to export tomato products and pigeon peas in 4-6 years.

The problems of input supply and adequate medium- and long-term financing appear to be most serious for the newly developing industries in this field. CONASA is facing repayment problems on a one-year loan, having been unable to obtain

adequate medium-term financing at the start of the operation. Both enterprises have problems of raw material.

It is yet to be demonstrated whether their arrangements with small producers in the respective regions will prove adequate. A dependence on small local suppliers has been a feature of the CONASA plans from the beginning. For FACOLEF, this has emerged after heavy rains severely damaged the 1978 tomato harvest of FACOLEF's own tomato plantation. Moreover, to fully utilize its facilities and achieve profitability FACOLEF states that it is also dependent on the Government's undertaking the second phase of an irrigation project near the plant (part of a USAID Integrated Agricultural Development Project for the south of Haiti).

At least one other company prepares canned tomato paste. At present it uses tomatoes imported from the Dominican Republic, but it has plans to grow crops in Haiti.

b. Vinegar

A private entrepreneur established a fully automatic vinegar plant in the northern part of the Port-au-Prince area, which produces vinegar on the basis of sugar cane. The vinegar produced is of very good quality and will clearly meet Haitian consumers' preferences, since apart from imported vinegar, Haitians have always used locally fermented vinegar from sugar cane juice.

The plant is the first large scale production of vinegar in Haiti and started operating in 1977. Its capacity is such that at full utilization it could easily supply the entire national market and substitute for all imports of vinegar. At a later stage of the project, vinegar at a price that makes it available to the poorer parts of the Haitian population, who do not consume vinegar regularly at present.

c. Edible oils

Traditionally, edible oil has only been extracted from cottonseed in Haiti. In recent years, facilities were initiated to produce edible oil from sesame (Jacmel) and sunflower (Port Dauphin S.A. near Cap Haitien). In all three cases, the oil is extracted mechanically with outdated oil presses. As a result, these activities have not yet had a significant impact in supplying local demand. This has led the Government to approve the construction of \$6-\$7 million plants to process soybean oil and any other oil seeds produced domestically or imported.

B. Recent Agroindustrial Performance

In trying to assess Haiti's agroindustrial performance over the last 10-15 years some consideration should be given to the problems of availability and reliability of data. However, even allowing for an adequate margin of error, the information obtained during the Mission do clearly

establish the tendencies and fluctuations as they prevailed in most of the fields of agroindustrial activities in the time-period considered.

1. Agroindustrial Growth Patterns

The value added by agroindustrial firms increased at an annual rate of only 0.3 percent in constant dollar terms between 1960 and 1974. The unsatisfactory rate of growth is mainly attributable to a significant decline in production between 1962 and 1967 (see Table 1). Since 1967, agroindustrial output has been increasing at a rate of 4.1 percent. However, this rate was slower than the growth of the Port-au-Prince market for which most agroindustrial products are destined. Accordingly, imports of such products have been rising rapidly in both legal and contraband categories.

In addition, it should be noted that production of sugar, cotton and sisal declined significantly during 1975-76 and 1976-77, and did not show substantial recoveries in 1977-78. Even though some gains were registered in flour milling, tobacco processing and alcoholic beverages in the same time period, these did not begin to offset the loss in value added by the decline in sugar, cotton, and sisal products.

In spite of a considerable growth rate since 1967, and in spite of efforts to expand and diversify agroindustrial activities, the subsector's performance has not been satisfactory up to now. It has not kept up with growth in domestic demand, and in some fields

Table 1

Value Added by Agroindustrial Firms, 1960-1974

(millions of gourdes, 1955 prices)

	Coffee Process- ing	Daking	Sugar Refining	Other Food Products ^a	Essen- tial Oils	Alcoholic Beverages	Tobacco Products	Cotton & Sisal Textiles	(A) Total Agro- Industry
1960	7.2	10.0	14.1	4.7	2.7	9.2	6.2	12.1	66.3
1961	4.2	13.3	17.0	5.4	4.2	10.1	5.8	10.0	70.0
1962	8.3	19.2	16.5	5.3	4.8	10.2	6.0	7.3	77.6
1963	6.7	19.2	16.5	5.6	3.0	10.3	5.9	9.3	76.5
1964	5.7	18.5	15.2	6.0	2.9	8.4	6.0	8.8	71.5
1965	5.8	21.2	15.0	7.2	4.2	8.9	6.2	7.3	75.8
1966	6.2	16.7	14.0	7.8	6.1	8.6	6.2	9.1	74.7
1967	4.3	15.4	13.1	6.7	7.3	7.4	6.3	6.4	66.9
1968	5.0	16.0	12.5	6.8	8.7	7.8	6.3	7.7	70.8
1969	4.7	17.0	17.5	6.8	7.7	7.2	6.0	10.3	77.2
1970	4.1	13.4	10.0	7.2	5.2	7.8	7.3	8.4	64.3
1971	5.5	15.3	12.6	8.7	7.6	7.9	8.6	4.8	71.0
1972	4.8	16.9	14.1	15.9	8.0	8.2	7.7	2.8	78.4
1973	5.0	21.3	12.9	11.4	8.5	8.1	8.3	3.9	79.4
1974	4.8	23.9	11.2	12.0	10.0	8.9	11.1	6.5	88.4

Source: Institut Haitien de Statistique, 1977, pp. 347-354, cited in Zuvekas, op. cit., p. 24

^aEdible oils, lard, molasses, and rapadou.

in which Haiti has traditionally been a net exporter, the decline in production during the last three years was so great as to make occasional imports necessary (sugar, sisal), or net exports became insignificant (cotton). Various factors have contributed to this situation.

2. Obstacles to Agroindustrial Growth

Based on the foregoing and on information obtained in interviews conducted during the mission it is possible to classify the the causes for the unsatisfactory growth rate into two groups:

- obstacles to growth susceptible of relatively rapid solution; and
- longer term obstacles to growth.

The latter are of no lesser importance: they are closely linked to Haiti's overall development process and will require more time to find and implement adequate solutions.

a. Obstacles to growth susceptible of relatively rapid solution

- Availability of adequate medium and long term financing

The problem of access to adequate medium and long term financing is a general constraint felt by Haitian entrepreneurs. A few aspects of this problem pertaining particularly to agroindustries should be noted, however.

The financial rates of return which can be expected from agro-industrial enterprises in Haiti are somewhat lower than those prevailing in some other components of the sector, particularly the assembly export industries. This makes agroindustries less attractive for financing to the private banking sector and the lack of access to financing emerges as a major constraint. The nature of the specific complaints is essentially the same as those noted for other industries in Chapter VII, with the addition that some of the most promising agro-industrial activities are the new processing ventures, and private banks in Haiti have shown a strong tendency to lend primarily to established business enterprises. They have shown great hesitance in taking risks with innovators, even though their undertakings appear favorable, as can be seen in the case of the new fruit processing plants in Cap Haitien and Jacmel.

With respect to IDAI, the activities of the institution were well recognized, with many agroindustrial enterprises commenting favorably on the loans and technical assistance granted. However, the slow procedures involved often makes it unattractive for businessmen to use IDAI loans and they look elsewhere for financial resources. In a well documented example, one full year elapsed between the approval of an application by IDAI and the payment of the first part of the credit.

Another problem in the field of financing should be noted. In trying to mobilize capital for the realization of project ideas, Haitian entrepreneurs often look for cooperation with foreign

investors. Not surprisingly, they generally find themselves in negotiations with enterprises which are much more powerful than they are. This can make cooperation for both sides relatively unattractive unless the Haitian entrepreneurs are willing to forfeit major participation in decision making in the future enterprise. It represents a limitation in obtaining technical know-how and assistance through foreign business partnership.

Sustained, adequate input supply of agricultural raw materials

The supply of agricultural inputs to agroindustries in Haiti is a complex problem that has seriously hampered the growth of the agroindustrial sub-sector. There is clearly no rapid solution to the problem. Agricultural development must be aimed at involving the large group of small farmers in a process enabling them to continuously raise their productivity by using modern inputs and making better use of the scarce resource cultivable land. In the short run, the problem can be alleviated, however, through the efforts of individual agro-industrial processing plants.

Institutional framework and supporting activities

Agroindustries and agroindustrial projects appear to receive a considerable amount of attention from national institutions and international agencies. What is missing, however, is a coordinated institutional framework that would allow more efficient action and avoid doubling of efforts and waste of skill and resources. The problem has become quite complex and requires special study. At

this point, two areas of concern should be especially mentioned. Various industrial promotion bureaus have been created over the last few years and a centralization of these activities in one or two offices is clearly recommendable. Another area in which better coordination and communication could prove very fruitful and beneficial is between the bilateral assistance given to Haiti by United States and various European countries, on the one hand, and the support provided by the major international agencies on the other.

b. 'Long-term' obstacles to growth

Appropriate production technology

With exception of the more recently established plants, agroindustries in Haiti use techniques which are technologically outdated. This is not to argue that a country like Haiti should install the most up-to-date technologies, but in many cases an increase in technological sophistication certainly is called for. Given Haiti's large supply of industrious, highly trainable and low cost labor, there should always be a tendency to use relatively labor intensive techniques. Technologies to be installed also depend on their availability in international markets, of course, though the soon-to-be developed Haitian production of agricultural implements may provide some widening of alternatives. Nonetheless, Haitian entrepreneurs and state enterprises will always be faced with the problems, given available technologies of how to use the abundant and low-priced labor force in an optimum fashion. Related

to this problem, but also involving the field business administration, is the scarcity of managerial skills and technically trained personnel, which is discussed in Chapter III.

Infrastructural deficiencies

The deficiencies in infrastructure may become critical to the future development of many agroindustries. Of first consideration is the lack of adequate feeder-roads to the major highways. Most roads in the countryside are in very poor condition and largely impassable after heavy rains. With increasing agroindustrial production, this may become a major handicap for adequate delivery of agricultural raw materials to the processing plants in terms of time and volume. Another limitation, that of adequate irrigation, is noted earlier in the chapter. See also discussion of energy problems in Chapter VII.

C. The Agroindustrial Growth Potential

Because Haiti remains a country still dominated by agriculture, agroindustries have an important role to play in the country's economic and social development. Continued agroindustrial development can be expected to contribute to:

- decentralization of economic activities by creating employment and income in rural areas, thus helping to offset the recent acceleration of migration to Port-au-Prince;
- import substitution in food products and edible oils, with a resulting savings in foreign exchange, and without raising prices to consumers;

- export expansion, leading to increased foreign exchange earnings;
- increased agricultural production from small farmers as a result of the incentives provided by the existence of new, dependable markets; and
- improvement of the nutritional value of food consumption.

Haiti's agroindustrial subsector has diversified and opened up new areas of growth in the last few years, which leads to the possibility that the 4 percent plus rate of growth over the last decade may even increase in the years ahead. A number of relatively favorable conditions appear to exist, and the Mission found generally optimistic attitudes among both private entrepreneurs and government officials. In addition, foreign investors appeared to be showing increased interest, based on success of various undertakings. What follows is a brief description of a number of agroindustrial activities which appear to have an important growth potential, and several suggestions that might be considered for influencing the administrative and economic framework guiding agro-industrial development in Haiti.

1. Agroindustries with Immediate Growth Potential

a. Integrated citrus processing or essential oil extraction from citrus fruit

One citrus processing plant is in the process of installing itself in Port-au-Prince (using recently purchased second hand equipment), and other facilities could be expanded or initiated

in the south at Jacmel and in the north at Cap Haitien. The basis for encouraging growth is a large and expanding international demand, and the abundant supply of citrus fruit in the two areas of Haiti noted. Essential oils from lime and oranges are high in demand in both the U.S. and Europe and processed, dried citrus peel appears to have a good market in Europe (particularly Holland and Germany).

Expansion of lime processing is underway in Jacmel. (Still in the planning stage, however, is an integrated citrus processing complex, essential oil extraction, citrus fruit concentrates and juices, and processing of citrus peel) which would be located at Cap Haitien. The project is favored by a growing demand for these products and the shareholders' experience with these production lines, albeit on a reduced scale, using outdated techniques. Problems to be encountered will lie in the areas of technical management and input supply to the future plant. Therefore, in project preparation proper, attention should be given to a technical assistance program for some time and also for the establishment of an adequate extension service to the surrounding region for the production of citrus fruit.

b. Canning(fruit, fruit juices, vegetables)

Based on rapidly growing demand, principally in the Port-au-Prince market, processing and canning of fruits and vegetables

seems to have a large potential for import substitution and supplying the additional demand caused by increasing incomes. There exists also a somewhat limited export potential to other Caribbean islands. More critical at present are input supply constraints. As indicated above, newly established enterprises in this field have yet to demonstrate that they will be able to secure sufficient agricultural raw material inputs from the surrounding areas to use their plant's capacity sufficiently. The future success of these industries will largely depend on the response of small agricultural producers to price incentives and guaranteed purchase agreements, but also on the successful implementation of larger agricultural development projects and extension programs presently planned or initiated in various parts of Haiti.

c. Sisal and edible oil

The local demand for sisal and sisal products (for coffee and cocoa sacks, binder twine, sisal ropes and artisan products) and its additional, though admittedly uncertain export possibilities suggest that Haiti might find it advantageous to substantially increase production from a current low of 6,000 tons a year to something nearer its traditional volume of 15-20,000 tons. An important step in this direction would be the reactivation of the Plantation Dauphin, the country's only remaining large sisal plantation,

at Fort Liberté in the northeastern corner of Haiti. This is currently being undertaken by the new owner of the 40,000 acre plantation, who also has plans for the expansion of sunflower production and the installation of modern machinery for processing sunflower oil. While the latter may be influenced somewhat by the Government's recent decision to invest more than \$6 million in an edible oil processing complex, it, too, appears worthy of further consideration. Other agricultural activities including cattle grazing and tobacco planting (which would require irrigation) also are under study.

Plantation Dauphin has a relatively well developed infrastructure including a deep water harbor, a landing strip for small aircraft, internal communication by a private telephone system, good roads, an internal railroad system and an electric power plant with a capacity of close to 2,000 kwh. In addition, there is a machine decortication plantation for sisal, oil extraction presses and more advanced equipment for edible oil production and a baler twine factor. Many more smaller items are installed including a range of farm machinery and transport equipment.

The project of reactivating the plantation might be worth supporting for various reasons:

- its location in the economically depressed northeast of Haiti;
- the large amount of employment created in the sisal production;
- the contribution to efficient import substitution from local production in edible oils, tobacco and later on beef; and
- the utilization of unused capital invested in a country with scarce capital resources.

d. Cocoa processing

Expansion and diversification of cocoa processing in the immediate future seems both feasible and likely. Cocoa production has been declining since 1974, but HAMASCOSA is planning an intensive extension program to small cocoa producers to substantially expand output. In addition, there are the product diversifications already noted in Chapter II.

2. Agroindustries with Growth Potential in the Medium and Long Term.

For most Haitian agroindustries, realization of growth on a significant scale does not seem likely without a parallel development of the agricultural sector. This should be taken into consideration in contemplating medium and long term growth plans. The underlying problem in each individual case is how to attain a sustained, adequate supply of the agricultural raw material to justify and support the respective increase in agroindustrial processing capacities.

a. Cotton and sugar

The point raised is most evident in the cases of cotton and sugar. Installed processing capacities are adequate to process higher levels of output such as those prevailed in 1973 and 1974. Nonetheless, the CALDOS Sugar Corporation near Cap Haitien is planning to expand their capacity, and expect that their increased demand will provide sufficient production incentives to the small producers in the region, just as they did several years ago. There is some talk of the installation of a second sugar mill in the north but that might depend upon a fuller development of the northern plain.

