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REGENERATING AFRICAN MANUFACTURING INDUSTRY: COUNTRY BRIEFS*

Studies on the rehabilitation of African industry

No. 2

Prepared by the

Regional and Country Studies Branch

Industrial Policy and Perspectives Division

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PREFACE

As part of the Industrial Development Decade for Africa, UNIDO's Regional and Country Studies Branch is conducting a series of detailed diagnostic studies to identify requirements and prospects for rehabilitation of industry in selected countries.

This document provides general background information for the project. Each African country is reviewed in terms of its key economic characteristics, trends and problems, rehabilitation needs, and prospects for manufacturing within the framework of overall economic policy and institutions. In turn, this provides a basis for identifying those countries with the greatest potential and need for rehabilitation.

The environment in which African industry operates plays a crucial role in determining many of its problems and the scope for successful restructuring and rehabilitation. Therefore, the briefs include information on the general economic and political climate and policies affecting manufacturing, as well as information concerning industry and ongoing rehabilitation efforts.

The structure of the country briefs is as follows:

- General introduction
- The manufacturing sector:
  - overall structure/performance
  - major branches
  - exports/imports
- Obstacles to production
- Policies directed towards the manufacturing sector
- The scope for rehabilitation (including references to ongoing projects)

In a concluding chapter, the major findings and issues are summarized. The document's Appendix lists approved and operational UNIDO projects as well as selected references to World Bank rehabilitation studies and projects. A list of available UNIDO Industrial Development Reviews for Africa is also included. A companion volume, "Economic Indicators of African Development" (issue no. 3 in this series), contains statistical information.

It should be stressed that, given the data that was available, a certain unevenness in the reports could not always be avoided. Various factors, including the limited length of the reviews, precluded a systematic exploration of plant-level performance, problems and rehabilitation efforts. This is the object of the in-depth diagnostic studies.

The Regional and Country Studies Branch plans to continuously expand and update this collection of briefs. These "country profiles" will contain all relevant information pertaining to industrial restructuring and rehabilitation in a condensed form. They will be available as separate country information packages, with statistical data attached.

This document was prepared by the Regional and Country Studies Branch of UNIDO in conjunction with UNIDO consultants Hjalmar Brundin and Paul Hesp.

TABLE OF CONTENTS

	Page
Preface	i
Algeria	1
Angola	6
Benin	10
Botswana	13
Burkina Faso	17
Burundi	20
Cape Verde	23
Central African Republic	26
Chad	29
Comoros	32
Congo	34
Côte d'Ivoire	38
Djibouti	43
Egypt	46
Equatorial Guinea	51
Ethiopia	54
Gabon	57
Gambia, The	61
Ghana	64
Guinea	68
Guinea Bissau	71
Kenya	74
Lesotho	78
Liberia	81

	Page
Libya	85
Madagascar	89
Malawi	93
Mali	97
Mauritania	100
Mauritius	104
Morocco	107
Mozambique	111
Namibia	115
Niger	117
Nigeria	120
Rwanda	125
Sao Tome and Principe	128
Senegal	130
Seychelles	134
Sierra Leone	136
Somalia	140
Sudan	143
Swaziland	147
Togo	150
Tunisia	154
Uganda	158
United Republic of Cameroon	162
United Republic of Tanzania	167
Zaire	172
Zambia	177

	Page
Zimbabwe	182
Concluding remarks: A summary of key issues and findings	187
UNIDO's approved and/or operational technical co-operation projects	213
List of Industrial Development Review Series	263

ALGERIA

1. General introduction

Until recently economic growth has been rapid in Algeria. This favourable growth is attributed to the steady expansion of the hydrocarbons sector. Since 1973 oil production has declined, while natural gas production and exports have increased. It is now Algeria's gas export potential - rather than its oil production - that determines the country's importance in the global energy market. Proven oil reserves will last only about 25 years at current production rates. Algeria ranks fifth in terms of world gas reserves and has become the third largest supplier of gas to the European Economic Community (EEC), behind Norway and the USSR, with a quarter of sales to the EEC in 1986.

The rate of economic growth was particularly high during the years of sharp oil price rises, with GDP growing in real terms by over 8 per cent a year in 1978-79, and by 16.7 per cent in 1980. Since then, however, oil prices have slumped. Because of early efforts to diversify from crude oil into refined products, and even more importantly into natural gas production, the impact of falling oil prices was less severe for Algeria than for most other OPEC countries. Nevertheless, according to the International Monetary Fund (IMF), the result has been a sharp deceleration in GDP growth, with annual real growth rates falling from around 5 per cent in 1981-83 to -1.5 in 1986, and with only a marginal upturn in 1987.

GDP per capita was $2,164 in 1984, more than twice the average for all developing countries, and more than three times higher than the average for Africa. Although the rate of population growth is very high in Algeria - 3.1 per cent - the average annual rate of growth in GDP per capita was maintained at positive levels until the slump in recent years. For the period 1970-84 the average annual per capita GDP growth rate was 3.1 per cent. However, there was minimal growth recorded between 1983 and 1987, reflecting the impact of collapsing oil prices and tighter market conditions for the gas export. Hydrocarbons accounted in 1984 for 28.6 per cent of GDP and around 97 per cent of all export revenues.

Always a heavy borrower, Algeria's external balance has become precarious in recent years. The trade balance recorded its first deficit for many years in 1986. Since Algeria regularly has a negative net on the services account, the deficit on the current account was substantial. In years of less dramatic falls in export revenues, Algeria has been able to maintain a positive trade balance by reducing imports, notably consumer products and non-essential foodstuffs. This is illustrated by the fact that between 1984 and 1987 imports were reduced by more than 40 per cent. External debt has risen substantially in recent years. OECD/BIS data record a total debt of $24 billion by the end of 1985, an amount which will have increased since then. In terms of share of GNP, this is approximately 45 per cent - high but not alarmingly so. The debt service ratio, on the other hand, is reported by some analysts as high as 63 per cent in 1986, although the World Bank reports a considerably more modest 33 per cent.

2. The manufacturing sector

The manufacturing sector accounted for only 5.4 per cent of GDP in 1970, but by 1986 the share had risen to 12.9 per cent. Per capita MVA was $201 in 1984, up from $82 in 1970, and recorded an average annual growth rate of 7.2 per cent for the 1970-84 period. Total employment in the sector was 626,000 in 1986, up from 191,000 in 1975.

Before Algeria's independence, manufacturing was dominated by food processing, cigarettes, textiles and clothing. Despite advances in expanding heavy industries, food products remained the largest of all manufacturing sub-sectors in 1986. The share of food projects in value added was 17.3 per cent, down from 20.7 per cent in 1975. The average annual rate of growth for the period 1975-86 was 5.5 per cent. In terms of employment, food products was also the leading sub-sector, employing 79,000 people, or 12.7 per cent of total manufacturing employment in 1986. The two main state corporations in this field had been Sogedia, responsible for a dozen fruit and vegetable processing and canning factories, a sugar packaging plant and a beet mill, and SN-Sempac, which produced semolina and pasta at more than 100 mills. However, both these have been restructured and broken up into smaller units in recent years, reflecting recent trends in Algeria's manufacturing sector.

Textiles and clothing together accounted for 16.1 per cent of value added in 1986, which was virtually unchanged since 1975. The average annual rate of growth of value added for these two branches was 9.6 per cent during the period 1975-86. Production is dominated by the state companies Cotitex (for cotton), Inditex (for industrial textiles), and Elatex (for wool), which account for about two-thirds of total production in these sub-sectors.

Iron and steel employed 64,000 people in 1986 - 10.2 per cent of total manufacturing employment - making it the second largest manufacturing sub-sector in terms of employment. In terms of value added, iron and steel had a 9.2 per cent share in 1986, up from 6.5 per cent in 1975. The major production unit is the Al Hadjar Steel Plant, which has a capacity of 2.2 million tons per year. A series of smaller steel works located in various parts of the country is being planned.

Other non-metallic mineral products, notably cement and fabricated metal products, rank next in importance in terms of value added and employment; in 1986 their shares were 9.5 per cent and 6.9 per cent, respectively. While fabricated metal products have grown by an average annual rate of 12.7 per cent during the period 1975-84, cement and other non-metallic mineral products have grown by only 3.3 per cent per year.

Petroleum refineries accounted for 6.3 per cent of manufacturing employment in 1985 and 4.9 per cent of MVA. The average annual growth rate in value added at constant prices for the period 1975-84 was 21.8 per cent, making this one of the most rapidly expanding sub-sectors.

The highest rate of growth in real value added during the period 1975-84, however, was recorded for electrical machinery, which grew in real value added terms by 52.42 per cent during the period 1975-84. The recorded share in gross value added for this sub-sector was 2.2 per cent in 1975 and 3.1 per cent in 1985.

Transport equipment is also an important sub-sector in Algeria's manufacturing sector, with over 5 per cent of value added and employment. In 1984 total production included 6,619 lorries and 731 buses.

Among other manufacturing sub-sectors are chemicals, including plastics and petrochemicals, noted for the huge complex at Skikda, where 120,000 tons of plastics and PVC per year are produced. Altogether these sub-sectors accounted for 1.6 per cent of value added in 1985 and 2.1 per cent of manufacturing employment. The industrial chemicals sub-sector is one of four sub-sectors showing a decline in value added during the period 1975-85; the others are wood products, rubber products and printing and publishing.

Growth of value added per employee shows large variations across the sub-sectors. These differences are likely to reflect changes in productivity as well as in capacity utilization. The fastest growth rate for the period 1975-84 was recorded in the electrical machinery sub-sector with 37.3 per cent. Iron and steel and petroleum refineries also gained (5 per cent each), reflecting advances in capacity utilization in these sub-sectors, although individual plants have faired worse than the average. The Al Hadjar steel complex, for example, produced at only 65 per cent capacity in 1985. The traditionally largest industries such as food, beverages, tobacco, textiles and clothing all show negative growth rates, indicating falling capacity utilization. Negative growth rates are also shown for chemicals, plastics, cement, glass, pottery, wood, rubber and non-ferrous metal products.

Over 90 per cent of manufacturing industry was owned by the State in 1977 through 61 corporations which employed 70 per cent of the labour force. These included the heavy industries, textiles, tanning and foodstuffs. The State has also expanded its role through nationalization. Over 100 French companies were taken over between 1962 and 1974. Private companies exist mainly in consumer-oriented light industries where some 5,000 companies employ a total of 60,000 people.

The trend is to encourage private enterprises and to decentralize. More than 90 of Algeria's giant state corporations - in manufacturing and elsewhere - have been split up into some 300 more specialized units since 1981. For example, Sonacome, which until 1982 had the monopoly on manufacturing and marketing machine tools, tractors, agricultural equipment, lorries and cars, has been broken up into four companies. The same pattern exists throughout the sector. The relatively favourable development in the non-hydrocarbon industry in recent years reflects to some extent the improvement in capacity utilization of existing plants and the coming-on-stream of new production units. However, performance advances also reflect this organizational and financial restructuring, which includes increased flexibility in management and in pricing procedures (i.e. productivity bonus schemes).

As a share of Algeria's total exports, manufactures are miniscule. Among exported products other than petroleum products are pig iron, zinc, and some industrial chemicals such a methanol, glycerine and ammonia. Of total imports in 1984 manufactured products accounted for some 89.7 per cent, with the

largest share being commercial road vehicles, which acccunted for 6.4 per cent of total imports. The main trading partners are France, the Federal Republic of Germany and Italy for imports and the United States, France and Italy for exports.

3. Obstacles to production

The biggest problem for the manufacturing sector is the shortage of foreign exchange. Reduced export earnings have caused the Government to curtail imports severely. Although the import control has been targeted primarily on consumption goods, the effect has inevitably been felt among manufacturers, both through lack of raw material and spare parts and through reduced demand for manufactured products.

The shortage of professionally trained and experienced management is in part a problem stemming from the rapid expansion of the industrial sector, and in part from the centralized system of administration. Algeria's intricate bureaucracy is also a constraining factor in itself, delaying decisions and creating administrative bottlenecks. In addition, heavy industry has developed with insufficient linkages to other sectors of the economy. The expansion of Algeria's export production is partly obstructed by protectionism in EEC countries, especially regarding food products, and partly by the low quality and high prices of Algeria's export products.

4. Policies directed towards the manufacturing sector

In the 1984-89 Five-Year Plan agriculture has priority over manufacturing in terms of product expansion. While industry as a whole received more than 40 per cent of investments in the 1970-73 Plan, the new Plan allocates 32 per cent to industry, with the emphasis on medium and light industry. The targeted growth rate is 5 per cent per annum, and increased employment is another high priority since Algeria's unemployment is running over 17 per cent. The development of manufacturing exports is also regarded as crucial in the Plan. Depreciation of the Algerian dinar has been one way to encourage this; subsidizing exports is another. Steel, for example, is being sold cheaply to Italy, the Federal Republic of Germany and the United Kingdom.

The Five-Year Plan also emphasizes efforts to encourage private enterprise. Since privatization in agriculture is politically less controversial than in industry, the pace is more rapid there than in manufacturing. At present, steps towards privatization in the manufacturing sector are not well advanced. However, the private sector will be given a greater role in setting up manufacturing industries to process raw materials produced in the state sector.

For light industries, the network of small-scale manufacture is considered complete; future efforts will be concentrated on improving the integration of the sector. Instead of investing in new cement works, production will be expanded at existing plants through small extensions to satisfy any increase in demand. High-tech industries, such as clock manufacturing and synthetic fibres, are planned for the 1990s.

5. The scope for rehabilitation

The shortage of foreign exchange and depressed domestic demand, and hence reduced levels of utilization in recent years, indicate the need for rehabilitation in Algeria. This need is expected to exist among major sub-sectors of manufacturing, especially in the branches with a long history in the country, such as food industries, beverages, textiles and clothing, but also among other industries with falling capacity utilization in recent years, such as some iron and steel works and chemical industries.

The Algerian Government is planning to undertake some rehabilitation on its own. For instance, the Al Hadjar Steelworks are going to be modernized. To what extent financing from Algeria's donors is available for rehabilitation is not known. Algeria receives relatively little foreign aid - $190 million in 1985 with France and Austria as major donors. The World Bank is the leading multilateral donor and creditor. However, the objective of World Bank lending in Algeria is mainly to support water projects. Among the various UNIDO projects (see Appendix) at least two would fall under the heading of rehabilitation. One $74,900 project concerns the steel industry's shortage of trained management for maintenance and assists in developing a computerized production central for maintenance. Another $71,000 project aims at revamping a PVC plant with the help of a UNIDO consultant.

ANGOLA

1. General introduction

Angola is one of Africa's richest countries in terms of natural resources. It has large reserves of oil, huge hydro-electrical potential, numerous valuable minerals including diamonds and iron ore, and a plentiful supply of agricultural land.

Since independence in 1975, the Angolan economy has suffered several severe shocks. The first was the mass exodus of the white settlers; then in 1975-76 the country was plunged into war. In 1986 defence accounted for 40.4 per cent of total government expenditure.

In 1970 GDP per capita was $1,015. However, mainly due to continued civil strife, per capita income declined to an estimated $332 in 1987. Production declined dramatically in 1975-76, and has since failed to return to pre-1975 levels in real terms. Real GDP stagnated or declined in the period 1978-82, and there is reason to believe that this trend continued in 1983-85. The price control system has proven inefficient and incoherent, giving rise to extreme price distortions. The artificial exchange rate of the kwanza has also exacerbated the problem.

The oil sector is the exception to the generally gloomy picture of economic development in recent years. Being the only sector with any real positive economic progress, it has become the economy's driving force. Almost all exports (95 per cent in 1985) are derived from this sector and it is the principal source of government financing. However, oil's predominant role has placed the economy in a precarious situation. The danger became evident in 1986, after the decline in oil prices that began at the end of 1985.

Angola's trade balance surplus has been insufficient to offset persistent net deficits for invisibles. The current account deficit has worsened in times of reduced trade surpluses (notably in 1986) and for the first time, despite severe austerity measures, substantial arrears have accumulated on debt service payments.

By the end of 1986, total external debt stood at approximately $3.1 billion, a large part of which is owed to the USSR. Bilateral debt reschedulings have since begun. A formal Paris Club rescheduling will not be possible until Angola becomes a member of the International Monetary Fund (IMF), which is not expected in the foreseeable future.

2. The manufacturing sector

The official manufacturing index showed that production across the sector as a whole in 1985 was 54 per cent of its level in 1973. According to UNIDO data, manufacturing accounted for 2.9 per cent of GDP in 1984, compared with a 4.9 per cent share in 1973. MVA per capita was $12 in 1984 against $31 in 1970, reflecting the fact that the average annual growth of the manufacturing sector was -10.8 per cent during the 1970s. However, during the first four years of the 1980s the annual rate of growth was a positive 1.1 per cent.

Among Angola's major manufacturing sub-sectors today are oil refining and cement production. In 1980, the shares of value added were 33.5 per cent for textile industries, 18.4 per cent for food products, 12.9 per cent for non-metallic mineral production (including cement), and a marginal 0.3 per cent for petroleum refineries. Sources other than UNIDO (notably EIU) provide information for the following discussion.

Oil refining has grown in recent years due to increased oil production and to increased capacity at the main refinery, a conventional hydroskimming refinery near Luanda, owned jointly by the state corporations Sonangol and Petrofina. Production rose by 1.9 per cent in 1984 and by a further 6 per cent in 1985, when near full capacity utilization of 1.5 million tons was realized. In 1986 capacity rose to 1.7 million tons. Major products are butane gas, petrol, jet fuel, kerosene, diesel oil, three types of fuel oil, and bitumen. The refinery meets most of Angola's domestic requirements and produces a surplus of fuel oil for export. All domestic marketing of the refined petroleum is handled by Sonangol, which acquired the retail network of the last independent distributor, Mobil, in 1982.

The fall in cement production was a serious restraint on the construction industry until recently. Production fell from 767,500 tons in 1973 to 126,400 tons in 1984. However, the main cement works, Cimangola in Luanda (a joint venture with Danish companies), has recently undergone extensive rehabilitation. This permitted the resumption of export as well as increased production for the local industry in 1986. New investments are underway which by 1988-89 will double the capacity to 1.5 million tons of cement.

Food processing claims scores of factories built during in the pre-independence period, including breweries and soft drink plants, fish canneries, grain mills, bakeries, and vegetable oil processing plants. Production in this sub-sector in 1985 was 37 per cent of its real value in 1973, largely due to the fall in domestic agricultural production.

Textile production has also fallen. In 1985, cloth production was 34 per cent below its 1973 level despite continued investments - notably in the Africa Textil plant in Benguela which registered an output of 17 million metres of cloth per year in 1977-79.

A steel plant that was built in Luanda in 1972-73 with a capacity of 40,000 tons a year and 60,000 tons of reinforcing bars was largely inoperative after independence, but reopened in 1984 after rehabilitation. Production of steel bars in 1985 was 15 per cent of its volume in 1973. Plants for steel tubes produced a little less than 3,000 tons in 1985 compared with 14,300 tons in 1973.

Offshore oil construction has been established through the building of a construction yard at Ambriz for platforms, jackets, and other equipment for the offshore oil industry. It is one of Angola's most successful investments since independence.

The non-ferrous metal industry consists largely of one plant producing zinc sheets. Production in 1985 was 3,882 tons compared to 12,000 tons in 1973. Mitsubishi has a 50 per cent stake in this plant.

Paper is produced at Alto Catumbela Paper and Pulp Mill with a capacity of 35,000 tons a year. It ceased operations in 1975, but has now reopened.

A wide range of chemicals are produced, including oxygen, acetylene, paint, soap, matches and tyres.

Assembly of vehicles has been greatly reduced since independence. Production of bicycles dropped from 36,518 in 1973 to 1,824 in 1985.

Among electrical goods, the manufacture of radio and television sets has developed since independence, while production of batteries has declined steeply.

State ownership of factories was brought about by the nationalization law enacted in March 1975. Most of the manufacturing industry is thus under direct government control. By 1984 about 80 per cent of industrial workers were employed in state enterprises. Recent policy trends, however, aim at increasing the role of private enterprise as well as encouraging foreign investments further (see also Section 4).

Manufactured exports consist entirely of hydrocarbons in the form of refined petroleum and LPG, which in 1985 accounted for 5.3 per cent of total exports. Imports, on the other hand, are almost all manufactures; in 1984 processed food amounted to some $45 million, civil engineering equipment $35.5 million, road vehicles and spare parts $31.5 million, and iron and steel tubes and pipes $22.5 million. Major trading partners are the United States, Spain, the United Kingdom, Brazil and Portugal for imports, and the United States, the Netherlands, Portugal, the United Kingdom and Japan for exports.

3. Obstacles to production

Production in the manufacturing sector grew rapidly in the pre-independence period. Most of the manufacturing enterprises were small settler-owned businesses; the Portuguese virtually monopolised skilled and managerial jobs. With the settler exodus in 1975, most factories were abandoned by their owners and practically all skilled workers fled. Shortages of managerial-skills, bureaucratic inefficiency, and over-centralization have hampered the Government's attempts to bring production up to pre-independence levels, along with periodic cuts in power and water supplies, and shortages in agriculture inputs, imported raw materials, machinery and spare parts. Throughout the sector, productivity has therefore been reduced to a small fraction of pre-independence levels. The sector's difficulties intensified in 1986 because of the foreign exchange crisis.

Most agro-food industries have experienced a decline in production due to the fall in domestic agricultural production, the collapse of the rural marketing system, the disruption of transport between the rural areas and the cities, and the foreign exchange constraints on imports. In the textile sector, the cotton shortage has been one of the principal causes of low capacity utilization and plant closures.

4. Policies directed towards the manufacturing sector

A package of economic reform measures (SEF) designed to aid economic recovery was officially introduced in January 1988. The authorities now hope that the new decentralization initiatives will help revive the manufacturing sector. The package of economic reform measures includes the privatization of much of the retail and wholesale sector, increased financial autonomy and responsibility for state enterprises, regional decentralization, the introduction of a foreign exchange retention scheme as an incentive for non-oil export industries, liberalization of the traditional rigid price control system, more restrictive monetary measures to soak up excess liquidity, changes in interest rate policy, reform of the 1979 investment law to improve incentives to foreign investors, and eventual devaluation of the overvalued kwanza.

5. The scope for rehabilitation

Although hard hit by economic dislocation since independence, Angola's manufacturing sector has considerable potential owing to its abundance of basic industrial resources (power, iron ore, oil). Many small factories established by the Portuguese are out of commission, due to the absence of relatively minor spare parts or certain aspects of technical experience. Therefore, with just a little extra attention, the industrial sector could demonstrate vigorous growth. There is expected to be scope for rehabilitation in food-processing industries such as fish canneries, grain mills, bakeries and vegetable oil-processing; in textiles including cloth production; in steel tube plants; in the production of chemicals including soap, paint and tyres; and in bicycles and batteries.

Several rehabilitation projects are ongoing in Angola. The steel plant was rehabilitated in 1984 and the cement plant, Cimangola, has recently been rehabilitated. UNIDO is supporting two projects: (1) a $12 million rehabilitation of FIDRO de Angola, which produces mobile refrigerators and vehicles for food transportation, financed by ILKA/GDR, and (2) a $3.8 million project aimed at enhancing the production in selected food industries (see also Appendix). Improved security conditions will, however, be a prerequisite for achieving broad based economic recovery and meaningful results in rehabilitation efforts.

BENIN

1. General introduction

Benin is a small, poor nation. Total GDP was recorded at some $1.5 billion in 1986. With a population of 4.4 million, 1986 per capita income was only $345. Agriculture, the economy's most important sector, employs three-fourths of the active population and accounts for 40 per cent of GDP and around half the exchange earnings. Improved harvests in recent years have led to Benin's achieving virtual self-sufficiency in food production. Commerce, mainly with Nigeria, is the other principal economic activity. Oil production began in 1982, but output has been low.

The economy's traditional growth sources are agriculture, entrepot fees and transit trade. Monitoring economic performance is difficult because of the large unrecorded trade with Nigeria. Generally speaking, growth rates have fluctuated in line with Nigeria's oil booms and slumps. The average real GDP growth rate over the period 1973-85 is estimated by the World Bank at 4.5 per cent a year. Estimates show that GDP has declined since 1982 in real terms. The high rate of population growth has meant an even sharper decline in per capita income.