In the case of cotton it appears that the ginning capacities installed at present (including the expanded and modernized gin of IDAI-SEN at Gonaives, which will start operation in the coming production season) are adequate to meet even substantially higher levels of production. Moreover, the expansion of spinning will really depend upon improvements of the quality of the threads produced. Dissatisfied private entrepreneurs currently active in the Haitian textile industry are talking about seizing the initiative and organizing an integrated cotton complex would also involve spinning, ginning and the production of their raw cotton requirements as well.

b. Dairy and beef

The IDAI-SEN dairy plant in Les Cayes and the Ministry of Agriculture facility in Damien supply only a small segment of the local market for milk and milk products. Imports of tinned and dried milk and of butter have been rising at an increasing rate over the last years, which demonstrates the large potential for domestic dairy operations. The approach to successful developments in this field will most likely require better integration with dairy cattle operations, than prevails in the two existing dairies. Such a project combining dairy cattle raising and milk production is now being contemplated

in the Cul-de-Sac Plain and Port-au-Prince area for producing fresh milk, evaporated milk, butter and cheese. In the northern plain, a project is under discussion which would involve beef cattle and possibly dairy cattle or double purpose cattle on a 1,000 hectares of natural and improved pasture with supplementary feeding on sugar-cane by-products.

Expansion of beef production both for local consumption and export does not appear to be limited by the market, but there is little experience in Haiti with any type of modern beef production operation and beef cattle herd management. The long-run growth potential for beef production lies in the central plain around Hinche because of its relatively large open spaces which are less suitable for crop production due to the sharp dry seasons and lesser irrigation possibilities.

c. Rice and corn milling

Consumer demand for rice, a staple item in the Haitian diet, has been rising faster than production, leading to substantial imports in recent years. Production more than doubled over the past 25 years reaching an all-time peak of 119.5 thousands of unmilled tons in 1974. Since then it declined, dropping sharply in 1977, because of the serious drought. Projections were for 47,000 tons of milled rice in 1978. It was estimated that

consumption would be approximately 60,000 tons (a decline), leaving a balance of 13,000 tons to be imported, a figure much below the 46,000 tons imported in 1977, however.

Milling capacity, comprised primarily of a large number of mills of less than a ton a day capacity, is believed to be adequate. The potential for large modern rice mills exists in the Artibonite Valley and in the south around Les Cayes, but there are considerations to be taken into account. First, such facilities would require the standardization of rice production with respect to varieties grown. To operate effectively, a large mill requires large quantities of a few varieties for mechanical reasons, since the size of the rice grain determines the characteristics of certain parts of the equipment and their adjustment to each variety.

Secondly, at a remaining or only slightly increased level of rice production, the installation of industrial level rice milling might put many of the small mills run by private individuals out of business. It is questionable if such an effect is desirable under present economic circumstances in Haiti.

Future increases in production justifying large mills depend greatly on fertilization, the implementation of irrigation systems, and perhaps the modification of land tenure.

Such developments are likely to take time, however, so that the implementation of a modern rice mill might be more favorable for the medium than for the short run, unless such a new facility were to be somewhat smaller scale than in most other countries, at least initially.

The case is somewhat different in corn. Haiti is traditionally self-sufficient except for periods of crisis such as the drought of 1977, at which time, imports of 16,000 tons were required (of which 10,500 tons were arranged under PL 480). Predictions for 1978 were for production of 302,000 tons, resulting in a surplus of an estimated 40,000 tons.

In spite of a relatively large corn production, no organized domestic marketing or distribution system ever developed in Haiti. Corn is milled by hand or in small hammer-mills, and, for the most part, consumed where it is grown. Relatively small quantities are sold in the urban market of Port-au-Prince.

Improved processing and storage would clearly be beneficial to avoid harvest losses and to induce increased production. However, any corn-mill project would have to be combined with activities securing an efficient market outlet of the mill's products to the urban markets. It may be best to initiate more mechanized corn milling with one or two relatively small, pilot project mills in strategic locations.

A private enterprise already active in food processing in Port-au-Prince is contemplating an integrated corn and rice mill project which would include a pork-butchery at a later stage. The undertaking would be part of an agro-industrial complex in the Les Cayes region, with an output of a diversified group of products destined for the Port-au-Prince market. The choice of location was determined by two factors --the approaching completion of the connecting highway which will reduce the overland transport time from between the two communities to four hours, and the closeness and fertility of the Plain of Les Cayes, which would provide the increased agricultural supply.

Initial contacts with IDAI have been taken, and the project is planned to fit in and complement agricultural development programs in the south. At present, IDAI is intensifying its extension program for the corn and rice producers in the region and its affiliate, SEN, is implementing a pork butchery to stimulate pork breeding, a traditional activity in the area. While the project is still at an early stage of preparation, it appears promising. Major economic and social development benefits would be derived from its location in the economically less active south, where the incentives of a new market for local output could provide a major impetus to agricultural development. The agro-industrial products (corn flour, corn germ, processed and packed

rice, frozen, chilled and canned pork) would be made available to Haitian consumers at prices lower than comparable imports.

A final note on milling: the government-owned flour mill, La Minotrie, will soon begin producing a high nutrition food compound (AKAMIL), based on corn and beans, under the terms of a technical assistance grant provided by the Bank.

d. Vetiver

Once the world's leading exporter of essential oils extracted from vetiver roots, Haiti is now surpassed by four other countries despite the fact that it has maintained the same volume of exports since the late 1960's. This indicate a rapidly growing demand, and thus a tremendous growth potential for Haiti, which has become only a marginal supplier to the world market.

In order for the country to realize its growth potential in vetiver, attention might be given to three aspects --integrated agricultural and agroindustrial projects, second and later stage processing, and review of the Government's involvement in vetiver activities.

Integrated projects combining a modern sufficiently large extraction plant with a close-by production are supervised by an intensive extension service for the small vetiver root producers

possess a strong development potential. Such a project is currently planned for the new facility at Montrouis owned and operated by La Minotrie. At least one private processor also contemplates a similar measure of backward integration.

Because the new government plant was established before additional local production of vetiver was initiated, the first consequence has been to increase the prices which the country's existing private producers have had to pay for vetiver roots, and to cause the quality of roots supplied to the market to decline greatly. While the quality deterioration probably will be reversed once increased supplies are developed near Montrouis it should be noted that this is only one of several interventions of the Government in vetiver. Processors are obliged to export all their output through the State's Office de Commercialisation des Essences Aromatiques (even if the private producers actually do the effective marketing), and the Office has levied sizable export taxes. The Government does not appear to be engaged in much extension work to help farmers who have been supplying existing producers, but is active, through a division of IDAI in assuring quality control; the latter appears to have been of value in keeping the inferior grades of Haitian vetiver oil off the international market.

Perhaps the most important gains can be achieved by initiating second stage processing of the vetiver essential oil, however. Such activities do not exist at present in Haiti, but appear highly promising even though there was, admittedly, one unsuccessful venture of this type. One private producer (who is also considering backward integration similar to the arrangements at Montrouis) has proposed an expansion of his essential oil extraction plant to include equipment for the further refining of the oil to acetate. He also talks about the possibilities of subsequent production of commodities using vetiver oils, such as soap and perfume.

e. Fish-industries

Surrounded by the sea, one might assume that fishing and the processing of fish are important to Haiti's economy. Unfortunately, fishing is still in a rudimentary state, practiced by some 15,000 fishermen on a subsistence or artisanal basis. They use primitive boats with which they fish within a ten mile range from the coast. Annual production at present is estimated at 4,800 tons. Processing at an industrial scale is nonexistent.

Fish and fish products clearly could make a greater contribution to the nutrition of Haiti's population, and also have a potential for export.

In the 1977-81 Five Year Plan the Government included a program for the improvement of Haiti's fish sector under the control of the agricultural ministry. Noteworthy in this program is specifically the fish-breeding program for sweet water fish and the extension service foreseen for fish ponds and fish tanks.

At present the IDB is financing a study for an assessment of the existing fish resources off Haiti's coasts. Previously, in 1977, a study was prepared describing a project which proposed the development of a small fishing fleet and the installation of required storage and processing facilities on shore.

f. Ideas for diversification of agroindustrial production

A few additional possibilities for agroindustrial growth should be noted.

Sisal juice. In machine decortication of sisal, large quantities of sisal juice are produced as a by-product. These are unused at present, but processes have been developed in other countries to extract hormones and other chemicals from the juice. These possibilities might be investigated, particularly in combination with the activities of reactivating the sisal plantation Port Dauphin.

Spices. Given climatological conditions, and growing world demands, it might be advantageous for Haiti to produce and export spices as it did in the 18th century. Spice

varieties with a favorable potential are, to use their French names, "anis étoilé," "canelas," "muscade."

Barbasco. Haitian conditions also offer the potential of growing barbasco which could be used to produce steroid drugs. Currently, Mexico dominates the world market in barbasco derivatives, which have proved an excellent foreign exchange earner.

Vetiver residues. In extracting essential oil from vetiver root, the root as such remains almost intact. Large quantities are dumped each year as waste. Possibilities of processing these residues should be investigated.

Fresh fruit packing. Preserving fresh fruits by using special type packaging (e.g., vacuum packed in plastic) could open up new export possibilities. Particularly suitable would be Haiti's rich and abundant mango crop.

3. Some Considerations for Action within the Framework Influencing Agroindustrial Development

Given the urgency of Haiti's social situation and the persisting obstacles to more rapid and effective economic growth, special consideration might be given to certain key factors in the general economic and administrative framework for agroindustrial development. One is the matter of providing adequate and timely financing for newly established agroindustrial enterprises. It can only be hoped that the improvements underway in IDAI

can be intensified so as to make it a more effective instrument of development. At the same time, it is encouraging to note that plans for a private development bank, which seem well advanced (see Chapter VII) are likely to provide important new support.

Secondly, agroindustrial and agricultural development are closely linked in Haiti. As detailed in previous sections, the production of agro-industrial crops fluctuates strongly, and competes with the production of food crops for the scarce production factors, land, capital and agricultural inputs.

Various undertakings are underway to alleviate some of the existing constraints. Particular mention should be made of agricultural development projects in the Plain of Gonaives (under the direction of the Organisme du Developement de la Plaine de Gonaives), the Cul-de-Sac area (Project Bas-Boen, administered by the Government of Haiti with the assistance of the OAS), and in the region of Les Cayes (where USAID has been working with the Government of Haiti).

Negotiations for IDB participation in the Project Bas Boen are currently underway. In addition, some technicians have wondered if the Bank might consider participating in a revolving credit fund, to be managed by the respective project execution agencies, which would help finance seasonal production credits to small farmers.

CHAPTER V

The Evolution of the Import-Substituting
and Assembly Export Industries

A. Import-Substituting Industries.

While it is in the nature of a developing economy that import-substituting industries (ISI) evolve throughout a country's history, they have become important in Haiti only in the past 5-8 years, and some government officials now look increasingly to ISI because of the relatively small amount of backward integration by the assembly export industries.

There are basically two groups of ISI --those based on the country's own natural resources and those based on imported inputs. The leading example of the former, Ciment d'Haiti, also represents the largest single investment in the manufacturing sector. Under the same heading of industries based on local inputs are cement blocks, cotton clothing and other cotton textile products, furniture (which is now coming to depend upon imports), leather goods, glass and ceramic products, and a large number of the agroindustries noted in Chapter IV. In addition, there are prospects for the future in brick (formerly an active local industry), salt, marble and stone. Under the heading of industries based on imported inputs are clothing based at least in part on synthetic fabrics, footwear, detergents, toothpaste and cosmetics, plastic goods, matches, paints, pharmaceuticals, steel (reinforcing bars, angles and squares), kitchenware and other metal products, simple agricultural implements, paper bags and some agroindustrial products such as flour and edible oils. In a few cases the currently imported inputs might be able to be obtained locally (notably in such agroindustries as edible oils). The nature of these industries varies tremendously; in some cases even those

using imported inputs are developing into fairly sophisticated processes with a high value added; in other cases all that is involved is repackaging or the addition of water.

One of the factors which has held back certain ISI development and has led to higher resource costs in other cases, has been the inclination to think in terms of the local market as the only relevant market. Because of the especially low level of per capita income and the highly skewed distribution of that income, the local market for most products is quite small, and, until recently, this was further aggravated by the poor transportation links between Port-au-Prince and the other leading communities of Haiti. As a result, there was a disinclination to attempt the production of many commodities, and where output was undertaken, this was often done in facilities of a size too small to achieve anything approaching minimum cost levels. In at least one case (cement), economies of scale were significant enough to lead to establishment of a plant with a capacity, which while still below that needed for minimum cost production, far exceeded local demand, being undertaken at amounts increasingly near capacity scale, in part because of the anticipated rapid growth of local demand, and in part with the understanding that some of the output would be exported. (Whether it was realized initially that the exports might have to be made at considerably less than average production costs is not known.) There is more and more recognition in the private sector of Haiti, though, that planning for production large enough to enable marketing beyond the local market makes sense because it is likely to achieve greater economies of scale and increase profitability, while at the same time reducing

one major source of risk, that resulting from the possible withdrawal of government protection which would lead to financial adversity for a firm unless it were capable of producing at costs comparable to CIF imports.

Government activity in the area of ISI raises a number of questions. First, the Government has an announced policy of favoring local manufacture of products, first, according to their relative weight in the country's import bill and second, according to the possibility of using national raw materials in the manufacturing process. Comparative advantage or potential comparative advantage are not really among the criteria (and the fact that so many of the products chosen appear to have at least a small comparative advantage is not comforting because it appears that others with large comparative advantage potential are being by-passed). Nor does priority appear to be given to products for which the domestic demand is sufficient to account for a scale of production at which costs are within some given percentage of the minimum cost levels attainable or to products for which there are good prospects for exports. These adverse aspects are reflected not only in the selection criteria, but also in the subsector studies and prefeasibility analyses which the Government prepares or commissions others to undertake. A further, and rather surprising deficiency is that despite the high rate of unemployment and underemployment, no special attention is given to products whose manufacture can be undertaken on an efficient basis by labor-intensive techniques, or to less capital intensive process alternatives for whatever products are selected. Recent work

by a number of economists and engineers has revealed that in many industries the process options are larger than often realized heretofore.^{13/}

As for the second most stressed criterion, that there be an effort to develop new ISI based on local raw materials, it certainly makes sense to consider the possible use of local raw materials for local industrialization, but such inputs should not be used if their use would raise costs to uneconomic levels, as for example, was formerly the case in Brazil when the steel industry was required to use domestic coal. Moreover, there may well be situations in which an efficiency analysis would conclude that it is better to export the raw materials in un-or semi-processed form: consider, for example, the recommendation of a prominent textile consulting firm that the long fiber cotton of one developing country/be exported, and that shorter fiber cotton (in Africa) be imported to manufacture the particular products in greatest demand in the country in question.

Haiti cannot afford the luxury of high-cost ISI. Future developments should concentrate on products, the case for which is not merely acceptable,

^{13/} See especially Howard Pack, "The Optimality of Used Equipment: Calculation to the Cotton Textile Industry," Economic Development and Cultural Change, Vol. 26, No. 2 (January 1978), pp. 307-325; A.S. Bhalla (ed.), Technology and Employment in Industry (ILO; Geneva, 1975); Louis T. Wells, Jr. "Economic Man and Engineering Man: Choice of Technology in a Low-Wage Country," in C. Timmer, J. Thomas, L. Wells and D. Morawetz, The Choice of Technology in Developing Countries (Center for International Affairs, Harvard University, 1975); and especially the September-October 1977 issue of World Development (Vol. 5, Nos. 9-10), which provides summaries of the case studies prepared by the University of Strathclyde group.

but especially promising, products in which Haiti has or can hope to achieve a comparative advantage, and in this initial period in which the range of economically plausible choices seems so broad, the concentration should be on those products in which the country can achieve a particularly strong advantage. The need to focus on the latter activities is stressed because at present the economic internal rate of return for many ISI in Haiti appears to substantially exceed the usual IDB and World Bank cutoff of 12 percent. This emphasis on comparative advantage means producing at a scale of output that minimizes costs (or comes close to doing so). Even after allowing for the fact that the necessary scale may be smaller for some industries in Haiti than in some other countries due to the low wage level (something which ought to be verified in subsector analyses and prefeasibility studies), it will be necessary to devote more attention to marketing than has been done up to now --local marketing to begin with, but ultimately, and to an even greater extent, foreign marketing. Among the many possibilities of financially attractive projects, attention should be given to those which offer the highest economic profitability, and among those of comparable economic profitability, to the projects which offer the highest contribution to employment, taking the indirect as well as direct employment generated (which is not generally done in most project evaluation, and, indeed is not required in cost-benefit analysis). Thus, it would be desirable to institute: (1) a more systematic approach to project identification; (2) an economic analysis of projects which takes full account of shadow prices, especially the low shadow price of labor and the high shadow price of capital,^{14/} and (3) a supplementary analysis which estimates: (a) overall linkage effects, with other industries and the rest of the economy; and (b) indirect employment effects.