Since the fall of Nigeria's oil revenues and the devaluation of the naira in September 1986, regional trade has been severely squeezed. Benin's export of domestically produced foodstuffs and the traditional but illegal trade in re-exports of consumer goods across the border have both been affected.

There is traditionally a very large trade deficit, with recorded exports covering only 5 per cent of the cost of imports in 1982. This is partly offset by service earnings and partly by transfers. The current account deficit decreased from 1981 to 1985, but is likely to have increased in 1986 and 1987. Benin's international reserves have fallen to very low levels in recent years.

According to the World Bank, Benin's external debt totalled $776 million (75 per cent of GNP) at the end of 1986. The main factor affecting Benin's debt profile is a sharp jump in commercial borrowing in 1980 to finance the oil development programme. Debt service was scheduled to rise rapidly from 1986; it is clear, however, that these obligations have not been met and that arrears mounted in 1986-87.

2. The manufacturing sector

The manufacturing sector is small, and according to UNIDO data its share of GDP has declined from 8.7 per cent in 1975 to 4.6 per cent in 1986. The World Bank estimates 1985's GDP share at only 4 per cent. The figures for real growth show a negative annual growth rate of 2.7 per cent in the 1970s and a further decline for the period 1981-84. Apart from the construction goods industry, which includes a cement plant, most activity is concentrated on the processing of consumer goods. Food, drink and tobacco processing, footwear manufacture, cycle and motor vehicle assembly, and ceramics form the basis of the import substitution sector.

Food processing is the major industry, with food products and beverages accounting for 42.4 and 17 per cent, respectively, of value added in 1980. Together these two branches employed 3,475 persons in 1986, or a little more than half the industrial work force. Value added for both these branches grew steadily during the 1975-86 period, in the food industries by 4.42 per cent per year in constant prices and in beverages by 13.26 per cent per year. Employment also expanded in the food-processing industries, while remaining virtually constant in the beverage industries. The latter, therefore, has attained a growth in value added per employee of over 18 per cent per year for the period. Within the food products sector, palm oil processing is the most important activity, but it has declined during the past decade. The Sonigcog has six small palm oil mills and studies are under way to revitalize this sector. A 45,000 tons a year sugar complex was commissioned as a joint venture with Nigeria in 1983 but has been running only intermittently ever since. Exports to Nigeria have not been realized because sugar prices have been much below production costs at the plant.

Textiles and clothing employed 2,067 persons in 1986, a little more than 30 per cent of total manufacturing employment, but accounted for only 11 per cent of manufacturing value added in 1986. The textile industry shows a negative 14.85 per cent growth rate of value added per employee for the period 1975-85. An integrated complex at Parakou producing cotton fabrics, which came into operation in 1975, is currently undergoing rehabilitation with aid from the West African Development Bank. Capacity will be raised to 3.5 million metres of fabric and 1,254 tons of finished garments.

A cement plant began production in 1982. Nigeria provided part of the financing and was due to receive a large portion of cement produced. Although capacity is 600,000 tons - about double Benin's domestic demand - production in 1985 was only 85,000 tons, reflecting Nigeria's economic downturn as well as the serious overcapacity of cement in the region.

All major industries in Benin are nationalized.

The trend seems to be to rehabilitate and develop existing industries rather than to venture into new fields.

Exports are dominated by palm oil and cotton. The oil is mainly sold to the EEC countries, while cotton is exported regionally. Imports are dominated by consumer goods from industrialized countries. A large part of these are illegally re-exported regionally, especially to Nigeria.

3. Obstacles to production

Benin is constrained by its dependence on Nigeria. In 1985 Nigeria closed the border which brought recession to Benin. When the border re-opened in 1986, there were few benefits for Benin, since the collapse in oil prices led Nigeria into recession. The palm oil industry in Benin has been affected by droughts, the latest in 1983. Other constraints include the shortage of foreign exchange and lack of entrepreneurial and manufacturing skills. This is partly due to the political situation which has made Western investors and donors unwilling to help finance Benin's development. The transport infrastucture is comparatively good, but further extensions are required for the regional transit trade.

4. Policies directed towards the manufacturing sector

Since 1972, when the present regime came into power, there has been emphasis on central planning and state participation in the economy. A slight shift in emphasis took place in later years, when the major problem became the shortage of foreign exchange. Negotiations with the IMF for a stand-by arrangement have been initiated, but are thus far without result. However, there is now greater scope for private enterprises and foreign capital than previously. For example, plans for a petroleum refinery, earlier scrapped, have been revived since they met United States interests. Another reflection of the shift in policies is the increased aid flows from France and Belgium. However, due to domestic political reasons, it seems clear that there will be no radical changes in economic and industrial policies.

5. The scope for rehabilitation

The small size of the manufacturing sector in Benin implies that there is relatively little scope for significant rehabilitation in that sector. However, a need for rehabilitation exists, particularly in the textile and palm oil processing sectors, which have both experienced deteriorating performance in recent years.

UNIDO is currently operating five projects (see Appendix), none of which seems to be directly involved with rehabilitation. Four are directed toward the planning and administration capacity and one is a pre-feasibility study on a mini-steel plant.

BOTSWANA

1. General introduction

Botswana may be characterized as a middle-income mini-economy (1 million inhabitants and GNP per capita of $960 in 1984) with relatively well developed infrastructure and social services. Rich diamond reserves are the country's main resource. Primarily due to diamond industry growth, mining now accounts for almost half of GDP. This economic growth record has not been shared by other sectors, giving rise to the dualism which characterizes the present Botswana economy where 80-90 per cent of the population remains dependent on livestock production in some form, largely outside the cash economy.

Arable agricultural output is constrained even in good years, and at best Botswana has been able to produce only half its food requirements. Recently, heavy rains appear to have ended seven years of drought that have posed a serious threat to water supplies, food production and the national cattle herd. Other serious political and social problems are the growing rural exodus and rising urban unemployment.

Botswana has, with an average real GDP growth exceeding 10 per cent per annum during the last two decades, achieved an economic record unparalleled by any other developing country. Botswana also holds a record in GDP growth per capita, with 8.4 per cent per annum from 1964 to 1985. Inflation, as measured by the national cost of living index, has remained moderate, averaging under 10 per cent per annum during the last five years.

Botswana's exports remain highly concentrated, with diamonds accounting for over three-fourths of total exports. Beef accounts for another 8 per cent, and copper-nickel matte another 6 per cent. The three together accounted for over 90 per cent of all exports in 1986. The evolution of the balance of payments has largely reflected the growth of the mining sector. The impact of both the falling pula and growing diamond market resulted in the current account surplus surpassing 14 per cent of GDP in both 1985 and 1986. One of the main strengths of Botswana's payments position over the past decade has been large capital inflows, arising principally from direct foreign investment in the mining sector. Botswana's international reserves have climbed to 30 months import cover.

Botswana's receipts of official aid have shown a downward trend over the past five years, reflecting the country's ability to finance a large portion of its development budget because of its strengthened external position.

Botswana continues to enjoy a very low level of foreign debt. Public external debt service of $48.8 million in 1985 was only 5.5 per cent of exports of goods and services. While debt service will increase to the end of the decade, a significant rise in the debt service ratio given present trends is unlikely.

2. The manufacturing sector

The manufacturing sector, accounting for 6.6 per cent of GDP in 1970 and 5.1 per cent in 1984, has grown at a slightly lower rate than the overall economy. In terms of average annual rate of growth, this has meant 9.8 per cent per annum for the period 1970-84, which can be compared to 5 per cent per annum for Africa as a whole. Per capita MVA was $77 in 1984, up from $35 in 1970, for an average annual growth rate of 5.6 per cent for the 1970-84 period. Expansion was particularly rapid during the 1978-85 period, reflected in an annual average growth rate in manufacturing employment of over 18 per cent, more than twice the target rate for the period. Total employment in the sector thus reached 10,000 by 1985, more than double the 4,447 employed in 1978.

The number of companies increased from 88 in 1979 to 276 in 1984. This increase did much to reduce the near total dominance of the manufacturing sector by one single firm, the export abattoir run by the Botswana Meat Commision (BMC). Its share of manufacturing employment dropped from 36 per cent in 1979 to 18 per cent in 1984. There was also a considerable diversification of Botswana's manufacturing base (see below). But the food sub-sector remains the largest sub-sector, accounting for 42 per cent of gross output, a third of value added, and 32 per cent of total manufacturing employment in 1984.

The second largest sub-sector is the beverages sub-sector with 18.3 per cent of value added and 15.3 per cent of gross output in 1984, although its employment share is only 4 per cent (in 1985). This sub-sector is dominated by one major brewery, the Kgalakgadi Breweries plant in Gaborone.

The textiles sub-sector accounted for 11.6 per cent of value added in 1984, 12.6 per cent of gross output, and 15 per cent of employment (in 1985). The largest plant is the Everest Mills plant in Francistown for knitted and woven polyester/cotton fabrics.

The metal working sub-sectors, including transport equipment and machinery, have increased their share of MVA from a modest 3.3 per cent in 1980 to 9.6 per cent in 1984, the share of gross output from 4.2 per cent to 5.3 per cent, and the share of employment from 7.9 per cent in 1978 to 20 per cent in 1985.

Since the late 1970s production of paper and paper products has expanded. This sub-sector accounted for 3 per cent of MVA and gross output in 1984 and for 5 per cent of employment in 1985, up from 0.4 per cent in 1978.

Likewise, a chemical sub-sector has recently emerged, accounting for 4 per cent of valued added and 4.2 per cent of gross output (1984) and for 3 per cent of employment (1985).

Figures for growth of value added per employee are available only for the food products and beverages sub-sectors. The former had a faster growth in employment than in value added; therefore, the average growth rate was a negative 3.6 per cent per annum for the 1975-86 period. The beverages sub-sector, on the other hand, recorded an impressive growth of value added per employee of 40.4 per cent per year for the same period.

Industry in Botswana is predominately small-scale, and available data show a definitive trend towards firms with 10 and less employees. While the Government owns a significant share of Botswana's major manufacturing establishments, both large- and medium-scale firms in the private sector are to a great extent foreign-owned. Available data indicate that firms with majority foreign ownership, excluding BMC, accounted for 50 per cent of manufacturing output and 51 per cent of MVA in the mid-1980s.

The trend is to maintain the rapid rate of industrial expansion of recent years. The main investor, the Botswana Development Corporation, is comprised of 31 subsidiaries and 17 associated companies and employs 5,600 people directly. In 1985/86 its turnover increased by 33 per cent. Earlier engaged in a very wide range of activities, BDC has shifted its emphasis to industrial development as part of the Government's attempt to attract investment and devise an employment incentive policy.

Botswana is a member of the Southern African Customs Union, which provides access to duty free imports from South Africa. This, together with the proximity of the South African market, has led to the present situation whereby about 75 per cent of imports, mostly manufactures, come from South Africa. In contrast, only 6 per cent of exports is destined for South Africa. The beef from BMC, largely exported chilled to Europe and South Africa, constituted 8.6 per cent of total exports in 1984. The exports of textiles, mostly to neighbouring countries, has increased considerably and in 1984 constituted nearly 4.7 per cent of total exports. With the exception of textiles and clothing and the BMC, most of the manufacturing sector is geared to the local market.

3. Obstacles to production

Botswana has less arable agriculture resources than its neighbouring countries, although a raw material base for industrial development exists. The country possesses a relatively well functioning infrastructure, but it is thinly spread. A shortage of industrial energy has occurred, but the situation will improve with the start of several 30 MW generators at Morupule, based on Botswana's own vast coal reserves. However, the most serious obstacle to increased investment and production is the political threat linked to developments in South Africa; the import dependence on South Africa makes Botswana's manufacturing industry sensitive to international trade sanctions. In the existing situation, competition from Zimbabwe and South Africa and its "home lands" (especially Bophuthatswana), combined with expensive utensils, the high cost of housing and land in urban areas, shortages of skilled manpower, limited export outlets, and the small domestic market are all obstacles to the development of the manufacturing sector.

4. Policies directed towards the manufacturing sector

Planning in Botswana has tended to concentrate on the activities of the public sector. The compactness of the administration, political commitment to pragmatic planning, integration of planning and budgeting, and a shift to medium-term projects have enhanced the success of the planning and implementation process. The manufacturing sector has been given increased

attention by the Government. The current Development Plan for 1985-91 aims at a growth rate of 8.3 per cent for manufacturing, higher than that of any other sector. A major industrial incentives scheme, the Financial Assistance Policy, channels considerable resources to the manufacturing sector and provides incentives for diversification of the economy with an emphasis on job creation as well as geographical dispersion of economic activities. It provides for a wide range of subsidies to potential entrepreneurs, as well as an attractive foreign investment scheme which allows complete foreign control and offers generous incentives and unconditional repatriation of profits and dividends. At the end of 1986, 1,321 projects had been approved which would provide 12,800 new job opportunities. Of the total, 1,057 were small scale (mainly in rural areas), 260 were medium scale and four were large scale. A new industrial development policy launched in 1984 emphasized opportunities for domestic supplies to the major sectors of the economy, utilization of the local resource base, and special support to small rural-based and locally-owned new industrial activity. The World Bank has extended a $2.3 million credit line for small scale agricultural and industrial projects. In accordance with the Goverment's policy to diversify the country's industrial and commercial base and to create additional employment opportunities, UNDP/UNIDO provides support to the building materials and textiles sub-sectors.

5. The scope for rehabilitation

The general climate for rehabilitation in Botswana seems rather favourable. The country enjoys political stability and a relatively comfortable fiscal and balance of payments situation. However, the smallness of manufacturing restricts the scope for rehabilitation in that sector. Among donors - as well as in the Government's own policies - the emphasis is to develop new industries, rather than rehabilitating existing ones. This is illustrated by the fact that out of the five ongoing UNIDO projects in Botswana (see Appendix) only one is a rehabilitation project - a $24,000 management consultancy project for a small silversmith cooperative.

BURKINA FASO

1. General introduction

With a estimated GDP per capita of $257 in 1987, Burkina Faso is one of the poorest countries in the world. As in most of the Sahalian region, this poverty is largely the result of limited resources. The country's landlocked position, scarcity of roads, and long distances from seaports further constrain the country's development potential in all sectors. An estimated 80-90 per cent of the population depends on the predominantly subsistence-oriented agriculture and livestock sectors for its livelihood. The impoverishment of the central region has given rise to spontaneous resettlement in the south, and large numbers of Burkinabe travel to take up seasonal or permanent employment in neighbouring countries.

Following a period of steady economic growth during the late 1970s, Burkina Faso experienced stagnation and economic recession in 1982-84. Recently economic growth has revived due to very good harvests in 1985 and 1986 (annual growth rates at 7 and 10 per cent respectively), but the persistence of an unstable political climate has continued to affect adversely both foreign aid and workers' remittances.

The rate of inflation, as measured by the GDP deflator, became negative in 1986, owing to the rapid decline in food prices and the collapse of world market prices for cotton.

The current account is permanently in arrears, due to the large trade deficit and a substantial deficit on services, which are only partially offset by private and official transfers. Cotton is the country's biggest export earner, although revenues have swung sharply from year to year due to shifts in world market prices (volume has been moving steadily upward since 1982). Live animals rank next in the official figures, although in practice much of the trade in livestock goes unrecorded as animals are moved across the country's borders in both directions. Imports are dominated by machinery and transport equipment, fuel, and - in years with poor rainfall- foodstuffs. Burkina Faso receives substantial aid, both grants and concessional loans.

The external debt burden has been rising, but Burkina Faso is not one of Africa's major debtor nations. By the end of 1985 total external debt amounted to 50.4 per cent of GNP. Most lending has been on concessional terms, but the proportion of non-concessional lending and short-term debt has risen. Even if debt service remains moderate (33 per cent of merchandise exports in 1986), the overall balance of payments position is still precarious. Burkina Faso is a member of the French Franc Zone.

2. The manufacturing sector

The manufacturing sector is small and rudimentary. Manufacturing's share of GDP in 1970 stood at 9.3 per cent, rose to 12.9 per cent by 1983, and increased to 13.5 per cent in 1986. MVA per capita was recorded at $16 for 1984, compared to $58 for Africa as a whole. The average annual rate of growth for MVA per capita was 2.5 per cent during the 1970-84 period, almost twice the growth rate of GDP per capita. Manufacturing is estimated to employ 8,968 people (1986), or only 1 per cent of the labour force.

The manufacturing sector focuses almost entirely on food processing and substitution of consumer goods imports. The largest manufacturing sub-sector by far is food processing. In 1985 its share of value added was 42.7 per cent, gross output 47 per cent, and manufacturing employment 33.7 per cent. The most significant plant is the sugar plant at Banfora (69 per cent state-owned), which began production in 1978/79 and has an annual production capacity of 21,000 tons of refined sugar from local cultivation. Capacity has been expanded to 31,000 tons, but the drought caused 1985/86 production to drop to only 28,000 tons. Work is in progress for another sugar complex in the Sourou area.

The beverages sub-sector is the second largest manufacturing activity. In 1986 it accounted for 18.3 per cent of value added, 13.2 per cent of gross output, and 14.1 per cent of employment. Brakina and Sovobra are two private companies operating breweries and soft drink plants. As part of a move towards economic self-reliance, the use of imported hops was prohibited by the Sankara government. But this decision was unpopular, as millet beer is perceived as being of inferior quality. The policy was reversed by the Compaoré regime when it took office in 1987, and beer prices quickly dropped.

The third sub-sector of any significance is the textile sub-sector. In 1986 it accounted for 12.8 per cent of value added, 13.9 per cent of gross output, and 14.3 per cent of manufacturing employment. Burkina's largest factory, with 600 employees, is the textile plant at Koudougou, which entered production in 1970 with an annual capacity of 500 tons of yarn and 760 tons of woven material, using local supplies of cotton. Its sales are entirely in the domestic market.

Other manufactured products include PVC tubes, mats, plastic bags, plastic plumbing equipment, cigarettes, soap, shoes, bicycles, scooters and tyres.

Data on the performance of the most important manufacturing companies show that the growth of output slowed significantly during the period 1981-84. Thus, a substantial decline in the volume of production was registered for bicycles and mopeds, tires, textiles and shoes. The most important cause for this decline seems to have been strong competition from imports.

For food products, the growth of value added per employee during the period 1975-86 was positive at 3.96 per cent, while the beverages industry recorded a negative rate of 2.47 per cent. The most positive development occured for the chemical sub-sectors, which recorded average growth rates of 16.4 per cent (industrial chemicals) and 18.9 per cent (other chemicals).

In terms of ownership the manufacturing sector is dominated by larger scale Government-controlled corporations in the food-processing and textile sub-sectors, such as the 55 per cent state-owned textile company Voltex and the 69 per cent state-owned sugar company Sosuco. The plastics company Fasoplas was established in 1980 and was financed by both the State and the private sector. The remaining manufacturing companies are privately owned.

The trend of expanded manufacturing activity during the late 1970s and early 1980s has in more recent years been halted by political changes. However, the new Government seems intent on regaining the confidence of investors, both domestic and foreign.

Besides cotton, Burkina Faso exports few manufactured goods, only some vegetable oil and rubber products. The main destinations are Côte d'Ivoire, France and the UK. Imports are dominated by food products, petroleum products, transport equipment, machinery and electrical equipment. Main sources are France, Côte d'Ivoire and the United States.

3. Obstacles to production

Expansion of the manufacturing sector is constrained by lack of raw materials, skilled labour and experienced managers; the need to import all the country's fuel; the high cost of transportation; and the small domestic market. Investment is held down by political uncertainty, and, for most enterprises, the rigidly controlled prices. Prices in some cases do not cover costs, with the result that a number of companies have incurred financial losses.

4. Policies directed towards the manufacturing sector

Since 1985, efforts have been under way to improve the financial situation of public enterprises. A few of these were restructured, with changes in management and cuts in personnel expenditure and other operating costs. For some industries, official factory-gate prices were raised. The import tax was reduced in 1984 by 75 per cent in order to help reduce the industrial companies' operating costs. Moreover, government authorities took steps to initiate a dialogue with private entrepreneurs in order to restore a climate of confidence for private sector investment.

5. The scope for rehabilitation

The small size of the manufactoring sector implies that the scope for rehabilitation is limited. Moreover, the general climate for rehabilitation in Burkina Faso is not very favorable. Captain Compaoré's regime is insecure, its economic policy is unclear, and further political changes can be expected in the foreseeable future. The problematic environment seems to be confirmed by experiences of UNIDO projects; one project to rehabilitate a brick making plant was initiated in 1983, but is still not completed. UNIDO also operates a project aimed at setting up a maintenance centre for agricultural tractors and other heavy vehicles. This project suffered from budgetary cutbacks - from $885,000 to $585,000 - during the implementation period, but progress has also been hampered by the lack of raw material on the local market. Operationally the project is classified as completed.

BURUNDI

1. General introduction

The economy of Burundi rests on two pillars: coffee exports and foreign aid. With a relatively small land area and a population of 4.9 million, the population density is high, the infrastructure is weak, and few natural resources have been developed. There is some optimism linked to ongoing experimental offshore drilling for oil beneath the Tanganyika Lake by the US company Amoco. To date it remains no more than a hope, but the economic outlook for Burundi would be drastically altered if the drillings prove to be successful. Surveys also exist for potentially rich deposits of uranium and vanadium, and the commercial potential of earlier discovered nickel deposits, estimated at 5 per cent of world reserves, have recently been looked into by the World Bank affiliate IDA. If commercially feasible to explore, the ore processing could include the recovery of copper, cobalt and platinum-group metals as well as nickel. For the next few years, however, agriculture will continue to account for more than half of GDP and employ around 90 per cent of the population. About 25 per cent of the land is under cultivation, of which some 90 per cent is devoted to subsistence crops and the remaining ten per cent mainly to coffee.

GDP in 1985 has been put at $970 million by the World Bank, with an annual average growth rate of 3.6 per cent between 1965 and 1980, and 1.9 per cent between 1980 and 1985. Per capita GDP stood at $213 by 1984 according to UNIDO data, and the average annual growth rate for the period 1970-80 was recorded as 1.7 per cent. For the period 1981-84, however, real growth in GDP per capita was or -5.3 per cent, largely reflecting weak export prices.

Coffee accounts for 72 per cent of export revenues, and totalled $92.6 million in 1985. Foreign aid for the same year came to $146 million, equivalent to 13 per cent of GNP. Burundi is one of the 30 African states designated by the third Lomé Convention as least developed and therefore qualifys for special treatment under the Convention's scheme to stabilize export earnings for products sold to the EEC. The EEC is the principal donor and also the principal trading partner, with the Federal Republic of Germany alone purchasing 30.5 per cent of exports, and, together with Belgium, Luxembourg and France, providing 39.7 per cent of total imports.

Burundi's total external debt rose from $111 million in 1979 to $527 million in 1986, equivalent to 39 per cent of GNP, and has since continued its sharp rise. According to the IMF, the debt service ratio was 22.1 per cent in 1986, up from 8.5 per cent in 1982.

2. The manufacturing sector

The manufacturing sector is small and restricted to the capital, Bujumbura. Manufacturing's share of GDP was 6.7 per cent in 1975 and 8.7 per cent in 1983, according to UNIDO data, while EIU reports a GDP share of only 4.1 per cent by 1985. The MVA per capita in 1984 was $20, compared to $58 for the whole of Africa. Total manufacturing employment in 1983 was recorded at 4,900 people, up slightly from the 3,016 employees recorded in 1975.

Manufacturing activity is heavily concentrated to Bujumbura and is dominated by the processing of agricultural products, e.g. cotton, coffee, tea, vegetable oil extraction, and small scale wood mills. Current production also includes glass, textiles, shoes and basic chemicals. By 1983 earlier efforts to promote industrialization based on domestic resources and location in unfavourable areas had started to produce results, with the establishment of several small scale enterprises, including cement, footwear and insecticide factories.

Food processing is reported together with the beverages and tobacco sub-sectors in UNIDO data, thus making it the largest sub-sector by far. The brewing industry has several foreign participators such as Heineken and Amstel of the Netherlands. It has expanded production by more than 30 per cent between 1981 and 1986, reflecting increased domestic demand as well as increased production capacity. These industries in 1983 together accounted for 75 per cent of manufacturing value added, two thirds of gross output, and 31.7 per cent of manufacturing employment with 1,555 employees.