^{14/} Footnote 14 appears on the following page.

A more systematic approach to project identification would entail a greater use of sector and subsector studies. These might be undertaken primarily by the Ministry of Commerce and Industry. DCI also should maintain a file of published studies dealing with process alternatives (see, e.g., the items in Footnote 13) in order to help assure that the sector studies give attention to the most appropriate processes as well as products.

The project evaluation might be the responsibility of IDAI in the cases of projects in finances, and the Bureau of Industrial Promotion or DCI in the case of all other projects requesting investment incentives, protection and other benefits. Whichever entity undertakes the evaluation, however, shadow price information referring to the industrial sector as a whole should be provided by DCI, and shadow price data referring to the economy as a whole should be obtained from CONADEP.

The supplementary analyses on overall linkage effects might be obtained from DCI in the case of other industries, and CONADEP in the case of the rest of the economy. Indirect employment effects might be furnished by CONADEP on the basis of the linkage data estimated for the linkage effects.

The especially large population of unemployed and underemployed and the sizable numbers currently in the pre-work age group indicate that the

14/ Whether a high shadow price should be calculated for capital depends upon the source(s) of the resources; for some projects, especially those in which relatively wealthy expatriates are involved, the market price undoubtedly reflects the opportunity cost. Note, though, that the market price is the approximately 35-50 percent of return that can readily be earned on investments in Haiti, not the 11-15 percent rate charged by the banking system, which is barely positive in real terms.

shadow wage rate in Haiti, which is generally much lower than the minimum wage rate for unskilled labor, as noted later in this chapter, is likely to remain quite low for some time to come. A requirement which many ISI possess, even more than most of the agroindustries or assembly operations, is the need for greater, and indeed, increasingly improved skills. The new efforts which are underway in the area of formalized vocational education and evening training (see Chapter II) take on added importance, and it would be unfortunate indeed if the funding currently being planned in this area were only temporary, if there were to be a decline in the quality of such training (such as has taken place at least previously) or if the trend in emigration of recently trained technicians were to continue --though the latter may be stemmed in part by a more rapid growth of new openings in Haiti, and in part by the emerging system of giving relatively more of the vocational training to laborers already under contract to a local firm.

As noted above, there are two groups of ISI, those based on local raw materials and those using primarily imported inputs. Until now, furniture and other woodworking activities have fallen under the former category, but that has already begun to change. In part, this is because the demands of the woodworking industry (and even more so, the charcoal industry) have led to serious deforestation (and soil erosion), though this is being alleviated by some efforts to plant seedlings replacing the trees removed at various locations between Port-au-Prince and Cap Haitien, primarily by community groups, but also by a few commercial enterprises (though there is not yet any reforestation law requiring this). Much woodworking is labor intensive so that this is an economically as well as financially attractive industry for Haiti to foster, and the quantities of wood which might be required if the industry were to reach its potential

would be likely to surpass those which could be furnished by Haitian sources, even given a substantial reforestation program featuring relatively rapid growing varieties.

While it is not the purpose of this report to provide a comprehensive review of existing ISI, a few observations concerning recent ISI in Haiti might be useful in guiding future developments.

Metal fabricating. One of the most interesting examples of ISI is in the metal fabricating industry where one enterprise was established primarily to produce pots and pans. Although the products doubtless were chosen because they are basic necessities, as fortune would have it, the processes called for (deep drawing and spinning) are among the most labor intensive in the metal fabricating industry. The plant has imported technicians to teach special skills (spinning, tool and die work), and has employed management consultants from time to time to improve the efficiency of plant operations. As a result, production costs have been low enough and quality high enough so that exports soon became a possibility and are now substantial. All this has been accomplished with imported raw materials and machinery. There have been various other metal fabricating efforts¹⁵ but most appear to have been somewhat less successful to date, to a degree at least because they depend upon more capital intensive operations and in one case at least, a relatively more skilled work force. In addition, a steel mill has been established to produce reinforcing bars for concrete along with a few other products such as squares and angles. Firm arrangements for scrap for the furnaces were not made at the time the plant was initiated, however. Even more important, the electricity demand would have

¹⁵ Reference is to the production of castings, small tanks and similar vessels, metal cans, tableware, and steel plate fabricating.

been too irregular for the existing power plant supplying Port-au-Prince; as a result, they have never been installed.^{16/} All this would seem to have mixed implications for the success of the forthcoming production of a series of new agricultural implements under the aegis of IDAI (with the technical advice of UNDP).^{17/} The current Haitian manufacture in that field, machetes, also undertaken by a company controlled by IDAI, is sustaining losses while producing what is alleged to be only a medium quality product in a protected market. The product choices for the expanded agricultural implement production were to have been reconsidered by UNDP in the fall of 1978 (with the advice of a second engineer, but apparently without the consultation of an economist, which clearly would have been desirable). Whether the equipment selected will lend itself to low cost production in Haiti at this point in time remains to be seen. A hopeful sign for expanded production in this area is the (still limited) experience of one small private producer, formerly in automobile repairs, who has just constructed a number of low cost windmills and is planning to move into other products whether or not IDAI expands its activity in this field.

Textile Products and Garments. The first relatively large textile and garment factory in Haiti was established in 1947, and a second in 1966. These plants operated with both domestic and imported yarn, increasingly the former after the initiation of the IDAI cotton complex in the mid-1960's, though in

^{16/} It is noteworthy, in this respect, that one of the concerns in government circles is that "so much bauxite is exported without much value added." Aluminum production is one of the most energy intensive industries of all.

^{17/} The anticipated IDAI agricultural implements factory is not to be confused with the more modest appropriate technology experiments which USAID is supporting in St. Marc. These include several small agricultural implements as well.

the 1970's, with the further decline in Haitian cotton production, the plants were confronted with a new problem --a greater need to import yarn (which tendency was reinforced by their growing dissatisfaction with the quality of the IDAI yarn), but government restrictions limited the amount which could be imported. Haiti was able to take advantage of the worldwide boom in the demand for denim a few years back, exporting denim trousers and skirts as well as other coarse cloths (this in addition to the exports of handicrafts based on artisan produced cloth), but this has changed. Now foreign factories have greatly expanded their capacity for denim production and the softer and finer cloths they manufacture are preferred even in Haiti. There is, in addition more competition from clothing produced with at least some synthetic fibers, a portion of which may originate in the local assembly export industries. Still, Haiti's potential for successful ISI in certain cotton products based on local inputs and apparel based on imported as local inputs, would appear to be highly favorable if supply problems can be resolved, if more attention is paid to relative factor prices in choosing production processes than was done in 1965 for the IDAI cotton complex, and if more can be done to assure a dependable quality of the yarn produced in Haiti.

Matches. The match plant, the first in what apparently will be a new industrial complex in Gonaives, has been very successful in financial terms and appears to have been a positive factor in economic terms as well. Even so, it might have achieved still more, especially in economic terms, if the Government had insisted, as a price for its import franchise and protection privileges, that active efforts be undertaken to market the output in other countries so that the equipment might operate more than one shift. Similarly, if the Government had insisted, perhaps greater efforts would have been made

to seek out local sources of supply so as to avoid the importation of the match sticks. Also, although the Ministry of Commerce and Industry did make a study of match production before the plant was authorized, the study did not consider whether it might have been more advantageous from the country's point of view, to produce paraffin matches or, alternatively, to produce paper-back matchbooks and continue to import a limited quantity of the wood stick matches.

Cement. Cement is a product with low value relative to its weight, and as such, it tends to be one of the first manufactures that many developing countries turn to, --one which it is often economically advantageous for them to produce. The timing of investment decisions is important though, first because cement is a "process" industry, one in which there are relatively few stop and start again operations, and in common with many such industries, one in which there are substantial economies of scale. The timing of investments is also important because the low marginal costs characteristic of cement production mean that in times of regional overcapacity other manufacturers are generally anxious to supply cement at prices considerably below the average unit costs which would be required to produce cement from new investment.

Except for fuel, the key inputs for cement production are available in Haiti. Local production was initiated in 1953 with a capacity of 80,000 tons, and in 1974, capacity was expanded to 325,000 tons. The investment was undertaken by Lambert Freres of France (with an 18.5 percent share held by IDAI), and is by far, the largest manufacturing investment in the country. Of special interest, moreover, in a country in which the commercial banking system has been generally reticent to lend for periods of more than three years, is that

a substantial portion of the investment was backed by 5 year loans from the banking system (notably one American bank, but also a French bank and a Canadian institution) and the apparent financial difficulties of the firm have led the banks to extend the credits so that they will probably end up as 8-10 year loans. The operation of the plant appears to have been a factor in leading to the demise of the essentially artisan-level brick industry (though the latter is apparently about to be revived as a modern manufacturing industry). The cement plant has fostered local cement block production, but it is doubtful that it has had anything to do with the boom in construction because the price of cement in Haiti, though not as high as the company would like, has been substantially higher than international levels. Technologically, the plant has made a contribution to the economy, providing employment opportunities for a number of Haitians trained in technical specialties abroad as well as at home, though, as with many other ISI, the investment required to employ an average worker is far higher than in the assembly export industries. In terms of fuel consumption, the plant may have proven a burden, though one cause of that --the tremendous rise in fuel prices-- could not have been fully anticipated at the time that the expansion plans were made in the early 1970's and it was decided to continue with the more fuel-intensive wet process.^{18/} The Government exercises a strong influence on the company through the controls exercised over prices on local sales other than to the international development

^{18/} It also might not have been anticipated that the plant would have to export so much of its fuel-intensive product at prices below average costs because the Government, a shareholder in the enterprise, had estimated that domestic demand for the mid-to-late 1970's would exceed plant capacity. Even so, it must be noted that the management of Ciment d'Haiti doubted the extremely high rates of growth implicit in the official estimates.

banks, with the official Regie de Tobac, (a sort of second Ministry of Finance) acting as the only agency authorized to sell to Haitian buyers.

Ciment d'Haiti claims that Swiss cement experts consider the Haitian operation to be among the most efficient it has seen for wet process plants of its capacity, and the company asserts therefore, that the low profitability of the operation is due to the controls over prices and sales. In any event, rumors abound as to the possible construction of still other cement plants in Haiti, including one, published in an international trade journal, (Rock Products, April 1978) that the Government itself is behind an effort to build a facility with a capacity twice as large as Ciment d'Haiti --that is, with a potential output three times current domestic demand in a situation of at least temporarily very depressed cement prices in the Caribbean basin. It is alleged that that plant would export substantially all of its production to purchasers in New Jersey. Since this was first written a feasibility study of the plant in question was presented publicly at a meeting attended by the Minister of Planning, the Minister of Commerce and Industry and Minister of Finance, but the Mission has not yet had an opportunity to see the study.

Other Industries. The following is a brief commentary on the basically ISI projects identified during the Mission:

1. Evaporated milk carton, carboard boxes and kraft pape..

This project is being advanced by an energetic and resourceful group of businessmen from Gonaives, originally merchants, who initiated the match factory and are also active in vetiver production, among other endeavors. The basic case for giving more attention to evaporated milk (and powdered milk, for that matter) is the lack of refrigeration facilities and the unlikelihood the income levels will permit most

Haitians to obtain refrigerators or ice boxes for some time to come. The project might evaluate production processes alternative to that now being considered to see if they would enable a less capital intensive approach consistent with the rate of return now anticipated (or required to bring about the investment). Also, the entrepreneurs involved probably could be induced to plan for a supply of milk from local sources at an earlier stage in the project than now anticipated. The paper mill plans are preliminary and may need attention to economies of scale considerations.

2. Agricultural equipment. The project, noted in the discussion above, is potentially a very important one. Special attention should be given by an economist, a financial analyst and one or more individuals closely acquainted with Haitian agriculture (as well as the engineers currently involved) so as to make sure that Haitian farmers do not become saddled with high cost equipment which would penalize agricultural development. Because of the difficulties of IDAI-SEN, it might be desirable to have operation of the plant independent from the financing body.

3. Bricks. It is difficult to understand why Haiti is not producing bricks at present, especially when one considers the high quality of the bricks used in the construction of the Citadelle near Cap Haitien. There is a new incentive, however, due to upward sloping cost curve for sand, which will boost the costs of producing cement blocks in the period ahead. The enterprise most involved in plans for a brick plant is not highly knowledgeable in this field, however, and seems willing to let suppliers select a facility that might be far from optimal. Moreover, the individual in question does not appear to be inclined to consider an optimal size facility if

that would involve a personal investment of more than perhaps three-quarters of a million dollars.

4. Charcoal bricks from waste products. Given the seriousness of the erosion problem in Haiti, the manufacture of charcoal from waste products (mainly sawdust but also other products and potentially bagasse) is a particularly attractive project, promising substantial externalities and thus a probably high economic return, as well as a financial return acceptable to the enterprise engaged. The softness of the manufactured bricks and the uneven dryness of the early output led to a lack of acceptance of the product in Haiti, though it is now exported successfully to Puerto Rico and there are prospects for export to Miami. Of course, the notion of energy-poor Haiti exporting energy products is disturbing indeed. Success in the local market could be expedited by a laboratory test comparing the BTU's and burning time of the bricks with the conventional charcoal marketed in the country. It should be noted that a private entrepreneur developed this product entirely on his own, whereas the efforts of the Government in this field, backed by foreign aid, appear to have been less successful. The project is in need of additional equipment, principally ovens.

5. Marble. Plans for a joint venture with an Italian firm, to exploit deposits near Gonaives, appear to be well advanced.

6. Salt. At least two groups are interested --both in an area near Gonaives. One of the groups, with more manufacturing experience, would emphasize industrial salt. The other is considering the production of table salt as well as salt for industrial purposes.

7. Stone for a) inexpensive flooring and b) more decorative construction purposes. This project might involve a joint venture of a private domestic firm with the Government. It is in an early stage of consideration.

8. Cotton bags. This involves a leading local textile producer who traditionally emphasized denim goods. The proposal is to produce bags for the flour mill, an autonomous government enterprise. The project would be financed from the firm's own resources if an agreement can be worked out limiting the import of the cloth from which the bags are now manufactured. The firm claims it would have no trouble producing bags for sale at the price currently charged to the flour mill.

9. Textile complex. This project is at an early stage of consideration, but would represent an expansion of an existing assembly export operation by a producer also active in other industrial undertakings. It is in addition to the textile project noted in Chapter IV.

10. Tile projects. There are several projects, the most prominent of which is aimed at export to the United States, and is the outgrowth of consultations, government studies and UNDP technical advice over the course of several years. The project will be undertaken by a group of Haitian entrepreneurs supported by IDAI and probably IFC. The project still seems too capital intensive, but reconsideration of the processes is underway. The other tile projects are much smaller and appear to be aimed primarily at local markets.

11. Foundry expansion. This may be desirable to avoid the prevailing tendency of new plants to establish their own underutilized small foundries.

12. Kiln for drying furniture. Although no one was encountered who proposed such a project, some furniture producers indicated that they would be interested in using the services of such a facility if it were available. Any major expansion of the furniture industry would require the establishment of a kiln for drying in Haiti. It is to be noted that at least two loans in the \$300,000 - \$500,000 range have been made to furniture producers in the last two years, and at least one other producer is considering an important, though, somewhat smaller expansion on the basis of a favorable reaction from large companies in the United States to two sample products.

13. Central machine shop and stamping facility. It would appear desirable to establish such a facility in Cap Haitien and also in Port-au-Prince. No entrepreneurs specifically mentioned their interest, nor were really clear indications of local demand registered, but such facilities will be essential to the smooth functioning of expanded industrialization in the country.

B. The Assembly Export Industries.

1. Introduction.

The assembly industries appear to have been the most dynamic element of the Haitian economy during the last decade. While there is a strong general consensus about the importance of this subsector, the growth of which is obvious to anyone even visiting Port-au-Prince, the lack of reliable data makes it very difficult to analyze, and limits the effort that follows.

This section first describes the assembly subsector and its recent performance; second, it discusses the physical, legal and institutional framework in which the assembly industries operate, and compares it with that of assembly subsectors in other Latin American countries; third, it discusses

the constraints that the assembly subsector is facing; and lastly, it makes some suggestions to improve its prospects.

The analysis of this chapter is based on the extensive information collected by the Mission's interviews with the entrepreneurs, government officials and international civil servants, particularly those at the United States Embassy in Port-au-Prince, who have made annual surveys of the assembly subsector on the value of assembly exports to the U.S. These surveys also have obtained information on employment, value added, and other characteristics of the assembly plants.

2. Magnitude, performance and structure.

The assembly industries in Haiti have been the fastest growing component of the economy in the last decade. The subsector is comprised of approximately 200 factories which employ approximately 40,000 workers. If one can assume that 3 or 4 people are supported by each worker, then the assembly industries support approximately 18% of the population of the Port-au-Prince metropolitan area, where all the assembly operations are located. Employment since 1974 has increased by approximately 50 percent despite the fact that the electricity cutbacks of 1977 (brought on by the drought) led to a virtual moratorium on growth for nearly a year. Employment in the electronics and miscellaneous group of assembly industries has doubled since 1974, and there has been an increase of about 50 percent in baseballs, toys and other sporting goods. In clothing, however, the largest branch of the assembly subsector employment has remained constant since 1974 due to the slowdown in the rate of output expansion required to comply with the U.S. quota on textiles and garments.

Employment in the assembly sector fluctuates through the year as international demand for some of its main products such as baseballs peak during the summer, and as the annual clothing quota tends to be fulfilled towards October. Thus, employment during the second half of the year tends to be approximately 5000 workers lower than in the first half. These fluctuations have been smaller than what might be expected, however, as the United States has allowed some clothing exports at the end of the year to be made under the next year's quota.

As in many other Latin American countries, the assembly operations employ a very large proportion of women.^{19/} This large female employment is not likely to cause as many social problems in Haiti as in other Latin American countries since the traditional structure of the Haitian family gives more importance to the female and allows her the role of breadwinner. Furthermore, Haitian assembly operations tend to employ a larger proportion of males than the same operations in other Latin American countries as males are more likely to take jobs which in other countries are considered as exclusively reserved for women such as sewing clothes.

Wages in the assembly subsector are paid on a piecework basis in most factories. The wage paid for each piece is determined by dividing the minimum legal wage in that industry by a norm determined by what is considered to be the normal productivity for a day's work. The minimum wage laws set standards which vary according to the presumed skill level of the

^{19/} Assembly operations require great manual dexterity, patience, and ability to work with small parts. Normally, the productivity of women at this type of work is higher than that of men inasmuch as women have smaller hands and are used to doing repetitive tasks at home.

activity. Thus, the minimum wages in "high" skill assembly operations such as electronics are now \$2.00 a day, while they are \$1.80 a day in "medium" skill operations such as baseballs and \$1.60 a day in "low" skill operations such as clothing. Entrepreneurs claim that under the piecework system, most workers make a wage which exceeds the minimum legal level by about 10 to 20 percent. The law allows a plant to pay a salary of only \$1.00 a day to apprentices during the first 90 days of employment, and some government officials maintain that many factories use the apprentice regulation to pay lower wages for up to 90 days and then fire the workers and hire another "apprentice" who is likely to have worked in the same trade before. While this may occur, the mission found no evidence that the practice is widespread. Given the low wage level and the piecework system of payment, the disruption to production that would result from the frequent firing to avoid minimum wages and high worker turnover which such a practice would entail, would not be likely to be in the entrepreneur's interest.

Haiti has a system of various taxes and levies which increase legal labor costs by approximately 50 percent. Full payments are not made by many firms, however, as the workers do not perceive a real benefit from joining the social security system and thus, do not request entrepreneurs to enroll them. Many workers feel that the medical and insurance services provided by the government are simply not worth the 2 percent contribution which they are required to pay if they join the system. The last figures from the social security institute indicate that only 21,000 manufacturing workers are affiliated with the system; as Haiti's manufacturing labor force is likely to be about 60,000, this means that approximately two thirds of the manufacturing employees who should be part of the social security system do not belong to it. That does not mean that fringe benefits are

non-existent in the many plants which do not belong to the social security system; some provide their own fringe benefits such as in-house medical service, transportation, Sunday pay for a six-day work week, and an annual monthly wage bonus in December. The high avoidance of the social security payments mean simply that fringe benefits in many plants are likely to be 25 to 30 percent of the wages rather than 50 percent as the law requires. The American Embassy has estimated average annual labor costs for 1978 at \$527 in clothing (\$1.88 a day assuming 280 work days); \$708 in baseballs and toys (\$2.53 a day); \$789 in miscellaneous products (\$2.82 a day) and \$999 in electronics (\$3.57 a day). These labor costs have been increasing at an average annual rate of 8% during the last 4 years, which indicates that in real terms they have been approximately constant.

The wage levels in Haiti are the lowest among the assembly operations in Latin America. Managers of visited plants believe that the actual labor costs per unit of output are also the lowest ones as labor productivity is very high in spite of the fact that a very large proportion of the labor force is illiterate. Labor productivity is very high as the Haitians are particularly creative with their hands and have an outstanding level of dexterity. Furthermore, there are no labor organizations, and traditionally, the workers are submissive and willing to follow orders and do repetitive manual work.

In spite of the low wage levels, the minimum wages are above the shadow wage rate as indicated by the following facts: (i) every time there is a job opening for an unskilled position, at least 5 applicants are found within a day; (ii) many workers are willing to walk to and from work even if it takes over an hour's work in each direction, to save the

9 cents of a ride in the tap-tap (modified pick-up trucks used for public transportation); (iii) workers in some of the artisan operations make substantially less than in the assembly plants. The Mission found one artisan enterprise in which it estimated that wages were as low as 70 cents a day. Thus, the mission estimates that the shadow wage rate in Port-au-Prince for unskilled work is definitely below the minimum wage level, and probably in the \$1.00 to \$1.25 range for factory work.

Wages for skilled workers are substantially higher than those for unskilled ones. A welder, or a foreman makes between \$180 and \$300 a month. These workers are somewhat scarce, as many of them emigrate to other countries in the Caribbean or the U.S., where they can find higher paying jobs. However, while migration has been high among qualified personnel, their scarcity has not been strong enough to curtail the growth of the assembly subsector. As the subsector continues to grow, one can foresee an increase in the real salary of qualified personnel unless the annual supply increases or the obstacles to emigration become more difficult to conquer.

As in other countries, the assembly subsector is the labor intensive subsector par excellence. Total fixed capital investment per worker, including land and buildings for the subsector as a whole may be placed at about \$2500 to \$3000. In general, fixed investment in clothing, electronics and baseballs and toys is somewhat lower than in the miscellaneous category which processes some local raw materials such as sisal, rush, cotton and wood. However, even in this "high" fixed capital assembly process, total fixed investment per worker is less than \$4000. In some cases, the investment per worker is so low that it would be financially advantageous to increase it.

(The Mission convinced the manager of one electronics assembly plant in which the temperature was 98°Fahrenheit that installation of even relatively expensive central air conditioning would increase worker productivity sufficiently to more than compensate for the outlay. But when profits are in the 30-50 percent range, marginal improvements do not always seem worth the effort --particularly if there is any risk at all, in this case, the Haitian manager's concern that his foreign employer might react against him for a proposal to introduce what might be viewed as an unnecessary cost.)

Total value added generated by the assembly operations includes labor costs, profits and the value added contributed by the use of some local inputs such as utilities, buildings, services, and a few domestic raw materials, notably sisal and cotton. While the precise level of profits, and thus also the value added per worker, would be extremely difficult to estimate, the Mission's educated guess is that value added per laborer ranges between \$2000 and \$3000 annually in the assembly subsector.

Haitian Government officials acknowledge the importance of the assembly operations in the country but lament that those industries do not generate many backward linkages in the economy inasmuch as they do not use many domestic materials. This seems to be used by some officials to show a preference for import-substituting industries over the assembly export plants. There are several interesting points which should be noted, however.

First, as is indicated in the first half of the chapter, some import-substituting industries use largely imported raw materials and intermediate components, and thus, do not create any more backward linkages than the export manufactures. Some, indeed, are little more than

assembly operations for the domestic market which generate less employment per gourde of investment than the assembly export plants.

Second, one of the most easily attainable backward linkages that the export assembly plants can generate is in the textile industry --and government cotton and textile policies (discussed above) appear to have played no small part in the failure to capitalize on this opportunity, though less than aggressive domestic entrepreneurship is surely to blame as well.

Third, it should be noted that there has been an appreciable degree of backward linkage in a few product lines, notably baseballs, where Haitian value added has risen to 50 percent. In addition, the assembly export industries have had a notable demonstration effect on several of the exporters of traditional light industry products based on local inputs. While the total of all such exports is below the level of 1974, there has been considerable recovery in the last two years, and in the case of leather products, carpets and bedspreads, furniture, and a miscellaneous category, the exports are now at levels which while still low in absolute dollar amounts, are four to eight times as high as in 1974.

Exports of assembly manufactures to the U.S. rose from \$61.4 million in 1974 to \$91.1 million in 1977, that despite two years of unusual adversities such as the drought-caused electricity curtailments which led to a decline or very small growth in output. Combined with the exports of light manufacturers based on local inputs (which are now taking on more of the characteristics of the assembly exports), Haitian exports of all light manufactures reached \$104.4 million in 1977.

The composition of the assembly exports has changed somewhat in the last four years, though mainly at the product level. Clothing remains the principal category, accounting for just under 40 percent of the sales value in 1977, up slightly from the approximately 37 percent figure of 1974. The imposition of a U.S. textile and clothing quota (affecting the overall level of exports, and most articles on an individual basis as well) curtailed, but did not put a halt to the growth of clothing exports. The quota fostered a measure of product diversification --towards some of the medium priced commodities, and towards those articles not designated with an individual quota. There still is relatively little market diversification; although a European -owned assembly operation now has been established and one U.S. company is exporting 70 percent of its output there, Haitian entrepreneurs have not made any serious efforts to investigate sales possibilities in Europe.

Toys and sporting goods are the second most important category of assembly exports, with 25 percent of sales in 1974, and 28 percent in 1977. Baseballs and softballs have been the dominant product, but Haiti now supplies 90 percent of the U.S. market so that growth slowed appreciably after 1976. In the last two years the addition to output has been in a wider array of sporting goods as well as in stuffed toys. Electrical and electronic assembly declined from a little under 24 percent of sales in 1974 to 20 percent in 1977, but probably experienced relatively more rapid growth in 1978, and judging by expansion plans, are likely to forge ahead of clothing before long. In the light industry group, artisan manufactures such as embroidery, banana bark furniture, sisal lamps and wall hangings, fishing lures and leather skin pieces are among the products which seemed to be staging a strong showing in 1978.

Only 10 percent of the assembly plants are wholly owned subsidiaries of multinational corporations; 25 percent are joint ventures, and 65 percent are entirely owned by Haitians. This ownership structure is drastically different from that of the assembly subsector in other Latin American countries, where there is a much higher foreign participation. This difference will be discussed below.

The assembly subsector in Haiti overlaps with the artisan industry. There are assembly operations which include a factory process and a subprocess which takes place outside the factory, in the workers own homes. Also, there are "factory" operations which are basically large members of artisans under one roof. An example of this is the embroidery of samples which are then shown in U.S. and European stores where embroidery sets are sold. Also, the assembly sector includes some processes which are normally not classified as part of the manufacturing sector, but which have all the characteristics of assembly processes such as the assortment of the food coupons collected at ^{20/} U.S. supermarkets.

3. The physical, legal and institutional framework of the assembly subsector.

The physical environment in which the assembly plants operate has some limitations. Formerly inadequate port facilities have been improved, as has the formerly unreliable supply of electricity, but there have been complaints about the lag in making suitable buildings available. However, while physical limitations might have been an obstacle to Haiti's assembly subsector growth, they have certainly not been unsurmountable.

^{20/} These coupons are flown to Haiti to be sorted out and then forwarded to the various manufacturers who issued them. This process requires a certain level of skills, as workers have to be literate, and is carried on an air conditioned building lest the wind blow and mix already sorted coupons.

The legal and institutional framework under which assembly plants operate is most unusual. In the other LDC's which have assembly operations, the normal legal and institutional framework includes a free zone, a system of temporary imports, and a tariff draw-back system. These three elements are applied on an impersonal basis, so that anyone may import components to be assembled, or get a tariff draw-back if they export products with imported components on which an import duty was paid. Haiti does not have any of these three legal and institutional arrangements. All the Haitian assembly plants operate under a franchise arrangement. The franchise is issued by the Ministry of Commerce and Industry and it exempts the plant from import duties, export taxes (if any), and income taxes. Normally the franchise is granted for a period of five years. The franchise granted to assembly operations is fundamentally the same as that granted to import substitution industries which produce a new product. The franchise is granted on an individual basis and may be modified by the Government when it considers a change appropriate. For example, there was a recent conflict between the baseball assembly plants and the Government following a prohibition of glue imports which was decreed to protect a new domestic producer who wanted to supply the baseball plants. Independent of the validity of the Government's position in this particular instance (based on the desire to increase the domestic content of the baseballs), it illustrates that there is a high degree of personal elements and contacts in the decision making process, and this is not conducive to increasing exports in the

21/ world markets. Furthermore, the current franchise system does not have the flexibility needed to begin to generate exports which have not been planned as it only allows for the establishment of operations which are planning to export designated products to markets determined in advance. However, exports from other Latin American countries such as Mexico and Colombia have sometimes resulted from short-term needs in the developed countries (that is, they have been unplanned), and such exports have been possible because of the existence of a tariff draw-back system, which

21/ The assembly plants did not want to use the domestic glue for the professional baseballs as they contended that the domestic glue was not produced with sufficient quality control. The plants were willing to use the domestic glue to produce the non-professional baseball. Therefore, their main objection was to the import prohibition and not the use of the domestic glue. The assembly firms also objected to buying from a monopoly owned by somebody very close to high sources of power, as the owner of the glue factory was described. The Government claimed that the glue imported by the baseball factories was produced by a subsidiary of the corporation that owned the assembly plant and thus, that the baseball assembly plant was never going to use the domestic glue even if it were price competitive with the imported one. The assembly plant denied any connection with the U.S. producer of the glue. Finally, the assembly plant was allowed to import the glue to assemble the professional baseballs. The familiarity of several cabinet members with some of the details of the case suggests that resolution of the problem may have involved more than one government minister. Sources close to the dispute claim that the assembly plant cancelled a planned expansion that would have employed 600 workers, and that it is currently looking for a different country to establish a branch as it feels it is too risky to depend on the whim of the Haitian Government to satisfy completely the U.S. demand. This expansion was to replace an assembly plant located in a higher wage less developed country. While all the elements of this story cannot be verified fully, it is true that incidents such as this should be avoided if Haiti's success in the assembly operations is to continue.

automatically exempted a firm from paying tariffs on reexported components. This kind of flexibility does not exist in Haiti today.