Among the minor manufacturing branches in Burundi, textiles and clothing accounted for 8.5 per cent of value added, 10.5 per cent of gross output, and employed a combined total of 1,189 people in 1983, almost 25 per cent of total manufacturing employment. The state textile organization COTEBU has been developed with assistance from the People's Republic of China. In 1980 it was producing three times Burundi's textile needs.

Fabricated metal products employed 533 people, down from 690 in 1975, and accounted for 5.1 per cent of value added in 1983, down from 12 per cent in 1975.

Industrial and other chemicals employed 643 people in 1983, for a combined 13.1 per cent share of total manufacturing employment; they are thus the fastest growing branches since 1975, when only 214 people were employed. In terms of MVA share, however, chemical industries declined from 9.4 per cent to 5.2 per cent between 1975 and 1983.

The wood products sub-sector accounted for only 0.2 per cent of value added in 1983, down from 2.4 per cent in 1975. Its share of employment fell from 7 per cent in 1975 to 2.3 per cent in 1983.

The ownership pattern is mixed, with the state dominating since it owns most larger manufacturing units, such as COTEBU in the textile industry and the glass factory supplying the breweries. Foreign private interests dominate the brewing industry, while domestic private interests dominate the smaller locally-based industries.

The trend is to emphasize agricultural-based industries and the integration of the primary and secondary sectors, e.g. the new Sosumo sugar project. The Government has opted for a cautious approach through selective investment as trading opportunities appear.

Burundi's exports are totally dominated by coffee, which in 1986 accounted for 57.8 per cent of total exports. In addition there are some exports of cotton and tea. Main destinations for coffee are the EEC countries, North America and Japan. A potential export market for manufactured goods exists regionally among the fellow members of the Great Lakes Economic Community (CEPGL), notably Zaire and Rwanda. Imports consist of production goods, equipment and consumption goods. In 1985 production goods accounted for 38.6 per cent and equipment for 29.1 per cent of total imports. Main suppliers are the EEC, Iran (petroleum), and Japan.

3. Obstacles to production

The small size of the domestic and regional markets is one of the serious constraints to expanding the industrial base. Other problems include the shortage of foreign exchange and the long distance to the sea, which means that only manufactures capable of bearing high transportation costs can be developed. Daily production is mainly obstructed by the uneven power supply and the shortage of skilled manpower as well as by the shortage of foreign exchange.

4. Policies directed towards the manufacturing sector

Economic policies have long been expressed in five year plans, skewed in favour of central control of prices and production through public sector enterprises or agriculture cooperatives. In recent years a shift has taken place, and now the role of private sector enterprises receives more emphasis. The Government plans to expand manufacturing through selective investment, and as trading opportunities arise, promote the export of manufactured products. The government has stressed agro-based industry in particular, as well as the integration of primary and secondary sectors. Funded by Badea, OPEC and the Abu Dhabi Fund, a sugar mill covering 90 per cent of domestic needs is being built. The fourth development plan, which covered the years 1983-87, included projects to set up rice and palm oil factories. Another aspect of Government industrial policy is the import substitution of basic items. As mentioned above, advances have been made in glass, textiles, shoes, and some basic chemicals. A $12.8 million credit from IDA will help increase the use of trees for wood supply and agricultural use, and will promote basic forestry services and tree planting.

5. The scope for rehabilitation

In the context of the whole African continent, the scope for rehabilitation in Burundi does not seem significant. International support channelled to Burundi seems to be of a basic nature, such as UNIDO's large-scale industrial promotion and technology transfer project (see also Appendix).

CAPE VERDE

1. General introduction

Cape Verde's economy has grown impressively since its independence from the Portuguese in 1975, mainly due to prudent economic policies followed by the Government and large flows of emigrant remittances and foreign aid. GDP grew in real terms by an average of 7 per cent annually from 1974 to 1984. More recent developments, however, are not as favourable, with economic growth down to about 4 per cent a year.

Despite its impressive growth record, Cape Verde's GNP per capita in 1985 was only $430. Its poverty is exacerbated by the poor natural resource base, prolonged cycles of drought, and a high natural population growth rate of close to 3 per cent. The number of Cape Verdeans living abroad exceeds the population residing on the islands. However, public works programmes and growing attention to social services have moderated the most extreme aspects of poverty.

The structure of Cape Verde's economy is overwhelmingly oriented towards services, with commerce, transport and public services accounting for approximately 60 per cent of GDP in the 1984-86 period. Construction, which is highly dependent on Government investment, is the second most important sector. Agriculture's share of GDP continued its downward trend from 18 per cent in 1981 to 16 per cent in 1985, due partly to the effects of drought.

The main positive items in the balance of payments are transfers of emigrant's remittances and foreign aid. These have tended to cover the merchandise deficit in almost equal measure over recent years, permitting Cape Verde to make a small addition to reserves. However, declining remittances and a projected increase in imports will increase the need for balance of payments support in the short term.

Cape Verde's foreign debt increased rapidly in the late 1970s and early 1980s. By 1985 the total debt amounted to 68 per cent of GNP. Because most of the debt is on highly concessional terms, the DSR is still relatively low at 14.2 per cent in 1986. However, the debt service is likely to become an increasing burden toward the end of the 1980s, as the grace periods on the loans contracted at the beginning of the decade begin to expire.

2. The manufacturing sector

Cape Verde's manufacturing sector is small. Its share of GDP has hardly changed, decreasing slightly from 5.7 per cent in 1975 to 5 per cent in 1984. The growth of manufacturing value added was on real average annual terms 1.6 per cent between 1970 and 1980, and minus 0.8 per cent for the period 1981-84. The MVA per capita in 1984 was recorded at $12, unchanged since 1975 when calculated in constant 1980 US dollars. Total manufacturing employment was 1,700 people in 1985 or 6.5 per cent of total employment.

There is very little information on the sub-sector level. The major industries are food processing, especially fish conserving, textiles, shoemaking, rum-distilling and soft drinks bottling.

The food processing industry has suffered as a result of severe droughts throughout the 1970s and again in the early 1980s. For example, a pork products factory initiated in 1978 has never been fully utilized. Fish processing, including crustaceans and molluscs, has potential to grow substantially. Annual fish catch was below 10,000 tons in 1984, but is expected to reach 30,000 tons within a few years as boats and appliances are being modernized.

The clothing industry is dominated by one factory at Mindelo which was completed in 1978.

The major metal working industries are state-owned enterprises which manufacture and assemble agricultural tools and machinery. A new shipbuilding and repairing yard (Cabnave) in Mindelo was completed in 1983.

In total there are 86 small privately-owned enterprises. In a 1983 survey 30 were classified as medium-sized. Three state-owned companies are engaged in the repair and assembly of agricultural tools.

Plans for the future include a 60,000 ton cement plant on the island of Maio and a petroleum refinery on Sao Vicente.

The major trend in manufacturing is tax relief and other types of Government incentives to emigrants in order for them to invest in the creation of new manufacturing enterprises on the islands.

Fish and fish products are the major foreign exchange earners, accounting for more than three-quarters of total merchandise exports. Processed fish (tuna) accounts for some 20 per cent of exports. By contrast, the great majority of imports are manufactured goods, followed by food, livestock and fuels. Portugal, Algeria and Cote d'Ivoire are the major recipients of exports, while Portugal, Algeria and the Federal Republic of Germany are the major suppliers of imports.

3. Obstacles to production

The manufacturing sector faces perennial operating difficulties, including the scattered nature of the islands, which inhibits internal communication and reduces the possibilities of economies of scale, the small domestic market, the shortage of trained managers, and the necessarily high transportation costs. While the country's location favours international sea and air transport, it restricts the flow of trade.

4. Policies directed towards the manufacturing sector

Major policies are formulated in the context of National Development Plans. The first plan, covering the period 1982 to 1985, was very ambitious. Rural development received the largest single share of expenditure, but industry was also emphasised with 20 per cent of total investment and a forecasted real growth rate of 12 per cent during the planning period. The

outcome was a real growth rate of 3 per cent per year, falling far short of the target. The second Development Plan, covering the 1986-90 period, has objectives which are compatible with past performance. The emphasis is still on rural development and tourism. The Government also hopes to raise donor funds for the development of the mining sector.

Within manufacturing, fish processing has been given a high priority, with plans to substantially increase the yearly fish catch. The above-mentioned incentives to emigrants, including a tax system favourable to repatriated and investment funds, also concern manufacturing directly. The Government has estimated remittances to amount to some $34 million in 1986. An agreement was signed with the United States in 1985 permitting US citizens to invest in the islands. Aimed primarily at at attracting investments by emigrants living in the US, the Government wants these emigrants to take a more active role in the economy, particularly in the small industry and fishing sectors.

5. The scope for rehabilitation

The scope for rehabilitation in Cape Verde is severely limited by the small size of the economy. Within the natural boundaries, however, the scope for rehabilitation work seems to be rather favourable, as indicated by a $4,000 UNIDO project to rehabilite a shoe factory (see also Appendix).

CENTRAL AFRICAN REPUBLIC

1. General introduction

With a population of 2.6 million and a per capita income of $306 in 1986, Central African Republic (CAR) belongs to the group of least-developed countries. Agriculture, including forestry, is the mainstay of the economy and accounted for about 41 per cent of GDP in 1984; mining and manufacturing accounted for about 11 per cent, and services for 44 per cent.

Serious mismanagement of the economy in the 1970s, along with adverse external factors, resulted in a decline of output and income per capita between 1977 and 1982. Major external and internal imbalances were financed through the accumulation of internal and external arrears. This provoked substantial declines in both official aid and private investment. Serious attempts at promoting CAR's economic recovery began early in 1982. These efforts have benefitted from the support from France, other bilateral donors, and international organisations including the IMF and World Bank. CAR's economy has responded positively to the Government's recovery measures. Although agricultural production fell sharply as a result of the severe drought in 1983, real GDP grew by 8.8 per cent in 1984, 3.8 per cent in 1985, and an estimated 2.8 per cent in 1986.

The main exports are diamonds, coffee, timber and cotton, each providing more than 15 per cent of total export revenue. This diversity in export structure gives CAR a measure of security against the characteristically sharp movements in the international markets. CAR has recorded successive trade deficits since 1981. A recurring outflow of services, particularly transport and insurance, has not been fully compensated by the inflow of net transfers for many years. As a result, a trend of regular current account deficits has developed.

At the end of 1984, total disbursed external debt was $296 million, equivalent to 45 per cent of GNP. The DSR has risen from very low levels in the late 1970s to become a significant burden. The Paris Club agreed to debt rescheduling in 1983 and 1985. Continued IMF supervision of the economy and regular reschedulings are expected to reduce the debt service burden to managable proportions in the range of 10-15 per cent of exports. Debt owed to private banks has been greatly reduced in recent years.

2. The manufacturing sector

CAR's manufacturing sector is small, and its share of GDP decreased from 7.8 per cent in 1979 to 4.6 per cent in 1983. MVA per capita in 1984 was recorded at $19, down from $24 in 1980. The average annual growth of MVA was only 0.2 per cent for the period 1976-81. A total of 5,800 people were employed in manufacturing in 1985.

The manufacturing sector is concentrated almost entirely to the capital, Bangui. Activities are little developed and are dominated by the processing of primary products, car and truck assembly, and small wood and iron workshops.

Food processing in 1983 accounted for 13.1 per cent of (current price) value added, thus being the single largest sub-sector. During the 1975-85 period the average annual growth of value added in constant prices was 3.8 per cent. Food processing also is the largest employer among manufacturing sub-sectors, with some 622 people employed in 1983. Industries include oil mills processing groundnuts, cottonseed and sesame; a flour mill, and an abattoir.

The textile and clothing industry relies on domestic cotton production. It has still not returned to the levels of the 1974-75 season, when it accounted for more than half of manufacturing output and almost two thirds of manufacturing employment. In 1983 the contribution to MVA was 12.4 per cent and the share of manufacturing employment 11.3 per cent. However, reconstruction in the cotton industry has started to improve the supply of raw materials. In 1979 financial difficulties forced the closure of the Icat plant, then producing 1.4 million meters of cloth per year. After reconstruction with French and domestic capital, the firm Ucatex's capacity has been raised to 4.4 million meters per year. A new spinning plant began operation in 1984 and a new weaving plant was completed in 1985.