The lack of a free zone in Haiti^{22/} makes it possible for the customs to become an obstacle to the assembly industry. While many plants indicated that they do not have customs problems, it should be noted that they hire special brokers who find ways of getting the customs officials to speed up the paperwork. A few firms have had difficulties with port customs and have resorted to importing and exporting by air as the airport customs seems to present fewer obstacles. Some government officials and entrepreneurs indicated that a free zone would not be established by the government as it would allow political opponents of the government to smuggle arms in the containers sent to the free zone. This is not a valid argument, however, as the government does not have to relinquish the right to open the containers and verify their contents, even if they are in the free zone.

In order to operate in Haiti, a foreigner requires a residence permit. These permits are difficult to obtain and personal connections or other facilitating arrangements are generally necessary to obtain them quickly. The difficulty in obtaining these permits may have had an impact on the willingness of several large firms to locate in Haiti. While these reports cannot be verified, it is still true that the problems in obtaining the work permit are an obstacle to the development of the assembly industries.

^{22/} The government decision to establish the industrial park in Port-au-Prince gives the park the status of a free zone. However, as of today, the park is not a free zone and it actually houses a few factories which produce for the domestic market.

In general, the personal elements involved in the franchise granting process, the difficulties with the port and the difficulties in securing the work permits all have produced a peculiar situation in which most assembly plants are Haitian owned. These owners contract their services out to firms who need assembled products. The owners and managers of these firms are individuals who can and know how to deal with the Government and with the institutional framework. A bottleneck constraining the growth of the assembly subsector can be created by the limited number of Haitians who are qualified to produce efficiently in the Haitian environment. In most countries engaged in assembly operations, the growth path of the industry has shown that foreign firms first establish themselves, and after a few years, domestic employees of these firms obtain the necessary know-how and branch out; therefore, the assembly sub-sector has provided a good teaching ground for domestic management and entrepreneurship. In the Haitian environment, the opposite path is followed. A foreign firm begins by contracting out a job with a domestic businessman; then it sends a manager who works out of the domestic entrepreneur's shop; and, who, after learning to do business in the Haitian environment, is then qualified to branch out and open up a new plant. The domestic entrepreneurs have to teach the foreign firms how to do business in Haiti. Not surprisingly, the exports of the assembled Haitian products are limited to products and markets that are tested and known, as the foreign firms have not been fertile grounds where domestic entrepreneurs learn the skills of international marketing necessary for a continuous success of an export oriented assembly operation.

4. Prospects and suggestions

As pointed out above, the assembly industries are one of the main elements of the Haitian economy today, as well as the fastest growing

subsector during the recent past. Haiti's success in the assembly industries has been due to a combination of three main elements: extremely low wages, closeness to the U.S. markets, and a very disciplined and dexterous labor force. As these elements continue to be present in the Haitian environment and as urban unemployment and underemployment are still very large, one may wonder why the assembly subsector has not grown faster in the past and whether it could grow faster in the future. While no quantifications are really possible in a rigorous econometric sense, what emerges from the evidence collected is the sense that the three positive factors mentioned above have prevailed over other negative elements in the past, but that the latter have limited the growth of the subsector. These negative elements are: the lack of infrastructure; the nature of business relationships and entrepreneurship in Haiti and of the Government's intervention in the economy; and the import restrictions on clothes in the United States. The prospects for the assembly industry depend overwhelmingly on what happens to these constraining factors.

In a way, the easiest constraint deals with the lack of infrastructure, as assembly operations do not really need much more in the way of expensive infrastructure. Good port and airport facilities exist in Port-Au-Prince, if not in other cities, and there are low cost industrial buildings and now a reliable supply of electricity in the capital.

The nature of business relationships and entrepreneurship as well as the Government's ways to operate depend on very deeply rooted elements of the Haitian culture about which the Mission is not qualified to even speculate. However, the fact remains that the success of the assembly operations in the future depends on the ability of the subsector to

diversify its markets, especially to tap the European market;^{23/} on its ability to grow beyond the confines of family owned and operated enterprises; on the ability of the Government to establish rules which apply to every firm in the same way, eliminating the need of a personal connection to the power structure; and on the ability to diversify the products exported, as the baseball market is not expected to grow and there appear to be major restrictions to substantially increasing participation in the U.S. clothing market. In order to grow at a faster rate, which the assembly subsector is capable of doing, a social and political infrastructure which provides more flexibility and depersonalizes the economic relationships in Haiti would be desirable. While economists can make suggestions such as the creation of a free zone, the establishment of tariff draw-back and temporary imports systems, only the Haitian government leadership can implement the needed institutional changes. Without that, the legal incentive measures will have little impact on the employment and well being of the masses of Haitians living in subhuman conditions. Such a shift in institutional arrangements will require a number of changes, prominent among them, decreasing the tight personal controls under which industrial development takes place, thus encouraging rather than hindering entrepreneurship and the attractiveness to local and foreign investors to invest in Haitian industry, and so promote Haiti's future development.

The last constraint, the U.S. quota on textiles and garments is an important restriction to Haitian exports which is leading to a curtailment

^{23/} This has been done successfully by other Latin American countries such as Brazil and Colombia.

of expansion plans in that component of the assembly industries. These restrictions clearly limit the potential for growth and for providing productive employment to the poor, which are among the principal development objectives pursued by the U.S. Government. Perhaps the U.S. will give particular consideration to this when it renegotiates the textile and clothing quota with the Western Hemisphere neighbor which has by far the lowest level of per capita income.

CHAPTER VI

Light and Medium Scale Construction Activity

The construction sector in Haiti has had a past of dramatic fluctuations due to political reasons. It can be said that there was a virtual moratorium on construction in the private sector from 1958 to 1970. During this period demand for construction materials decreased dramatically, and some of the construction materials factories actually disappeared. The production of bricks was halted and the kilns abandoned so that even today, no bricks are produced in Haiti. While there is a consensus in Haiti about the growth of construction, there are no data that allow any rigorous analysis of that sector and particularly light and medium scale activity. It is clear, nonetheless, that beginning in 1970, the construction sector began to grow as the private sector started to build again. Moreover, the sector is likely to have an even bigger role in the near future of Haiti's economy than it has had in the past. The basis for this expectation is found in a combination of factors. First, migration to Port-au-Prince is going to continue as industrial employment grows and as the agricultural sector becomes mechanized --indeed, even in the absence of increased mechanization, as a still larger rural population finds itself confronted with plots too small to sustain an adequate standard of living. Second, Port-au-Prince has already one of the worst slums of the world. It is hard to imagine that the Government will not be pressured to improve the living conditions in the city. Third, the growth of industry and private business, and the noticeable return of professional Haitians is increasing demand for better housing.

The following provides information on the principal characteristics of the sector.

A. Government Plans and Activity

The Five Year Plan of 1977-81 estimates that a housing deficit of 40,000 units will be generated by new immigrants to the Port-au-Prince area alone during the period through 1981. There are no estimates of current housing deficits in the city, but casual observation indicates that the problem is dramatic. The Government of Haiti has begun to tackle the housing problem on several fronts.

1. One "sites and services" project has already been initiated. A Second project, which will get under way within two years, will produce 1,000 units. In preparing the latter, CONADEP studied small housing units which could be considered as satisfying minimum requirements. Plans were produced for 25 m² houses (two rooms) that would cost between \$750 and \$1,100. CONADEP believes that this type of housing would be economically viable since low income people currently pay \$10 to \$15 monthly rent, a figure comparable to that which would have to be charged in the project. It is important to note that the honesty and discipline of the Haitian people make it very likely that low income people will repay housing debts something which cannot be as easily assumed in certain other Latin American countries.^{24/} Thus, CONADEP believes it has good reasons to be optimistic

^{24/} CONADEP points to the lack of examples of urban land invasions as evidence of the high honesty and discipline of Haitians.

about the financial viability of projects which in other countries might go bankrupt.

2. A rehabilitation project will be financed in the Saint Martin beighborhood as part of the large water supply and sewage project for Port-au-Prince. The Saint Martin area has a density of 1,500 inhabitants per hectare. The project will bring utilities to the neighborhood and will benefit 20,000 to 25,000 people. Approximately 230-240 houses will be dismantled to open fire lanes, but the 700 families affected will be relocated on adjacent land purchased from the private sector. The project will not concern itself with the improvement of existing houses, but only with providing services which currently are non-existent.

3. There is no real housing bank in Haiti. The Housing Bank exists on paper as it was created after receiving technical assistance from the OAS. It has not been able to capture any financial resources, however, and thus it has not functioned. The growing housing problem in Port-au-Prince will not be able to be ameliorated unless the housing finance issue is addressed in a positive way by the Government.

The Government also is engaged in a few programs of rural construction using labor intensive methods of production. These programs have built a number of coffee processing and marketing centers, and the

roads linking the centers to main highways. Besides these, the Government is building other rural roads. In total, about 50 kilometers of roads have been constructed at a cost of between \$4,500 and \$8,000 per kilometer, employing crews of approximately 40 local laborers per kilometer built.

B. Private Sector Activity

The private sector has constructed housing for the upper class and for the well-to-do repatriates who demand higher housing standards than the rest of the population. However, the lack of housing finance in the country makes it impossible for the private sector to serve anyone who does not belong to the two groups mentioned; they are the only groups who have enough capital to pay for houses with either short term regular bank financing or without any bank financing at all. In spite of the obvious market restrictions, an entrepreneurial private group has produced plans for low cost private sector built houses. They indicate that a basic house, with approximately 60 m.² of living space can be built for about \$3,500, given current market conditions. However, there are no current financial prospects for this project.

E. Supply of Construction Materials

As discussed in Chapter V, the cement industry has an output that exceeds domestic demand by 30 percent, currently exporting the difference.

Therefore, no cement shortage is foreseen in the near future, even assuming that the recently announced 660,000 ton project is not undertaken.

Cement blocks are produced in various factories. These plants do not require heavy investment and, according to the owners of the largest, his operation could increase output by 50 percent with existing capital equipment, and could expand the plant itself within four months if necessary.

Sand is produced in quarries near Port-au-Prince. The normal output declined by 400 m.² due to the closing of a side of the quarry for environmental protection reasons. However, there are other sandstone deposits in the country, and thus sand is not expected to be in shortage in the future, although the price can be expected to rise somewhat.

Besides cement, cement blocks and sand, there are other construction materials currently produced in Haiti such as steel bars, angles and squares made from imported pig iron and metal windows also made with imported materials. The steel products are sold at prices about 25-35 percent above CIF Port-au-Prince prices. Most of the output of these industries is used in public, office, and industrial buildings, and housing for the upper income groups. Several brick, tile and stone (flooring) projects are currently under consideration, as noted in Chapter V. The domestic supply of other materials which could be used in low income housing construction such as wood and glass, is not readily available in Haiti. Thus, a housing boom in Haiti is likely to generate a significant balance of payments problem due to the lack of domestic sources of many construction materials plus the large energy requirements of brick and cement manufacturing. In addition, the current level of cement exports would decline, at least from the existing plant.

CHAPTER VII

The Obstacles to Industrial Development

Some of the most outstanding opportunities for Haitian development are to be found in the industrial sector. Contributing to these opportunities are Haiti's low cost, dexterous and highly cooperative labor force, as already noted, and the country's location close to the United States and not far from a number of other high and medium income nations. What gives these assets and also Haiti's limited mineral and agricultural resources^{25/} such a high value for industrial expansion, is the relative lack of attention they have received in the past. In export assembly industries, in import substituting industries and in many agroindustries, the financial rates of return are very high, and it seems likely that the economic rates of return are high as well. According to the national accounts, manufacturing industry has been growing at an average of 7 percent per year for nearly a decade, and as indicated in Chapter I, the rate may well be nearly double that.

Despite these achievements, there are a number of obstacles to industrialization, and while some can be expected to be alleviated in the period ahead, others are likely to worsen unless changes are undertaken.

^{25/} Haiti is reputed to have only modest mineral resources. While studies financed recently by international agencies do not substantially alter this view, it must be noted that much of Haiti has not yet been subjected to serious geological exploration.

A. Encouragement by the Government of Haiti and the Overall Relation
of the Government to Industrialization

There have been both positive and negative aspects of Government policies affecting industrialization, as indicated above, but the main thrust has been favorable, and the shift in emphasis and attitudes has been permissive of and conducive to industrial expansion. Indeed, the latter may have been the principal explanation for the sharp rise in the rate of industrial growth.

There is no point in overlooking the obstacles, however. Regulations and minor taxes have remained numerous, and in some fields continued to grow. In vetiver essential oil production, the Government intervened with quality control (which was in the interest of most producers), but also with stiff taxes, and control over international marketing. Profits remained high but the Government's decisions to siphon off most of the quasi-rents may have played a role in Haiti's failure to maintain its international leadership; the degree of intervention may have discouraged private entrepreneurs from planting more vetiver and from initiating larger, more modern extraction facilities, or second stage processing operations.

The Government also began to regulate the commercialization of other commodities; it became the only authorized purchaser of raw cotton and the sole seller of semi-processed cotton products, it determined that sugar would be sold by weight rather than sugar content, and it levied heavy taxes on coffee. The supply of all three commodities was affected adversely and

domestic processors were placed at a disadvantage. In addition, the Government began to take on an added role in the industrial sector, becoming a minority shareholder in several manufacturing establishments (notably in the cement industry --Ciment d'Haiti), a majority shareholder in another (a machete factory run by IDAI-SEN), and assuming full control of still others (flour, the Gonaives cotton processing complex, the dairy and the now defunct slaughterhouse in Les Cayes) by means of either the autonomous Minotrie d'Haiti or IDAI.^{26/} Recently, la Minotrie constructed what will be the country's largest vetiver plant, its financing of the new undertaking aided in part by the fact that autonomous government enterprises are not subject to income taxes. Further government activity is now planned for: (1) full control of plants which will produce animal feed, additional agricultural implements, and sugar (model artisan sugar mills); (2) partial interest in a major tile project; and (3) possible involvement in a large new cement plant as well. Added to this, it should be noted that relatives of key government officials are quite active in a number of other industrial activities. The result of all this is a measure of continuing uncertainty about the opportunities, not so much for private enterprise, as for those entrepreneurs who are not especially well connected.

The rate of profits to be earned in industrial investment is so high though, that the greatest impediment is not the specific thrusts of the Government into industry but the lack of government institutions which might give particular impetus to the private activity or at least regulate in an

^{26/} The plants operated by IDAI-SEN are supposed to be sold to the private sector after they become established, but it is difficult to detect serious efforts at bringing about such transfers, although prospective buyers appear to exist for several of the activities.

even handed manner. The latter, the importance of personal relationships, is dealt with in Chapter III. With respect to the government institutions responsible for the industrial sector, it would be agreeable to report that better data are being provided for the use of industrial planning and that the industrial analyses prepared are helping to identify better projects and/or production processes equally profitable but more successful in employing workers —but such does not seem to be the case. The studies prepared by, or for the Government, have not provided such information, and the basic data on industrial production, industrial employment and industrial exports has become increasingly deficient, often being in error by 50 per cent and more.

The Government continues to provide some new sources of stimulus, of course. A Bureau of Industrial Promotion was established (now reorganized as the Office of Industrial Promotion and Services), and initiation of a foreign based Investment Promotion Center is anticipated. Industrial decentralization has been assigned a high priority, and this has led to the authorization of longer tax exemptions for enterprises which locate outside Port-au-Prince, and to the proposed establishment of an industrial park at Cap Haitien. But it is questionable whether the current changes in mechanisms and attitudes constitute as great a momentum for industrialization as that which took place in the early 1970's.

B. Foreign attitudes, foreign investment and foreign aid

Foreign attitudes and assistance have been important to the recent expansion of Haitian industry, and in particular, the assembly export industries. The key element may well have been the encouragement a commercial attaché of the U.S. Embassy gave to a group of Haitian businessmen to consider the example of Hong Kong and other Asian centers and endeavor to assemble products for the United States and other foreign markets. Led to such references as the Thomas Register, several local entrepreneurs sent off hundreds of letters offering their services as contractors, and with the further stimulus arising from the publicity given to the possibilities by a freight manager from Air France, followed by an article in an aviation cargo newspaper, U.S. producers and distributors became aware of the increasingly favorable climate for manufacturing in Haiti. The catalytic role of the U.S. Embassy is fully acknowledged by Haitians in the assembly industries. In addition, the openness of the United States market to many imports, and the exemption from U.S. import duties of the proportion of value added comprised by U.S. produced components also was of major aid.