Beverages and tobacco are relatively important sub-sectors of manufacturing. These industries recorded a share of total manufacturing value added of 6.6 and 10.9 per cent in 1983, respectively. They employed 828 people in 1983, or 14.8 per cent of total manufacturing employment. There are two breweries (Mocaf and Castel) and a soft drinks bottling plant. The cigarette factory began production in 1977 and has a capacity of 50 million cigarettes per year.

The fabricated metal sub-sector essentially consists of vehicle assembly plants for Citroën and Peugot cars and trucks. Production has declined steeply in recent years. For example, only 30 Citroën Visas were assembled in 1985, compared with nearly 300 in 1981. It appears production in 1986 was suspended altogether.

Other sub-sectors of significance are wood products, printing, and chemicals, with a combined share of about 39 per cent of total value added in 1983. The most important of them - wood products accounted for 28.5 per cent of value added in 1983, and recorded a remarkable growth of value added per employee of 61.58 per cent between 1983 and 1985.

In terms of growth of value added per employee, the tobacco industry is the only other industry showing positive growth, with an average annual growth rate of 3.6 per cent for the period 1975-83. Food, beverages, and chemicals all showed negative growth rates. (Information was incomplete for the textile and clothing industries.)

Ownership of the larger companies is dominated by foreign, especially French, interests. The growth of private domestic business is slow.

The trend is for major international donors to call for the promotion of small- and medium-scale enterprises, but little change has been seen in these areas in the recent past.

Manufactures in the form of processed cotton and some wood products account for only a small percentage of total exports. On the other hand, manufactured goods make up over 95 per cent of imports. France is by far the most important trading partner, purchasing 35 per cent of exports and supplying over half of the imports.

3. Obstacles to production

The small size of the domestic market acts as a major constraint to the manufacturing sector. The very small financial sector is another constraint. CAR also has to cope with the recurring problems of a landlocked country with inadequate transport links for the movement of goods. There is also the common problem of an oversized bureaucracy both in central Government and in the extensive network of parastatal organizations.

4. Policies directed towards the manufacturing sector

The Government has embarked on a programme including a wide range of privatization, public sector reform, and restructuring of State enterprises. It now takes the view that industrial development should be primarily the responsibility of the private sector. The emphasis in official industrial policy has moved from import substitution to the supply of basic needs with local resources, while continuing to enhance export performance. In the provisional Economic and Social Development Plan (1986-90), the allocation to industry as a result of this approach is negligible. With a predominantly agrarian economy, the priority accorded to rural development in the Plan is the clearest way of increasing purchasing power and hence demand for manufactures.

Among projects under way are a plywood and chipboard factory, an additional textile complex, clinker-grinding and a cement factory, and a variety of food processing industries. A new plant to refine cotton seed oil, which will be able to treat 20,000 tons of seed per year, is planned at Bambari. An oil mill, with an annual capacity of 7,500 tons, is planned at the Bossongo oil palm plantation with funding from ADB, France and the African Development Fund. In 1985, work finally began on a 6,000 tons a year sugar processing complex at Ouaka funded almost entirely by French and Saudi Arabian capital. The first sugar processing plant in the country, it was expected to begin operation at the end of 1987.

5. The scope for rehabilitation

The tiny size of the manufacturing sector limits the scope for rehabilitation. There might be some scope in the cotton industry, where a restructuring programme has started to improve the cotton supply. UNIDO is assisting in the rehabilitation of a brick making plant through a $43,500 project (see also Appendix).

CHAD

1. General introduction

With a recorded GDP per capita of $134 in 1986, Chad is one of the world's poorest countries. Its economic development has been hindered by a landlocked location and harsh and variable climatic conditions, plus civil violence on a scale and intensity for which there are few parallels in Africa. Urban riots, rural insurgencies, ethnic violence, factional infighting, army coups, and armed interventions from its neighbours form the dismal background against which much of Chad's recent history has unfolded. The country's economy is overwhelmingly dependent upon agriculture and cattle raising, which together account for about 60 per cent of GDP. Cotton is the principal cash crop and contributes 90 percent of Chad's foreign exchange earnings. Above the tenth latitude stock breeding is practised extensively, but droughts have reduced the size of the herds. Although deposits of uranium, gold, oil and bauxite have been detected, none have yet been exploited commercially.

The first half of the 1970s witnessed a prolonged drought which caused average GDP growth to fall to less than 1 per cent a year. The conflict of 1979-82 further disrupted the economy severely, causing real GDP to shrink by about 30 per cent. After the establishment of the current Government in 1982, and with the progressive restoration of stability, the economy began to recover. This progress was interrupted by a drought of unprecedented severity in 1984, followed almost immediately by a sharp decline in the world cotton price. 1985, however, saw real growth of 29 per cent, resulting principally from the effect of good rains on food production. Overall, real GDP was still marginally lower in 1986 than it had been in 1977.

Except in 1983/84, Chad has constantly run large trade deficits. The deficit widened dramatically in 1985-86, due to a surge in imports and depressed export earnings reflected by the steep descent in cotton prices and the fall in cotton production. By 1986 exports were approximately one-half the value of imports. The share of cotton in total exports fell from 74 per cent in 1984 to only 44 per cent in 1986. Large inflows of official grants in recent years have exceeded the value of exports, but have still not been sufficient in preventing large current account deficits since 1985. In 1986 the estimated deficit was equivalent to 10 per cent of GDP.

According to IMF data, Chad's total external debt had risen to $171 million by the end of 1986, the equivalent of 21 percent of GDP. Actual debt service has remained fairly low, and the debt service ratio, calculated as if arrears had been payed, was 4.4 per cent in 1986.

2. The manufacturing sector

The manufacturing sector accounted for 8.4 per cent of GDP in 1984. According to UNIDO data, the average annual rate of growth during the 1970s was 0.5 per cent and -8.6 per cent between 1981 and 1984. MVA per capita was recorded at $10 in 1984, which was half the value in 1980 and only 17 per cent of the average MVA per capita for Africa.

Manufacturing activities are essentially centered in Moundou and N'djaména. A substantial portion of manufacturing involves small-scale enterprises and craft industries which operate in the informal sector, and thus are seldom recorded in the official statistics. The manufacture of agricultural tools, carts, ploughs, weeders, etc. belongs to this informal, yet significant, sector of the Chad economy.

Data on a sub-sector level is very scant and covers only a few industries until 1982. Since 1983, industrial production has generally been recovering steadily, although most industrial enterprises are still operating below capacity.

Agricultural processing is the principal source of manufacturing activities with cotton processing as the major activity. There are 26 cotton gins in the country with a capacity of 184,000 tons, although half of these have now been closed. Capacity in 1986 was estimated at 120,000 tons.

In 1982 textiles and clothing accounted for 40.7 per cent of total manufacturing value added, down only marginally from the 41.3 per cent recorded for 1977. The main company is the Société Tchadienne des Textiles (STT). In 1986, textile production was 13.9 million metres, a decline of over 10 per cent compared to 1985. This was the result of increased illegal imports from Nigeria.

In 1986 food products accounted for 30.5 per cent of total manufacturing value added. Between 1975 and 1985, growth of value added in this sub-sector was 3.32 per cent. Cottonseed is the source of the economy's self-sufficiency in edible oils and soap. Sugar refining has increased in recent years, reaching 25.9 thousand tons in 1986.

The third largest sub-sector for which any data is available is beverages, which in 1982 accounted for 11.8 per cent of manufacturing value added. In 1977 the share was 13.1 per cent and the average annual growth rate of value added in the beverages industries between 1975 and 1982 was 5.19 per cent. Production of beer in 1986 stood at 116.6 thousand hl, down from a record 151.7 thousand hl in 1985.

The metal working sub-sectors, including transport equipment and machinery, accounted for 8.7 per cent of value added in 1982, an increase from 5.3 per cent in 1977.

In 1982 the tobacco industry, unchanged since 1977, accounted for 3.1 per cent of value added. According to UNIDO data, the tobacco industry had an average annual growth rate of 1.5 per cent during the 1975-82 period.

The present industrial trend is positive due to the re-establishment of civil order and the end to hostilities. But the devastation of war has left many industries in great need of rehabilitation.

There is a mixed ownership pattern in Chad's small manufacturing sector. Some larger enterprises, e.g. STT, are state-owned, some are foreign-owned, and quite a few small- and medium-sized operations are private or joint ventures.

Chad's exports are dominated by cotton, which made up 74 per cent of total exports in 1984. Due to reduced cotton prices and production, the share in 1986 fell to 44 per cent. There are no exact data on the direction of trade, but Portugal, FRG and Cameroon are major destinations for Chad's exports. In the absence of reliable information, Chad's imports are assumed to include a wide range of consumer and capital goods, including the country's petroleum requirements. The main sources are France, Cameroon and USA.

3. Obstacles to production

At present the main problem is that the manufacturing sector has long been hampered by the civil unrest. One fourth of the existing small- and medium-sized private and mixed enterprises in the manufacturing sector were destroyed during the hostilities of 1979-82, most of them around N'djaména. Chad's industry is also hampered by the country's landlocked position, the small domestic market, lack of infrastructure and shortages of foreign exchange, manpower and raw materials. In addition, Chad's manufacturing is exposed to keen competition from Nigeria, partly due to opportunities for illegal border trade. Textile production by the STT declined by over 10 per cent in 1986 as illegal Nigerian imports increased. The performance of other manufacturing sectors, including sugar refining, brewing and cigarette production, has also been affected by smuggling, as domestic prices increased following the introduction of a new tax in October 1986.

4. Policies directed towards the manufacturing sector

To promote the recovery of the manufacturing sector, the Chad Government has offered exemptions from import duties on materials necessary for enterprises to re-establish themselves, and, in certain cases, increased access to bank credit for investment purposes. Enterprises have also benefitted from a moratorium since 1980 on bank credits. In addition, a loan was received from the European Investment Bank in 1985 to finance investments in small- and medium-sized enterprises.

5. The scope for rehabilitation

Chad's economy has, to some extent, recovered from the devastation of war. Rapid growth, from an exceedingly low base in 1982, has brought many economic indicators back to pre-war levels. Although the tiny size of the Chad manufacturing sector prevents rehabilitation on any significant scale, the severe conditions over the years have without a doubt left many industrial enterprises in need of rehabilitation. UNIDO is providing rehabilitation assistance to construction materials industries through a $1.1 million project which has been relaunched in 1987 after several years' delay. In general, rehabilitation needs are likely to be especially pronounced in the cotton processing sector. However, the risk of recurring drought or the resumption of the conflict in the north casts a shadow over prospects for economic growth and, to some extent, over the success of a rehabilitation scheme.

COMOROS

1. General introduction

The Federal Islamic Republic of the Comoros Islands is comprised of three islands strategically located across the mouth of the Mozambique Channel. A fourth island has remained under French rule and serves as a naval base. However, since 1986-87 the influence of the Republic of South Africa has increased rapidly, reflecting a growing interest in the Comoros as a tourist resort.

The Comoros is one of the poorest countries in the world, with a GDP per capita of $331 in 1986. During the 1970s growth in GDP per capita was negative, but during the period 1981-85, when Africa as a whole experienced negative growth, the average annual rate of growth in real GDP for the Comoros Islands was positive at 1 per cent.

Agriculture employs over 80 per cent of the population and contributes about half of GDP. Due to high population density, however, there is a shortage of cultivable land and a chronic food shortage.

Traditional cash and export crops are vanilla and cloves, both of which are faced with worldwide over-production and falling prices. Ylang-ylang is also an important export item, mainly to the French perfume industry. The main source of foreign exchange receipts, however, is foreign aid, although there is potential for fishing and tourism. The country receives fairly generous donations from France and the Gulf states.

Total foreign debt stood at $156 million in 1986. The DSR was below 10 per cent in 1985. For 1986 the World Bank estimated debt service would claim nearly 30 per cent of export earnings. The Comoros has avoided any long-term commitments to economic restructuring and has made no use of IMF stand-by arrangements or other funding.

2. The manufacturing sector

Manufacturing accounted for around 6 per cent of GDP in 1985. MVA per capita was $16 in 1985, down from $27 in 1975 (before the break with France).

According to a 1980 ILO survey, there were 125 firms employing some 700 people, engaged mainly in distilling essences and processing vanilla, and manufacturing food products, garments, furniture, soap, jewellery and pottery. There also are some 20 saw mills, a printing plant, a soft drinks bottling plant and a plastics plant.