Several other governments have now given encouragement of Haitian development --by means of infrastructure assistance^{27/} and by encouraging nationals from their countries to invest in Haiti. Businessmen from Canada

^{27/} Canada is cooperating with the World Bank Group (IDA) in studying and developing energy alternatives, and in the field of vocational education. Germany has been active in power development and in providing assistance for the recently established Bureau of Industrial Development in the Ministry of Commerce and Industry. U.S. direct assistance has been oriented primarily toward the rural sector, but this has included artisan industry projects, and has led to support for the establishment of a private development bank mentioned in the text. Recently, moreover, the U.S. has provided advice concerning the government institutions which have responsibilities in the industrial sector. Also, OPIC, the Overseas Private Investment Corporation, which is a U.S. Government entity, has made several loans in the \$300,000 to \$500,000 range in the last two years, in addition to providing insurance on other projects.

and Germany have become more active in the assembly export industries. There are French interests in several lines of activity, most notably cement, and Spanish interests in sugar (Caldos Sugar Corporation). UNIDO is helping to establish a Haitian Investment Promotion Office in New York. The IDB and the World Bank have provided substantial loans for economic infrastructure and the IDB has funded local industries through its support of IDAI. Some progress has been made, moreover, towards the establishment of a private development bank with USAID in the forefront among the promoters, and additional support likely to be forthcoming from the World Bank Group, a German group, and the Caisse Centrale de Cooperation Economique (the French Government development bank).^{28/} On the other hand, there have also been a few foreign factors of a less positive character. The U.S. market has been the key one for Haitian exports and the textiles and garment quota assigned to Haiti since 1974 has curtailed the growth of assembly exports in a subsector with major possibilities of backward linkages. (Neighboring Dominican Republic has not been limited in its access to the U.S. market by such a quota.) Moreover, while the World Bank Group has been active and continues to be active in helping to improve the basic infrastructure of Haiti, it may not be inclined to follow up with investments of greater magnitude, either in industry or in infrastructure (even if such sizable investments were economically well justified) because Haiti is classified as

^{28/} The private development bank being proposed would have an initial capital of \$4.5 million to \$6 million, half of the shares of which would be sold in Haiti. Agribusiness projects would be the first priority, with other industrial projects also receiving attention. Major evaluation criteria would be the quantity and quality of the jobs created, the net effect on the balance of payments, location outside Port-au-Prince, and use of domestic raw materials. The entity would make most loans in the \$40,000 to \$100,000 range, and would consider risk capital ventures (up to 30 percent) as of the fourth year of operation. It is not anticipated that the bank would reach its full capital until its tenth year of operation.

a country not yet fully creditworthy and therefore eligible for lending only from IDA (and IFC), the former of which features terms much more lenient than those available from the World Bank, but maximum financing levels much lower.

C. The Limitations --and the Centralization-- of Economic Infrastructure

Economic infrastructure is more limited in Haiti than in most countries and while this leads to inconveniences it does not always constitute a serious obstacle to industrial expansion. As an example of this point, consider that paving the road to Jacmel and similarly surfacing three quarters of the distance from Port-au-Prince to Les Cayes appears to have had very little impact on industrialization, and business leaders in Les Cayes do not expect that it will make much more difference when the remaining section is completed. The government dairy is better able to sell milk in Port-au-Prince than previously and its losses have been reduced somewhat, but it still operates at little more than half its capacity, and thus at a loss.^{29/} Perhaps at the next stage, the lack of a paved highway would be a serious obstacle.^{30/} At the moment, however, the transportation links limiting industry seem to relate more to transportation from Haiti to the rest of the world than to transportation within Haiti.^{31/} Modest airport facilities at Cap Haitien and

^{29/} Improved feeder roads in the Plain of Les Cayes area might help milk collections, but so would an additional milk collection vehicle, even without any road improvements.

^{30/} Paving of the Northern Highway does seem to have helped foster industrial development in some of the communities between St. Marc and Port-au-Prince, and possibly in Gonaives, as well.

^{31/} An exception is that there may be an unrealized potential through improved cabotage (now the object of a World Bank study), particularly in incorporating some of the southern and northwestern communities into the market for manufactures from the rest of the country and in first opening up possibilities for national manufactures based in those localities. Industrial and mining possibilities in southwestern Haiti have not been seriously considered to date, in some measure at least, because of transportation limitations. It should be added that the international shipping conference quotations for all Haitian ports to the major U.S. ports are relatively high at present.

Les Cayes (the former slated for improvement) and inadequate harbor facilities at both cities appear to be inhibiting industrial expansion -- primarily assembly exports, but also agroindustrial and possibly other exports, and even some import substituting industries (ISI) which might be able to justify their location at those sites if imported inputs could be delivered directly to those ports. And, in perhaps an increasing proportion of the cases, location at Cap Haitien, Les Cayes or elsewhere outside Port-au-Prince may be the only feasible solution if certain industries are to be established in Haiti at all. Thus, the lack of good vocational schools and their particular weakness outside Port-au-Prince may well be inhibiting the establishment of some industries in the country as a whole, and certainly is limiting the development of backward linkages in the case of those industries already established.

The two infrastructure problems noted and the weak telecommunications network constitute limitations to industrial growth less serious than those represented by the energy and electric power situation, however.^{32/} As recently as 1977, electricity cutbacks brought on by drought led to curtailment of industrial output and postponement of some industrial expansion. While the installation of 41 MW of public generating diesel capacity (financed in part by the World Bank and in part by the Haitian Government), and 6 MW of back-up capacity for the private sector alleviated short run electricity problems, and World Bank, German Government and CIDA projects will take care of anticipated needs for the next few years, problems still remain.

^{32/} Water shortages also may deter some industrialization, but the impact may be greater on the composition than on the level of industry.

First, while the electricity supply of Port-au-Prince is now adequate in capacity,^{33/} there are serious transmission problems. In addition, because of the relatively small size and distant location of the largest power plant in Haiti (Péligre), it is not possible to connect facilities such as the electric furnaces purchased for the steel mill, without causing serious flicker problems for the entire system. Separate (relatively small) facilities would be required, and it appears that the owners may be thinking along those lines.

To give an idea of just how limited the situation is beyond Port-au-Prince, moreover, the potential for producing additional electric power for industry is greater at Ciment d'Haiti, 40 kilometers north of the city, than it is today in Cap Haitien, Les Cayes and Gonaives combined, and half as great as it will be after the completion of the currently planned power expansion in those towns. Approximately 6,600 KW are planned for Cap Haitien in 1979-80

(completely replacing the existing obsolete generators which have a 2,000 KW capacity), and less than 2,000 KW each are planned for Gonaives and Les Cayes.^{34/}

^{33/} The demand for electricity in Port-au-Prince might exceed supply somewhat in 1982, but if so, that could be alleviated by shifting one or more small generators from Cap Haitien, which will have a temporary excess of capacity at that time.

^{34/} The Gonaives expansion is being financed by the German Government, which is also active in the developments in Cap Haitien, together with the World Bank. The Canadian Government is cooperating in a study of the Haitian power situation which the World Bank is monitoring. As a consequence of what has already been presented, IDA will finance two 15,000 KW generator plants in Port-au-Prince over the next two-to-three years. The preliminary draft of the study maintains that additional hydroelectric energy sources are limited (less than 50,000 KW in all) and relatively expensive. Lignite in the Central Plateau region is sufficient for approximately 120,000 KW for 25 years, but it does not appear that investments will be recommended for the short run), primarily because economic exploitation of those resources would require generating facilities of at least 60,000 KW, and that is far more than the demand which the study projects for Haiti in the near future. It should be noted, however, that even though the study implies that the proportion of public electric power used by industry will rise from 50 percent at present to 70 percent in the mid-1980's, the assumptions concerning industrial growth upon which these projections are based are not fully explained and seem very conservative, seriously underestimating the emerging pattern in the assembly export industries, and avoiding consideration of any resource based or ISI projects of major dimensions.

Residences, existing industries and a projected tourist facility will use up much of that amount and little or none will be available for major new industries outside Port-au-Prince. One large enterprise, a tire factory, and at least three assembly plants already have decided against location in Cap Haitien because of a lack of electric power. Nor is it enough to argue that there is much industry for which electricity is a minor cost such that Haiti's low labor cost and the tax advantages will offset the high cost of self-generated energy. That may be true in many cases, but at least some enterprises will not locate in Haiti under those conditions, and even if they would, the solution of an increasing number of small and medium-size generators is an inefficient solution to energy generation for the country as a whole.

Manufacturing will have to increase greatly in importance in the Haitian economy if there is to be any hope of substantially increasing employment and lifting living standards, and for this to take place, a major increase in electric generating capacity would be essential. Rather than allow this to happen piecemeal, consideration should be given to possibilities of electric power generation far larger than the approximately 110 MW capacity of public power currently available in Haiti and the approximately 150 MW now planned for the early 1980's. The cost of building ahead should be borne by the eventual industrial users, of course. That would tend to raise their electricity costs, to the extent that there was initially underutilized capacity, but the price paid might, nonetheless, be lower than if they relied upon small, in-house generators, or upon

other relatively small facilities set up only after they had made firm commitments to establish a plant; even if that were not true, most industrialists would doubtless accept having to pay a higher price for electricity, given the other, more than compensating advantages of locating in Haiti. However, many of the kinds of industries which the Government appears to seek would never consider establishing themselves in the country without indications that the supply of electricity was going to be substantially increased.

There are, admittedly, risks in such an approach. Increasing the capacity figure now planned would cost approximately \$10 million for each 10 MW, and even more for installations outside Port-au-Prince. For this reason, the Government might withhold full implementation of expanded capacity until prospective investors gave at least a preliminary commitment. Finally, there are limits to the amount of additional capacity which Electricité d' Haiti could properly oversee and operate. Still, only by "thinking big" --or at least a little more ambitiously-- about electric generating capacity will it be possible for Haiti to attract major new investments and to realize major gains in industrial exports. If enough forethought is given to the products emphasized and the process utilized, it may also be possible to realize substantial gains in industrial employment over and above those which the assembly export activities are generating.

The reason why the energy and other infrastructure should be made available to areas outside Port-au-Prince is not merely that industrial decentralization is desirable in some social or political sense. Rather,

the argument is first and foremost, an economic one --despite the fact that there is such a lack of skills and services outside the capital that initially, industrial decentralization clearly will have its special costs. But consider Port-au-Prince. It is already confronted with grave urban problems. The industrialization of the 1970's has brought 40,000 or more new industrial jobs to the city in the past 8-10 years. The existing assembly industries appear pleased with the profitability of their operations and plan sizable expansions. Interviews the Mission held with many of the existing enterprises in this line led to the conclusion that the plants now in operation are likely to double their workforce in five years; in addition, if the Government's new Investment Promotion Office in New York and its soon-to-be trained investment promotion officers to be incorporated into European embassies of Haiti are successful, they are likely to attract new firms employing perhaps as large a group of workers as those which existing firms plan to add to their payrolls. With 80,000 new jobs, many economists would project the same number of job seekers entering the city, this despite the existing unemployment and underemployment. Assuming families of five, that would mean perhaps 400,000 newcomers to Port-au-Prince, added to the 100,000 to 200,000 likely to arrive whether or not there is such additional job creation. But 500,000 to 600,000 more inhabitants in Port-au-Prince within five years would transform an already overcrowded urban area with severe sanitation problems into one of the worst slums in the world. Low cost housing for industrial workers near the new plants might help, and some planning is being undertaken along those lines by a few in the private

sector as well as a few in the Government,^{35/} but the further answer is that in addition, other communities with a greater capacity for absorbing substantial increments to populations (and for doing so without taking up prime agricultural lands) must be provided with the means for attracting industry --the infrastructure and the incentives. The latter, incidentally, need not involve such a loss of revenue as would be implicit in the recent extension of the income tax exemptions for location outside Port-au-Prince, or in the differential (and subsidized) interest rates now accorded some agricultural projects, and proposed on a broader scale by some observers both for industry and agriculture. Regional differentials in minimum wage requirements (as in Mexico) and regional teams which would provide technical assistance for industrialists (charging for most if not all of the cost), and/or a partially subsidized machine shop-stamping plant operation might be even more effective, if for no other reason, because their value is likely to be better perceived by the small or medium scale entrepreneur.

D. The Special Industrial Skills: Management and Labor

An industrial system begins with entrepreneurs and in Haiti that is a problem area. Haiti has entrepreneurs as capable as those in other countries but such men are still few. Most began as importers or merchants and many are still inhibited by the memory of the governmental controls of the late 1950's and early 1960's. Innovation is much less common than imitation. There is generally a lack of trust of those beyond the family, though recently several enterprises have been formed combining the resources of

^{35/} One industrialist is also considering a project of medium-cost housing, aimed at providing attractive circumstances for technicians, foremen and key middle level personnel.

"good friends" and even mere acquaintances. Record keeping is often less careful than in more industrialized societies and project identification and planning are generally quite casual, something which may not be entirely irrational given the 30-50 percent financial rates of return on investment available in much of the industrial sector. The apparent failure to detect processes which are profitable and also provide high employment potential, may be due in part to the lack of focus on the matter in the industry studies the Government prepares (or commissions) and the lack of either incentives or official directives which would induce entrepreneurs to redirect their efforts.^{36/} This is an area in which IDB and other international institutions could help. It must be conceded, though, that it will not be easy to get private sector decision makers to change their approach very much so long as good personal relations with key government officials continue to be so vital for the conduct of business. In any event, Haitian industrialists would benefit by assistance in basic management skills and in this connection, the Bank might consider support of a management training institute and a troubleshooting type technical assistance service. The most serious management problem for the newly emerging industries today may be at the level of foreman. The failure to obtain as large a number of supervisory personnel as is desirable despite their availability and their willingness to return to Haiti for a high enough salary, may be another sign of the shortcomings of top management; the

^{36/} Casual questioning leads to the conclusion that the shadow wage rate is generally far below the \$1.60-\$2.00, plus 50 percent fringe benefits that constitute minimum wage levels. They appear to be approximately \$1.00-\$1.25 in Port-au-Prince; \$0.80 to \$1.10 in Cap Haitien and Les Cayes and as low as \$0.50 to \$0.75 in certain areas where there are only cottage industries.

cost in terms of profits foregone may be quite high. Inadequate supervisory personnel (and serious deficiencies in marketing) also help explain the serious underutilization of plant facilities.

Along with management limitations, there are, of course, serious worker limitations. Haiti is 75-80 percent illiterate, and even in Port-au-Prince, literacy may not exceed 25-35 percent. This is a problem, though perhaps more so for the future and the period of further expansion of Haitian industry than for the present. Moreover, literacy is not a prerequisite for all industrial processes. In one especially successful medium size plant, for example, a 200 man operation producing specialized furniture for export, there are perhaps only half a dozen who can read and write.

Literacy and special skills are needed for industrialization, even at present, however, and the next steps in the process will make them still more essential. As indicated in Chapter III, most of the vocational schools in Haiti are quite weak. Moreover, there are no more than 500 vocational school graduates each year in Haiti in a population of more than 5 million, and a substantial number of those with training in the mechanical arts leave to work in other countries. There is not yet adequate contact between the schools and prospective employers in the private and public sector. With World Bank, CIDA and IDB aid in this area, as well as a special vocational education tax imposed on manufacturers, perhaps the outlook will change.

E. The Financing of Haitian Industry

Although obtaining financing is relatively difficult for small enterprises, particularly new ones, it would be stretching matters to say that this has been one of the most serious bottlenecks to industrial expansion. The available supply of short term commercial financing has increased significantly in the last few years though the export assembly plants have had relatively better access to this source than other components of the sector. The major problem arises from the difficulty in obtaining financing for longer periods of time. Loans of more than three years from the commercial banking system are uncommon, and loans of more than five years are rarely granted, though it is acknowledged that loans tend to be rolled over for a period beyond that for which they are granted.^{37/} Nonetheless, one of the effects of the system is that most projects are seriously considered only if they can be paid off in three years, i.e., if the financial rate of return on investment is at least 33 percent. While there appear to be many of these available, the system leads to a bias towards those projects and processes which promise the highest financial returns in a relatively short period of time. Also, while the current system emphasizes lending for working capital, it should be noted that insofar as international funds are important for investment projects and they are

^{37/} The commercial banks are limited by law as to how much they can lend long term but in fact they do not even approach those limits. At present the ratio of loans to deposits is approximately 1:1 for the private commercial banks. When the commercial banks do make one of their rare medium term loans, they seem to base their decision more on the reputation and wealth of the principals than on the soundness of the project. Moreover, according to the IDB Socioeconomic Report on Haiti, which referred to three of the five or six largest medium term loans, "These transactions were financed indirectly with foreign commercial bank credits through special arrangements with the BNRH that exempted the intermediaries from restrictions on medium term lending." Inter-American Development Bank, Socio-economic Report on Haiti (Washington, 1977) p. 44

often earmarked primarily for foreign exchange, there sometimes is not as much of a working capital component in internationally funded investment projects as would be desirable for labor-abundant Haiti. This undoubtedly reinforces the initial disinclination to search for labor intensive alternatives, however profitable they might be.

Limits on the use of collateral also cause problems. Under Haitian law, "movable" machinery cannot be accepted as collateral for a loan. This is an obstacle to industrialization in itself, and it creates yet another problem. Entrepreneurs become accustomed to obtaining one, two and three year loans on the basis of their signature alone. Then, after their activities progress and they seek a larger or a longer term loan some are resentful when banks request collateral. This is one of the reasons why IDAI has met with resistance, although there are other reasons as well, as noted below.

Although complaints are sometimes raised with respect to the level of interest rates, real interest rates (after allowing for inflation) are not high. Commercial bank rates range from 11-15 percent (except for the Banque Nationale, which appears to make some commercial loans in the 9-11 percent range, contrary to the general regulations it issues); IDAI charges 9 percent for loans to agriculture and 12 percent for loans to industry. Interest rates so low in real terms discourage savings and furthermore,

cause lenders to ration available funds --in the case of the commercial banks, to their lowest risk customers. If interest rates were somewhat higher, the added savings they would generate would make more funds available to newer and smaller enterprises.

IDAI, the government development bank, has a small professional staff but nonetheless, also operates the Port-au-Prince Industrial Park, and runs a small group of enterprises. It has been a source of longer term, easier facility development credits, and unquestionably has played a role in the recent industrial expansion, but it appears to have important limitations. First, the proportion of all loans outstanding granted by IDAI has been declining, and is now only about five percent. Second, the bank has a small staff of capable professionals. Third, many in the private sector believe that the institution favors friends of its own leadership in granting its loans. Fourth, it appears to attend first to its industrial enterprises (all of which operate in the red), then to its industrial park, and only after that to private borrowers; the latter account for only 40 percent of its industrial portfolio. Fifth, IDAI endeavors to examine loan requests carefully, ^{38/} which means that it moves ^{39/} very slowly in an environment in which industrial profits are so high that most industrialists with any feasible alternative source of financing are inclined to turn to those sources. (This leads, among other things, to financing for shorter periods of time, and a reinforcement of the trend to select the most obvious of the alternatives which promise recuperation

^{38/} Perhaps less so in the case of applications from SEN enterprises. Almost all the loans to SEN are in arrears, and the causes for this according to an ICAITI study, are inadequate prefeasibility studies, poor choice of equipment, inadequate size of enterprise, poor plant management and deficient marketing.

^{39/} Delays of half a year and even a full year in answering correspondence are not unknown. Moreover, some inquiries are never answered at all.

of investment in three years.) In addition, there is a degree of misunderstanding of the requirements of development banking (such as the need for collateral), as noted above.

For all of these reasons IDAI cannot be described as an unqualified success. Efforts are underway to improve the situation, however. First, the IDB has already undertaken efforts to get IDAI to improve its operations and seriously restrict the amount it loans to its own enterprises. Second, there are proposals for the revision of the banking law so that commercial bankers might be induced to grant more loans and to loan for longer periods of time, but this does not have the support of the President of the Central Bank who points out that even current banking laws would permit much more medium to long term lending than currently is granted. This is true, though the private banks would lend at least somewhat more if they were not required to place as large deposits with the Government's Banque Nationale or if the permissible range for interest rates were raised. Third, efforts are underway to create a private development bank, as noted above, and there is apparently considerable local support. The need for such an institution would be less strong if banking laws were changed, but even the creation of a private development bank would require some alteration of existing banking regulations.

F. The Supply of Inputs

On the surface, the supply of inputs might seem to be a problem only for certain agroindustries, but it is best viewed as a matter of concern for import substituting industries as well. Underlying agricultural supply difficulties (quantity and quality) are such matters as: (1) lack of modern farming techniques and the extension services which might be required, and combined with that, inadequate use of fertilizers; (2) insufficient availability of irrigation; (3) primitive harvesting techniques (which damage output); (4) lack of storage facilities for semi-perishables, and related to that, inadequate use of pesticides to reduce losses while crops are still in the field; (5) deficient transportation facilities --feeder roads, coastal shipping, trucks for transporting cattle sizable distances, and an inadequate number of refrigerated vehicles for milk-pick up and delivery and meat transport; (6) insecure landholding titles leading to a reticence to invest; (7) overly small and interrupted patterns of landholding which thwart the introduction of measures tha might lead to a greater productivity; (8) soil erosion due to excess wood cutting; (9) government regulation of the prices paid for certain crops and official regulations which prevent payment according to quality, at least in some cases; and (10) government taxation of certain crops. All of these appear to have played a part in limiting the supply

of agricultural inputs, as discussed in Chapter II. They constitute obstacles which impede the full realization of the agroindustrial potential. There is another factor tending to limit agricultural supply (and this should not be obscured by the current difficulties of two of the most prominent new agroindustries) --the lack of nearby processing facilities. The potential that such plants possess for stimulating local supply appears very great for the short to medium time period.

Import-substituting industries also can have supply bottlenecks. These can arise because of cutoffs of foreign supplies (due to any number of possible emergency situations abroad), or to adverse balance of trade problems --a current reality in Haiti-- which has been masked and compensated at least for the time being, by the very large remittances of Haitians working in other countries. Supply problems in the case of inputs which originate from Haiti, or which economic cost-benefit calculations indicate should come from Haiti, also can arise from a large number of factors, and while none appear to be serious bottlenecks at the moment, they could arise because of inadequate development of mineral resources identified in geological surveys (including inadequate transportation access to those resources), and inadequate cataloguing and surveying of other resources. The former considerations explain why Haitian industry imports gypsum and is running into sharply rising costs for sand, and the latter would seem to account for the importation of the matchsticks used by that recently established industry. Another problem which could inhibit some industries including export activities, would be the need to use local inputs which

were high cost and protected. Relatively high cost steel bars and angles might seem to be a case in point, but in most of the relevant uses, the price of steel is a very small proportion of the final price of the importable or exportable commodity, and thus had had little major consequence to date.

G. Marketing

Marketing is almost undeveloped in Haiti. This is true even within Port-au-Prince where per capita income has been rising noticeably, and there appears to be even less effort to ascertain the potential market (not to mention the demand at different prices or for variations in the product) in the remainder of the country. Beyond the country's frontiers, even less is done of course. Almost all of the new assembly export plants run by Haitians operate through special contracts with a few foreign buyers, and the local producers are only vaguely aware of the problems in marketing their output in the United States. Most Haitian producers are almost completely unaware of European markets and European distributors. Even the problems with the U.S. textile quota have not led those local businessmen who once sat down with the Thomas Register and wrote letters of inquiry to hundreds of U.S. businessmen to do anything comparable with respect to Europe. The efforts of German Government assistance to the Bureau of Industrial Promotion including their preparation of an investors guide which will be published in German and French, may provide a first step in eliciting inquiries from more European department stores and distributors, as well as in attracting foreign investors. In addition, the forthcoming

establishment of a foreign-based Investment Promotion Center and the use of investment specialists in various European cities may help. There can be little doubt that if Haiti is to continue to experience rapid growth of manufacturing industry, better acquaintance with European markets and investors will be indispensable. Use of the facilities of the International Trade Organization would be desirable. With respect to marketing in general, the Government might require industrial projects requesting special incentives to consider more carefully their possibilities of exporting, and encouragement might be given to the establishment of joint ventures with one or more foreign marketing firms.

H. Basic Corporate Legislation

Last, but far from least, an obstacle to Haitian industrialization which is likely to become even more important in the period ahead as the country's sector gains a measure of maturity, is the lack of a true corporate law, and indeed, the rudimentary nature of the basic laws dealing with business organization. This, combined with weaknesses in the laws covering banking and financial markets, could prove quite serious in the years ahead.

CHAPTER VIII

Public Policy Options and Private Sector Measures Which Might Reduce the Obstacles to Industrial Expansion

What can be done to alleviate the obstacles to industrial development in Haiti, and in a manner which best contributes to overall economic development? In the case of some obstacles, there are several possible approaches, each with its advantages and disadvantages; in others, a single guideline may be clearly preferable, with the choice resting primarily in the means of implementation. This chapter brings together many of the suggestions made throughout the Report.

A. Institutional Weakness and the Importance of Personal Relationships

There are at least two ways in which this problem --which is of truly awesome proportions in Haiti-- could be handled. One approach would be to depersonalize the governmental mechanism, to determine more decisions on the basis of merit judgments or at least to seriously require that certain prerequisite conditions be fulfilled. A tendency towards this approach would certainly seem to have much to recommend it. An alternative, however, which would at least permit the economic system to function under the burdens of an increasing number of decisions, would be to make greater use of delegated authority.

Another aspect of the institutional weakness is the lack of coordination between ministries and other key agencies of the Government. Inter-ministerial units are established from time to time, but these are ordinarily

trouble shooting groups, constituted to resolve very specific matters. What is needed is an ongoing coordination, so, for example, the sectoral work done on industry in CONADEP is truly integrated with that undertaken by DCI, as well as with the project identification and promotion activities of the Office of Industrial Services and Promotion and IDAI. It would be desirable if the integration were achieved in a manner tending to maximize the country's development potential, but even the mere assurance that the actions of the four agencies were consistent and compatible is likely to have considerable beneficial effect.

With respect to the private sector, one suggestion for institution strengthening is that the leaders of the Chamber of Commerce use their access to the most powerful in Government to voice industry-wide positions on public issues. This is seldom done at present and would mean that the Chamber would have to make greater efforts to ascertain the views of its members. In addition, in order to attempt to reduce the extraordinary importance of personal relationships even in transactions that take place entirely within the private sector, the Chamber might take steps to encourage greater professionalism, holding seminars and periodic meetings on such topics, and giving support to management training programs.

B. The Inadequate Definition of Industrial Priorities and the Deficiencies of Sector Studies and Preinvestment Analyses

Although the last Five Year Plan assigns a high priority to industrial decentralization, the Government has not yet made clear the full ordering of its priorities within the industrial sector. In view of this, the Government might consider the advantages of issuing a mid-period policy

statement which would outline its underlying philosophy with respect to the role of Government institutions in fostering industrial development, and restate its priorities, as well as the kinds of actions and studies it plans to undertake to help implement those priorities. The basic rationale for changes in the public policies affecting industry would be to overcome the obstacles to industrial development noted above, to provide an even more successful sectoral expansion in the period ahead, and to do this consistent with the best feasible alternatives for overall economic development. To achieve this, it is necessary to assure that there are also well conceived criteria for project identification and project evaluation, and that the latter are consistent with and supportive of the sectoral and global objectives.

1. Criteria for the Selection of Industrial Projects in Haiti

In view of the high productivity of investment in many industrial activities in Haiti, but at the same time, the considerable uncertainty as to what the appropriate rate of discount might be (or just how large a volume of investments might yield returns near that level), it would be a mistake to merely subject projects (and project ideas) currently being discussed to a conventional cost-benefit analysis, though even doing that much certainly would be desirable.

a. Comparative advantage status. To begin with, for the current period, only projects with what seem to be a strong comparative advantage potential should be considered. Projects with only moderate promise should be seriously considered at this time only if they are

characterized by major external economies (as, for example, significant skill development usable elsewhere in the economy), or if they can be expected to serve as strong catalysts (which might be contended in the case of some agroindustrial activities). The comparative advantage might well be realizable (the scale might be sufficient to attain adequately low levels of production costs) only if there is more attention to marketing, especially foreign marketing, than has been common of industrial undertakings in the country. This means that the ISI should be able to export or to compete with imports without protection or subsidies within some relatively short period of time, say three to five years.

b. Decentralized locations. For the reasons developed above, special consideration should be given to comparative advantage activities located outside the metropolitan Port-au-Prince area. While the various negative externalities can, in theory, be captured in a cost-benefit analysis, it is not likely that they would be, particularly for the period say, three to five years into the project. While the decentralization is a desirable feature, no projects should be undertaken, even outside Port-au-Prince, unless they have clear promise of comparative advantage.

c. Contribution to employment. (i) Among the product lines which seem to promise high economic returns, preference should be given to those which would lead to the greatest gain in employment. The employment gains might be indirect as well as directly involved

in the project, so that some analysis beyond a cost-benefit appraisal would be required. (ii) Attention should be given to production processes. There should be at least some degree of search to see if a particularly labor intensive process might not also be more profitable. Significantly more labor intensive processes which are only moderately less profitable might be justified by a socioeconomic project analysis such as those developed by Little-Mirrlees, Squire-Van der Tak and the UNIDO Guidelines methodologies, but before considering such an approach, it would be best to ascertain if significant additions to the employment cannot be made simply by using a strictly economic cost-benefit analysis employing shadow price calculations.

d. Energy. Some consideration might be given to seeking out especially low energy projects in the short run, particularly for those located outside Port-au-Prince. For the medium to long term period there will presumably be a very substantial expansion of public power so that Haiti can achieve its potential in manufacturing, but even so, highly energy intensive activities should be avoided unless the energy addition is more than compensated by new foreign exchange earnings.

e. (i) The use of local resources and (ii) the relative significance of a commodity in the country's import expenditures. These criteria are currently the two most important for determining government favor to ISI. While both may be factors which lead to first notions in project identification, it would be sounder in economic terms if projects which first came to light because of their use of

local resources or their relative weight in the import bill were then evaluated according to the first four criteria listed here.

2. Sector Studies and Preinvestment Analyses for Project Identification

To identify the projects which most warrant further consideration, and to eliminate from detailed evaluation, those which have lower economic promise, serious sector and subsector studies are required. Such studies, moreover, can provide the kind of information on interdependencies (with other industries and with the rest of the economy), on choice of production techniques, on indirect employment effects, on possible catalytic effects, and on distributional impact which are essential for a proper evaluation of individual projects.

C. The Weakness of Haitian Infrastructure and Its Negative Consequences for the Decentralization of Haitian Industry

There are many possible courses of action; given the critical nature of the situation it would be desirable for each to be analyzed and for the comparative advantages and disadvantages to be considered in making decisions.

First, among the obvious possibilities is improvement of the harbors and airports at two or three of the secondary communities. The airport at Cap Haitien is already slated for improvement, though even that will only permit use of small jet planes. But harbor improvement (or construction of an alternative harbor to the west of the city) also should be seriously considered. In Les Cayes either airport or harbor improvement (including, for

the latter, possible construction of a new harbor beyond the immediate city limits) would seem essential. For Gonaives, given the type of industries now actively being considered, harbor improvement might be adequate, and the question arises whether it might not even be preferable to use other harbor facilities initially, such as those at the cement plant, north of Port-au-Prince.