Except for an ylang-ylang distilling plant, most enterprises are small- to medium-sized and fairly evenly spread across the two most populous islands.

There is some potential for the fish processing industry. The total catch is typically around 4,000 tons per year, but the potential for tuna fish alone has been estimated at 25,000-30,000 tons per year.

Investments are very limited due t e lack of resources and low levels of capital and skills.

Exports covered only 43 per cent of import costs in 1985. Before independence France was responsible for over 50 per cent of the trade; in 1984 it still accounted for 50 per cent of total exports and an even higher share of imports. The United States purchased some vanilla, and cloves were exported to a variety of European and Asian countries. Littoral states such as Kenya, Pakistan and the Republic of South Africa supply manufactured goods such as building materials and foodstuffs.

3. Obstacles to production

Among the constraints to expanded manufacturing production in this small island economy are the shortage of raw material, shortage of skilled manpower and high transportation costs. The dependency on foreign aid is an increasingly binding constraint, as aid flows from the Gulf states are decreasing and not being replaced by other donors.

4. Policies directed towards the manufacturing sector

The Government is making an effort to expand the economic base of the country and to decrease its dependence on vanilla and ylang-ylang. These policies are encouraged by the donors, and at a 1984 donor conference 36 manufacturing projects were identified, all of which would be new investments. These include a 500 ton per year cooking oil plant, a 1,400 ton per year sugar mill, a mineral water bottling plant, a 500 ton per year salt factory, and a plastic sandal factory with a capacity of 500,000 pairs per year. All these projects would conserve foreign exchange as well as increase employment, but so far none has been undertaken and it seems unlikely any will be undertaken in the near future.

Both the World Bank and UNIDO have recommended that priority be given to the financing of small manufacturing projects, calling for projects costing no more than $150,000 (Cfr50 million). However, the Comorian investment code ratified in 1980 provides guarantees only for investments of Cfr150 million and above.

5. The scope for rehabilitation

The Comoros would possibly benefit from outside assistance in maintaining their plants for ylang-ylang production, which have been in operation for some years.

At present, UNIDO does not have any ongoing projects in the Comoros.

CONGO

1. General introduction

Congo's population was 1.9 million in early 1986. With an estimated GNP per capita income of $1140 in 1984, the country enjoys one of the highest per capita incomes in Africa. Oil exploitation started in the 1970s. In 1984, oil accounted for 43 per cent of GDP, 90 per cent of exports and nearly 70 per cent of budgetary receipts. Apart from oil, the main resource exploited is timber from the huge forest that covers about 55 per cent of the country's land area. Agriculture is still the most important sector in terms of employment, involving about 35-40 per cent of the economically active population. However, its share of GDP has always been small and has declined in recent years.

Since the 1970s, the pace of economic activity in the Congo has been determined by international oil prices. Rapidly rising oil earnings enabled the Government to finance large scale investments in the early 1980s. Growth in GDP per capita reached 5.4 per cent during the 1981-84 period, which was one of the highest real growth rates in Africa. By 1985 Congo's oil earnings were beginning to decline and in 1986 the oil share of GDP fell dramatically to only 15 per cent, while total exports fell by 49 per cent. As a result, real GDP growth stagnated totally.

Despite the oil export revenues, Congo's current account has regularly been in deficit except in 1984. The current account deficit was around $170 million in 1985 and $260 million in 1986. The pressure on the balance of payments has been such that the country's international reserves have fallen sharply. By the end of April 1987 they were still only $5.7 million, theoretically enough to cover less then six days of imports. However, Congo is a member of the franc zone and thereby can draw on the common pool of foreign exchange held by France and other members of the zone.

The collapse in oil prices, set against an already burdensome foreign debt profile, was the key factor in the sharp deterioration of Congo's economic position, which forced the Government to make major public spending cuts and reach an agreement with the IMF. This accommodation led to a Paris Club rescheduling in July 1986, and debt relief from the commercial banks. In July 1987, the World Bank approved a $70 million structural adjustment loan.

The high borrowing had left Congo with a heavy debt burden by the middle of the decade, even before the crash in oil revenues in 1986. By the end of 1985, according to World Bank figures, Congo's total external debt stood at $2.24 billion, equivalent to 144 per cent of the country's GNP.

2. The manufacturing sector

The manufacturing sector is small, accounting for 5 per cent of GDP in 1985 (before the large fall in the oil sector's share) and 9.5 per cent in 1986. However, it employed 9,400 persons, equivalent to 13 per cent of the labour force. The average annual growth of the manufacturing sector was 4.1 per cent between 1970 and 1984.

The manufacturing sector is largely based on the processing of agricultural and forest products. The most important branches are oil refining, cement, agro-food processing, textiles and the production of sawn timber, veneer and plywood. Until 1983, agro-food industries were the most important branch of the industrial sector. Following the commissioning of an oil refinery, the chemical and petroleum-based industries became predominant. Most of the industry is located in Brazzaville, Pointe-Noire and N'Kayi.

The first petroleum refinery at Pointe-Noire began operations in 1976 but technical problems caused a six-year closure. With the help of French finance, the refinery was rebuilt under the name Coraf and began production in 1982. However, production has been well below the 1 million ton per year capacity. The Government hopes a liquefied natural gas plant will be set up following new gas discoveries in 1981 by the French companies Agip and Elf.

The food processing industry was the leading manufacturing activity during the 1970s, accounting for over 30 per cent of MVA in 1977. By 1984 its share of MVA had fallen to less than 20 per cent, while its share of employment remained very high at 36.7 per cent (these figures exclude the food oil refining industry). The main products are palm and groundnut oils, animal feed, wheat flour and sugar.

In 1984 food processing was overtaken by the beverage sub-sector which then accounted for 30.7 per cent of gross output and 21.4 per cent of MVA. However, its share of manufacturing employment was only 13.4 per cent.

The same year 2,140 persons, or 23 per cent of the manufacturing labour force, were engaged in producing wood products and furniture. Government policy requires that timber companies process at least 60 per cent of their production; these activities accounted for 17.1 per cent of MVA in 1984. The major products are sawn timber, veneer, and plywood.

Labour productivity in the industrial sector has grown significantly since the beginning of the 1980s (of the order of 25 per cent per year). However, it is still approximately nine times lower than that in the primary sectors. Levels of labour productivity in the manufacturing sector differ between sub-sectors. Improvements in efficiency, measured in terms of the ratio of value added to actual production, were most apparent in the agro-food, metalworking and chemical industries. Low levels of efficiency occurred mainly in the paper and paperboards, textiles, and building materials industries. A rising share of wages in total MVA from 53.2 per cent in 1975 to 61.4 per cent in 1985 appears to be an indicator of overmanning, which seems to be one of the principal causes of low labour productivity.

The ownership pattern is mixed. Some of the larger manufacturing companies are state-owned, under the control of three State corporations. Larger enterprises include breweries, soft drink plants, oil and flour mills, sugar factories, fish-curing plants and a cigarette factory. In the wood processing industry, on the other hand, the State sector accounts for only a small proportion of the production. Foreign private companies are dominant, and there are also some private Congolese companies. The petrochemical industry is based on joint ventures between the State and foreign companies in a 60-40 proportion.

The state-owned manufacturing companies originally were created with the intention of making Congo self-sufficient in a range of basic products, but many have been operating at a loss in recent years. Labour productivity was 7.5 times lower in the public sector than in the private sector. Most of the smaller companies are private or mixed. Overall, the private sector accounted for 72.2 per cent of the turnover of the industrial sector in 1983, and this is expected to grow as the Government's reform measures come into effect.

The trend has been rather negative in recent years. A number of projects have floundered or been cancelled. For example, a long-standing project for the construction of 290,000 tons of paper pulp has been abandoned because of lack of foreign finance. A textile company set up in 1968 closed in 1977 due to financial difficulties. These were closely linked to faltering supplies of cotton from domestic and neighbouring markets. A cement plant established in 1968 has never operated at capacity but several efforts have been made to upgrade its performance. As the result of an expansion project begun in 1982, capacity is now 100,000 tons a year, and 1985 production reached 62,000 tons.

Almost all Congolese manufacturing production is destined for the domestic market. The share of manufactured exports in total exports has continued to decline since the beginning of the 1960s, falling from 50.9 per cent in 1965 to around 7.9 per cent in 1984. The operation of the petroleum refinery has permitted an increase in the export of chemicals and miscellaneous petroleum products. Congo's main trading partners are industrialized countries. In 1985 the United States purchased 55 per cent of total exports together the US, accounted for over 90 per cent of exports France, and other major Western European countries. The share of manufactured imports in total imports has increased. In 1984, more than 60 per cent of manufactured imports consisted of machinery and equipment, with France supplying more than half of the imported goods.

3. Obstacles to production

A major obstacle to expansion of the manufacturing sector is the small size of the domestic market. Another is competition from neighbouring countries, particularly Cameroon. This is enhanced by the progress in the region's inland transportation. Congo has developed the same industries, e.g. textiles, paper-pulp, petroleum refining etc., as its neighbours. Moreover, Congo is faced with the same problems as many other developing countries: foreign exchange shortage, lack of skilled manpower, and an oversized bureaucracy.

4. Policies directed towards the manufacturing sector

Most industrial plants are in Brazzaville, Pointe-Noire and Nkayi. The Five-Year Development Plan for 1982-86 spells out the need to balance regional development. However, the reversal in the oil market starting in 1983 and the operating difficulties of the State enterprises placed a heavy burden on the implementation of the Plan. In 1985, the implementation of the Plan in the industrial sector could be assessed at less than 35 per cent; the rehabilitation of State enterprises, the prime object of the Plan, had still not been achieved. In the Second Five-Year Plan (1987-91), priority will be given to the rehabilitation of State enterprises, maintenance and rehabilitation of production plants, and development of new projects.

5. The scope for rehabilitation

The tiny size of the manufacturing sector prevents rehabilitation on any significant scale, but there is scope for rehabilitation within the overall framework of Congo's economy. The decline in investments, and low productivity mainly in public enterprises, imply there is need for rehabilitation across a great variety of branches, including food processing. Together with the high priority given to rehabilitation of State enterprises in the Five-Year-Development Plan, there seems also to be scope for rehabilitation. Financial constraints have inhibited the Government from fulfilling its intentions, however.

UNIDO currently operates two small projects in Congo, but neither of them deals directly with rehabilitation.

CÔTE D'IVOIRE

1. General introduction

With a GNP per capita of $720 million in 1986, Côte d'Ivoire ranks well ahead of its neighbors within the West African community. Its population of 10.3 million is growing at a rate of 4.5 per cent per year, of which 3.5 per cent is natural and 1 per cent is net immigration. Côte d'Ivoire is essentially an agricultural country. Although agriculture is the primary occupation of some 79 per cent of the work force and accounts for almost 30 per cent of GDP, the country is not self-sufficient in food production. There are oil reserves but Côte d'Ivoire's oil fields are relatively small, geographically complex, and located in deep waters. As a result, exploration has proved more difficult than anticipated at the time of discoveries in the 1970s. Production has fluctuated and in 1985 reached 22,500 barrels a day from three of the five existing wells.

During the first years of independence, Côte d'Ivoire's economy had one of the highest real growth rates in Africa. However, a deep recession began in 1981 and lasted until 1984. With the support of the IMF and the World Bank, the Government imposed tough austerity measures from 1981. Excellent harvest and improved agricultural export prices broke the recession in 1985-86. The subsequent slump in commodity prices sharply reduced revenues, while the depreciation of the dollar against the CFA franc increased the debt burden. There was a substantial decline in the trade surplus during 1986, and this trend was even more marked in 1987. Data on the capital account reflect the drying up of investment and credit flows in the 1980s. A decline of more than 5 per cent in real GDP per capita was forecasted in 1987, while the public finance deficits were expected to represent 7.3 per cent of GDP.

Agricultural products account for almost three quarters of export earnings. Côte d'Ivoire is the world's largest producer of cocoa and the third largest of coffee. These two commodities accounted for 60 per cent of Côte d'Ivoire's export earnings in 1985, so the country is particularly vulnerable to adverse shifts in their prices. Another traditional export is timber, which accounted for 7 per cent of export earnings in 1985. However, forestry resources have been greatly depleted and since 1984 petroleum products have exceeded timber in export value.