An important matter for all three communities is to assure major increases in the capacity for electricity generation. The level of expansion currently planned for the period through the early-to-mid 1980's will not even come close to enabling Haiti to take advantage of its potential in manufacturing, and will greatly inhibit the goal of locating industries outside Port-au-Prince. The Government should give careful consideration to the case for greatly expanded plans for the period five to ten years ahead.

Third, to forestall the development of slums as bad as those in Port-au-Prince, attention should be given to the costs and benefits of several alternative sites and services programs. Low cost housing might well be evaluated jointly with any proposals for industrial parks or free zones, particularly inasmuch as new industrialization is likely to augment the migration to the area involved. Since any major increases in the industrialization of areas outside Port-au-Prince are at least several years off, consideration might also be given to housing for industrial workers in Port-au-Prince, which is fast becoming one of the world's most desperate slums. A recent World Bank mission has undertaken analysis of the contribution which a sites and services program might make.

Fourth, if decentralization of industrial growth is truly desired, then consideration should be given to the relative efficiency of various alternative incentives. It is not clear, for example, that a dollar of tax incentive, such as provided by the recently enacted regional preference, will prove more effective than a comparable expenditure on promotional activities by credit institutions, or a technical assistance service provided to entrepreneurs or regional differences in the minimum wage laws (as used in Mexico). The latter, moreover, could be justified by regional differences in the cost of living and by reference to shadow wage rates. If it were to prove politically unacceptable to have different minimum wage rates for different communities, perhaps the Government could use the underlying economic justification as a basis for approving franchises and granting protection more readily to industries locating outside the metropolitan Port-au-Prince area.

D. Deficiencies in Managerial and Technical Capacity in Haiti

First, the Government might want to reevaluate the advantages and disadvantages of requiring that the various church supported vocational schools be turned over to the Government within a relatively short period of time. It would be most unfortunate if there were any decline in the enrollment or the quality of instruction and equipment at the Canado school. Second, the Government schools might communicate more with those in the private sector to help gauge the vocational specialties in greatest demand. Third, encouragement might be given to the establishment of a management training institute which would concern itself with short courses aimed at foremen as well as managers, and which would provide trouble shooting

technical assistance to enterprises. Given the profitability of private sector activities, both kinds of activities should be able to pay for themselves, though an initial subsidization of the technical assistance service might be considered for areas outside Port-au-Prince. Fourth, the Government might give consideration to bringing more foreigners to Haiti to teach short courses; this might be a means of enabling more of those Haitians who seek further training to obtain it at home, and might mitigate the continuing exodus of very young technicians. Fifth, the Government might favor the creation of joint ventures of Haitian firms with foreign management and engineering firms. Sixth, the Government might attempt to capitalize on the generally favorable experience of repatriated technicians by formulating a program to stimulate still more engineers, mechanics and others with skills useful to the industrial sector to return to Haiti. Seventh, consideration might be given to the establishment of an institute to deal with industrial norms, perhaps under the supervision of DCI.

E. The Supply of Agricultural Inputs for Agroindustries

The Government might first conduct an analysis to determine the effects which its regulatory activities have had on the supply of various agricultural commodities, notably cotton, sugar, coffee and vetiver. At the same time it should review the reasons for delays in irrigation projects and consider an increase in agricultural extension activity and agricultural credit. Another measure might be to plan for a nationwide cadastral survey, which would provide landholders with the security essential for undertaking major improvements --and for obtaining bank financing for such expansion.

The private sector could contribute to the increase of agricultural supplies by establishing long term purchase agreements with farmers, and perhaps by providing agricultural extension services of their own, which benefitting farmers might well be willing to pay for.

F. The Difficulties in Obtaining Financing, Especially Medium Term Financing

First, careful consideration might be given to the reasons why the private banking system is so liquid. Might it be possible to coax more lending from the private banks if assurances were given to them that they now do not enjoy? Would the private banks be willing to increase their lending and, especially, their lending to smaller and newer activities if the real interest rates were not so low? (At present, with a rate of inflation of approximately 10 percent, and nominal interest rates authorized for 11-15 percent, the commercial banks have little incentive to lend to other than their lowest risk customers.) Would the banks be willing to increase their medium term lending if the Banque Nationale were to authorize a 20 rather than 30 percent reserve requirement for those financial institutions which placed 10 percent of their portfolio into 5-10 year loans? In any event, the private banks are likely to enter the mortgage market to a significant extent only when and if the mortgage bank begins to function.

Second, is there need for a new banking law, as many private bankers insist, and as apparently might be necessary to establish a private development bank being proposed by USAID, supported by the World Bank group? Would such a law encourage the beginnings of a capital market in Haiti?

Third, the Government should encourage IDAI to engage in more diffusion of its credit facilities outside Port-au-Prince. In view of the fact

that medium credit such as extended by IDAI is so vital to the establishment of an economically sound industrial sector, perhaps the Government should reevaluate whether IDAI should continue to engage in non-banking activities (directing industrial enterprises, administering the Port-au-Prince Industrial Park, testing the quality of vetiver, etc.) which currently occupy a substantial amount of its time and energies.

Finally, prospective borrowers might find that private banks have a greater willingness to finance for medium term periods if they provide the financial institutions with more data relating to the fundamental soundness of projects, data which go beyond current minimum requirements, focusing primarily on the project's short term solvency and the personal solvency of those undertaking the investment.

G. A Modern Law for Corporations and Partnerships

Consideration should be given to revision of the basic laws affecting business so as to stimulate the creation of more publicly held enterprises.

H. The Deficiency of the Haitian Approach to Marketing

There is a general deficiency in the area of marketing, and a particular unfamiliarity with European markets. The Government might consider several measures. First, those about to be trained in investment promotion techniques might be sent principally to European locations, either in Haitian embassies or in special investment centers such as now planned for New York. In the private sector, the Chamber of Commerce might prepare its own material to supplement that of the Government for use in the Haitian Investment Office

and the Haitian embassies. It also might send a representative to some industrial fairs and increase contacts with other chambers of commerce in the United States and Europe. Second, greater use might be made of European marketing firms, and, looking more broadly in international terms, marketing assistance might be requested for a number of specific products from the International Trade Organization in Geneva. (In addition, aid might be requested from individual nations which have achieved notable successes in the assembly export industries). Another approach might focus more on the stick than the carrot. New industries, and expansion projects requesting the country's special incentives for industrial expansion as well as protection from foreign imports, might be required to indicate much more about their possibilities of exporting than is asked of them at present, and a good deal about the domestic market as well, including at least some discussion of price elasticity of demand.

I. Possible Clouds on the Horizon for the Assembly Export Industries: Haitian Government Skepticism and a Foreign Trend Toward Protectionism

There may not be much that the Government of Haiti can do about international trends towards protectionism, but consideration might be given to organizing an essentially pro-freer trade defense, with representatives of other leading assembly export countries, perhaps coupling this with a special plea for Haiti in view of its severe poverty and its limited potential other than in manufacturing.

As for Government attitudes more favorable to ISI than to assembly manufacturing, it might be useful to evaluate the advantages and disadvantages of recent and prospective ISI in Haiti on the one hand, and to explore

the possibilities of backward linkages for the assembly activities already established in the country, as well as other assembly industries which might be considered for the period ahead.

The Chamber of Commerce might indicate its firm support of a linkage approach to industrial development, and might make an active effort to bring small or prospective suppliers to the attention of the projects of its larger members. This would be useful for all branches of Haitian industry.

APPENDIX

Industrial Parks and Industrial Decentralization

The currently strong demand for space in the Port-au-Prince Industrial Park and the recent concern for industrial decentralization has led to at least preliminary consideration of industrial parks in three other Haitian cities.

First, has the Port-au-Prince Industrial Park been a positive development experience, or, more to the point, does the experience of the Port-au-Prince Industrial Park provide indications that the establishment of similar facilities outside the capital city would serve as an effective means of promoting industrialization in other areas of Haiti? Second, is it entirely clear that it is desirable to decentralize the efforts and foster several "development poles" in a country of only incipient industrialization? (This is a question, which for Haiti, must be answered in the affirmative, as indicated in the main report.) Third, how effective would industrial parks be in stimulating the decentralization of Haitian industrial development initiatives relative to other measures such as the expansion of certain physical infrastructure, the establishment of regionally based teams engaged in "extension services" to small industrial enterprises, or the use of regionally differing minimum wage rates?

The Port-au-Prince experience. Consider first, the Port-au-Prince Industrial Park. The idea for such a facility was conceived in the early

years of the new incentives for industrialization, in the late 1960's but the Park did not begin operation until the mid 1970's by which time the new thrust to Haitian industrialization was well underway. Initially, it was difficult to lease space in the newly constructed plant sites, in part, perhaps, because it was less expensive to rent industrial buildings outside the industrial park than within it. Neither is true any longer; the Park's rental fees are competitive and there is strong demand for its space, though it should be noted that the Park is an IDAI activity which still operates at a loss, unlike its market competitors. In addition, it might be noted that even at this time there are only about 1,800-2,000 workers employed in the Park as compared to the approximately 35,000-40,000 total in the export assembly industries, and the perhaps 20,000 which have been added since the Industrial Park was established. The Industrial Park has attracted only a handful of enterprises oriented wholly or even in part to the local market; the overwhelming proportion of value added in the rental facilities of the Park is taken up by the export-assembly industries.

Industrial Park facilities appear to be fairly good, but there are certainly some deficiencies; new space is often not available as soon as desired, there have been occasional problems with the supply of electricity and water, no special assistance is provided to cope with customs complexities,^{1/} and worker canteens are not available, which contributes to a general problem of excessive litter. Finally, only rental space is available; it is not possible for enterprises to purchase sites within the industrial park.

^{1/} This problem probably would not arise if the Industrial Park were truly a free zone.

If the Port-au-Prince Industrial Park does not appear to have been an unqualified success and a major engine of the new industrialization that the country has experienced, it has, nonetheless, had a catalytic effect. Some of the manufacturing enterprises which now own land outside the Park initiated their operations in Haiti by leasing space in the Park and moved outside, usually purchasing a site, when they became convinced of the long run potential of their operation. (In some cases, the reason for leasing initially appears to have been due to the one year residence required of foreigners who wish to purchase land in Haiti, and leasing space in the Government's Industrial Park may have occurred to some entrepreneurs as a step likely to aid in their subsequent dealings with officials.) Second, some enterprises which rented or purchased sites outside the Park from the outset were stimulated to initiate their operations (and to come to Haiti in the case of foreign enterprises) by indications that the Government was undertaking serious commitments to foster local industry --such as the establishment of an industrial park. Third, the Park is incorporating some additional services and now plans to "build ahead" to a greater extent than formerly. This will help entrepreneurs reduce the time required to get their operations started; as a consequence, the Park may come to include a larger proportion of the new industrial employment than, for example, in the past two years.

What, then, are the implications of the Port-au-Prince experience for the success of industrial parks in Cap Haitien, Les Cayes and Gonaives? To begin with, the Port-au-Prince Industrial Park has been much more successful in attracting export-oriented assembly industries than those producing for

the local market, or for a combination of domestic and foreign markets. But it should be noted that the arrival of export-oriented assembly activities was already in full swing before the Park was built. In contrast, there are not yet any export-oriented assembly industries in Cap Haitien, Gonaives or Les Cayes --not even in Cap Haitien from which shipments abroad could be made at present by propeller planes and possibly by ship as well (though not in containers), in so doing avoiding the higher insurance charges required for travel through the Winward Passage, separating Haiti from Cuba. Even the extended tax incentives recently approved for areas outside Port-au-Prince do not seem to have elicited any new response for establishing assembly activities beyond the area of the capital city. A few new industrial activities are being projected for Cap Haitien and Les Cayes, and a larger number, perhaps, for Gonaives but there is little reason to believe that the existence of an industrial park would have any effect, positively or negatively on these plans. Are there, however, any other types of projects for which such a facility might make a difference, and does there appear to be enough of a demand to yield benefits sufficient to cover the costs involved? In the case of Les Cayes, it would appear that only a few industries producing primarily for local consumption would be attracted, but such enterprises might provide sufficient demand for a small, minimum facility industrial park. The case against anything larger is reinforced by the lack of adequate port facilities, the small air transport facilities, the meager electric power capacity, the weakness of vocational training programs, and the depressed attitudes of many local entrepreneurs; a feeling predominates in Les Cayes that the Government has

done much to weaken the prospects for industrial development in the town for the last fifteen years --since the closing of the port and the take-over of the dairy and the slaughterhouse (both of which were in arrears of loan payments to government banking institutions).

As for Gonaives, there are plans for several resource-based industries (and at least one import-substituting industry) which would produce for the local market, and in one or two cases, for export as well, but the realization of these projects would not depend upon the establishment of an industrial park, and indeed it is most unlikely that any of them would locate in an industrial park or other rented space. Were an industrial park to be set up in Gonaives, few enterprises could be expected to enter, at least initially, because the city probably would seem too inconveniently located with respect to good airports or harbors to attract export-oriented assembly industries. If the establishment of the resource-based and import substituting industries noted above should be accompanied by an improvement of harbor or airport facilities, then the outlook for assembly industries would change and consideration might be given at that point of the possibility of an industrial park.

The only serious possibility for the location of a major new industrial park is at Cap Haitien. Here transport facilities are adequate or will be so by the time an industrial park would be constructed; the existing airport can handle shipments to nearby markets such as Miami, and it will soon be improved to be able to accept small jets. The port is in need of improvement, though, and it might also be considered whether an

alternative port should be constructed to the west of the city. The establishment of an industrial park could attract new industry to a region in which the unemployment rate appears to be even higher than in Port-au-Prince. The arrival of new industries probably would lead private investors to construct private manufacturing bays for rental, as in Port-au-Prince, so that the official industrial park could be a small one --which would be desirable since, in Haiti, privately constructed manufacturing sites seem to be able to operate profitably at the same rental charges which lead to losses in the public sector. There appears to be limited entrepreneurial thrust in Cap Haitien, though, so it appears highly unlikely that the private sector would initiate the construction of such sites. Moreover, there are two other contributions which an industrial park could make. First, the park could take steps to encourage the establishment of a machine shop within its jurisdiction, or in the last analysis, could operate one itself. A machine shop with perhaps a few medium-size stamping presses as well, could service both new and existing industries in the North. At present, the only machine shop equipment in the area is to be found at the Caldos Sugar Corporation, at Limonade, to the east of Cap Haitien, and it is quite limited. The existence of a machine shop and stamping facility would add to the backward linkage potential associated with the new industries, and would increase the attraction of the park for industries other than assembly operations. Second, and equally as important, if more industry is to come to Cap Haitien, the channeling of many manufacturing enterprises in an industrial park may help to preserve the touristic

attraction of the city.^{2/} This may be worth something in and of itself --all the more so given the major expansion in hotel capacity which is on the drawing boards (approximately 750 new beds in first class facilities, compared to the approximately 75 beds now available). Some firms in a Cap Haitien Industrial Park might even orient their production towards the prospective demands of the expanding tourist activity in the North.

Thus, there is a case for considering further the establishment of and industrial park in Cap Haitien, but particular attention should be given at the same time to the reason why at least one major company decided recently against locating at Cap Haitien, i.e., the inadequate supply of electric power. Although 6,600 KW will be added to the city's supply by 1980, and Cap Haitien will even have substantial excess capacity in that year, once the major new resort is completed, there will be little if any capacity available for new industry. Plans for an industrial park would have to include the financing of new electric generating facilities (as well as some other additions to economic infrastructure). While it is true that the low labor costs and the tax advantages may be sufficient to private entrepreneurs to offset the added costs involved in establishing diesel generators at individual plants, this is a high-cost and inefficient solution to the problem from the country's point of view. Finally, evaluation of the case for an industrial park at Cap Haitien should indicate how the economic return on investment in such a facility would compare to the rate of return on: (1) other forms of support for industry in the north; (2) investment for industrialization elsewhere in the country, and (3) the best alternative investments available in the country, regardless of sector.

^{2/} It might be desirable to consider a plan for overall land utilization in the area around Cap Haitien.