Côte d'Ivoire's external debt totalled $8.4 billion (142 per cent of GNP) at the end of 1985, according to the World Bank. The Government was obliged to reschedule its foreign debt with both the Paris and London Clubs for 1984 and 1985, and in mid-1986 secured a multi-year rescheduling agreement. In May 1987, Côte d'Ivoire again suspended payments on its foreign debt and in December the Paris Club declared a rescheduling on more favorable conditions than Côte d'Ivoire's status as a middle income country normally would permit. The London Club of private sector lenders has proved less generous, though.

2. The manufacturing sector

Until the recession of 1981-84, the manufacturing sector was one of the most dynamic in Côte d'Ivoire's fast growing economy. Manufacturing output increased by 8.9 per cent a year in real terms between 1965 and 1974 and by

5 per cent a year between 1973 and 1984. Manufacturing's contribution to GDP was 13.7 per cent in 1970 but by 1983 it had fallen to around 11 per cent, when MVA totalled $638 million. Employment in manufacturing in 1985 was estimated at 81,600.

The manufacturing sector is based mainly on the processing of cocoa, coffee, timber and other agricultural commodities. Agro-related industry accounts for around 60 per cent of industrial output.

The food products sub-sector, according to UNIDO's data base, accounted for 25.5 per cent of gross output and employed 17,832 persons, 32.9 per cent of total manufacturing employment in 1983. According to other sources (published in the UNIDO country profile) the 14 largest enterprises in the food sub-sector in 1983/84 employed 24,534 persons, indicating a fairly large discrepency (and also the need for caution when interpreting the data given). According to the UNIDO data base, the output share in 1975 was 23 per cent and the employment share 22.4 per cent. The food industry's share of manufacturing value added also increased from 21 per cent in 1977 to 34.5 per cent 1985. There are 16 units for coffee hulling with a combined capacity of 325,000 tons a year, 4 cocoa processing factories with a capacity of 110,000 tons a year, 6 sugar complexes with a capacity of 2 million tons a year, and numerous palm oil mills with a capacity of 1.2 million palm clusters a year. There are industries producing canned pineapple, tomato, mango, tuna fish and animal feed.

The sugar industry has had difficulties in recent years. Domestic demand of some 80,000 tons of raw sugar a year could be satisfied by two of the six existing complexes. It was hoped the excess capacity would be exported. However, world market prices proved to be only half the production costs, which were exacerbated by increasing interest payments on the credits taken for the investments. In 1983/84 two sugar complexes were closed, plans for six more complexes scrapped, and the area under sugar cultivation reduced. By 1985/86 output had increased to 138,000 tons from earlier low levels of 55,000 tons in 1983/84. Under a rehabilitation programme supported by French credits, production is to be restored to 186,000 tons a year in order to cover domestic demand.

Textiles and clothing is the second largest sub-sector, both in terms of employment and value added. In 1983/84 the ten largest enterprises of the textile and clothing industry had close to 12,000 employees, which would correspond to some 18 per cent of total manufacturing employment. The share of manufacturing value added in 1985 was 22.5 per cent, slightly higher than the 19.9 per cent share in 1977. The textile industry belongs to those industries that earlier were protected by import quotas and import surcharges. As a result of policy changes in recent years aimed at eliminating such trade barriers, the textile industry is likely to be adversely affected.

Wood products is the third largest sub-sector in terms of employment. According to UNIDO data 7,580 people were employed in 1983. Until overtaken by petroleum in 1984, forestry - including both logs and sawn timber products - was also the third largest source of foreign exchange earnings. Only a portion of the products are manufactured, however. This is reflected clearly

in 1985 figures for the MVA share: the wood industry had only 2.7 per cent, putting it behind several other industries, a.o. chemicals (8 per cent), transport equipment (5.7 per cent), fabricated metals (5.3 per cent), beverages (5 per cent) and tobacco (3.7 per cent). In 1977 the wood industry's share of MVA was 8 per cent. The decline reflects the serious depletion of forests; the area of exploitable timber has fallen to one-sixth of its level at the time of independence. There are some 700 forestry enterprises, of which two-thirds are owned by Ivorians, but most of the production is carried out by large integrated firms, many foreign-owned. A programme to conserve the resources has been initiated, which will reduce further the volumes available for export. There is also a reafforestation programme in place, supported by the World Bank and other external agencies.

Petroleum refining industry employed 876 people in 1983, a meager 1.6 per cent of total manufacturing employment. The share of MVA in constant prices stood at 1.9 per cent in 1983, down from 2.4 per cent in 1976. In the 1970s Côte d'Ivoire nurtured hopes of emerging as West Africa's main refining centre by processing oil imported from Nigeria, Angola and Zaire. For various reasons, including increased refining capacity in other countries, problems with domestic oil production, and the glut on oil markets in general, expectations have not been fulfilled.

The growth of real value added per employee of all manufacturing industries in Côte d'Ivoire has been highest for the textiles sub-sector. For the period 1975-83 the growth rate on the average was 6.73 per cent for textiles, while food products grew by 2.51 per cent during this period. Wood products and wood furniture recorded the most rapid declines: 6.8 per cent and 9.04 per cent in negative average annual growth rates, respectively.

Côte d'Ivoire's manufacturing industry is dominated by publicly-owned enterprises and by the high proportion of foreign ownership. The Government holds over 50 per cent of all registered capital of enterprises. There are only 17 wholly state-owned companies, however. Most are semi-public companies and many enterprises are joint ventures between the Government and foreign partners. The bulk of technology, finance and management originates in the industrialized market economies. There is also a predominance of large-scale enterprises and a concentration of industries to the Abidjan area.

The trend seems to be that the structural adjustment programme is beginning to yield positive results. Helped by higher prices of important export commodities, industries producing goods for export, such as food, rubber and textiles, have developed more rapidly than industries producing for the domestic market. A comparison of growth of imports versus domestic production for the local market from 1974 to 1980 shows that domestic production grew faster than imports, except in the case of products such as chemicals and metals, for which the country has few resources.

Manufactured exports accounted for 1 per cent of total exports and for 20 per cent of industrial production in 1960; for 44 per cent of industrial production in 1980; and for 10.7 per cent of total exports in 1983. Major products are petroleum products, cocoa butter and cocoa paste, wood products, chemicals and textiles. The developed countries purchase three quarters of

Cote d'Ivoire's exports; in 1983 the EEC accounted for 30.1 per cent. Manufactured imports mainly consist of machinery, transport equipment and chemicals. The EEC countries provide over 60 per cent of imported manufactures.

3. Obstacles to production

The major problem hampering the development of the manufacturing sector is the foreign exchange shortage. Mounting arrears from time to time in recent years have prevented new investments and importation of raw materials and spare parts. Adverse developments also seem to have curtailed the ability of the banking system to finance industrial development. For the important agro-industries there is also the vulnerability of crop fluctuations caused by natural hazards and the highly volatile world markets for commodity exports. Inter-industry linkages are weak. Apart from the agro-, textiles and wood industries, the industrial sector is relatively little integrated, with industries supplying local intermediate goods. Industrial expansion in Côte d'Ivoire is further constrained by the small domestic market and the heavy dependence on foreign capital and technology.

4. Policies directed towards the manufacturing sector

Since 1981 the Government has been trying to promote industrial development through a series of industrial reforms aimed at making industry more diversified and competitive. The 1981-85 Five Year Plan's objectives included:

- increasing the processing of local resources;
- promoting inter-industry integration;
- improving industrial regional balance;
- increased use of national human resources.

The World Bank has provided a total of $500 million in structural adjustment loans to help industrial enterprises adjust to the more liberal commercial policy.

Tariffs and import surcharges have been revised and reduced, and export premiums introduced for agro-industry products, fertilizers, textiles and timber products. Various measures have been taken in order to encourage private capital to venture into industry. Apart from tax incentives, the investment code has been changed to encourage more SMIs and to decentralise industry away from the Abidjan area.

Among planned new investments are one textile factory, one dairy, one more refinery for processing imported crude oil for the regional market, one sugar packing industry, three plants for industrial alcohol, and a complex producing ammonia from off-shore gas reserves. There are also plans to rehabilitate one of the palm oil processing plants.

5. The scope for rehabilitation

Declining levels of investment in many industrial branches in recent years implies vast opportunities for rehabilitation of manufacturing industries in Cote d'Ivoire. However, it is difficult to assess which particular branches would demonstrate the best scope, since no specific mentioning of this is made in the material covered for this report. The food processing and textiles industries seem to be the major candidates. They are the most important industries by almost any criteria, and they are capable of generating much needed foreign exchange.

UNIDO is operating one $177,200 project with the purpose of strengthening the Government's capacity to restructure and rehabilitate industries which are financed by CCI.

DJIBOUTI

1. General introduction

Djibouti is a small country (23,00 square km) and effectively a city state. The population is estimated by the World Bank to be 350,000 (1984), a quarter of which leads a nomadic life in the semi-desert hinterland.

United Nations statistics show a GDP per capita of $575 for 1986. This figure gives the false impression Djiboutians have a higher standard of living than people across the borders in Somalia and Ethiopia. In practice, most Djiboutians live at subsistence level or below. The economy itself is based largely on services - centered on the port, railway and French military garrison - which accounted for over 50 per cent of GDP in 1984. There are no minerals of any significance, agriculture is severely constrained by shortages of both land and water, and manufacturing is embryonic.

GDP growth was fairly favourable during the first years of independence; between 1978 and 1982 average real annual GDP growth was 3.5 per cent. (A major contribution came from France but since 1982 French assistance has declined.) From 1982 to 1985 GDP has been nearly static in current price terms. Growth in real terms declined to an annual average rate of only 0.6 per cent between 1983 and 1985. Future prospects for economic growth depend largely on Djibouti's ability to successfully implement the current development programme. The goal is to become a regional service centre, which in turn requires upgrading of facilities as well as expertise.

Djibouti has little to export but must import significant amounts. Hence, the trade balance always has shown a substantial deficit with exports covering only a fraction of imports. But Djibouti is an important transit port. A quarter of imports and nearly 40 per cent of exports by volume were destined for, or sourced in, Ethiopia or Somalia. Only food and live animals appear as separate items in the export data, together comprising a quarter of total exports. Imports cover a wide range of goods, from machinery and capital equipment to food. In 1983 and 1984 total imports to GDP were over 55 per cent (including transit trade).

The services account shows a positive net due largely to fairly generous official transfers. However, the deficit on the current account is still well above 10 per cent of GDP.

Since 1973 the Djibouti franc has been pegged to the US$ at Dfr 177 per 1 US$. This has meant substantial swings against the French franc, the major currency in the country's trade. The dollar appreciation caused the Government to introduce severe austerity measures and increase its efforts to raise the level of foreign assistance and investment. One result was that the external indebtedness of Djibouti increased sharply after 1983. In 1982 disbursed debt to GNP stood at only 7.5 per cent. Since then disbursed debt has increased from US$ 24.4 million in 1982 to US$ 119 million in 1986, implying a share of GDP of about 34 per cent. Nearly 90 per cent of the debt, however, consists of concessional loans, and the DSR is well below 10 per cent. Barring recent changes in the foreign exchange regime, the terms of trade will have improved since the US dollar started its slide in 1986.

2. The manufacturing sector

The manufacturing sector is small, employing less than 19,000 people. As a share of GDP, manufacturing has changed very little over the years. In 1975 it stood at 7 per cent, rose to 8.6 per cent in 1978-79 and declined to 7.3 per cent by 1984. Despite the negative impact of events following independence - the Ogaden war not least - overall performance was slightly better during the 1970s than during the first years of the 1980s. The figures for real growth demonstrate this - for the 70s the annual average was 0.3 per cent, while it was a negative 0.3 per cent for the period 1981-1984. However, the easing of general economic conditions in the past few years is expected to have had a positive impact on these growth figures.

Activity in the manufacturing sector is concentrated to building, agro-industry, mechanical and small artisanal industries. The major industrial concern is the 25,000 bottles per day mineral water factory at Tadjoura, which began operation in 1981 at a cost of $25 million, and which exports to Saudi Arabia and North Yemen apart from supplying the local market. One dairy was constructed in 1982 and a second, the state dairy, in 1985. A Government printing press was opened in 1984-85, there are ice and carbon dioxide plants, and plans for a new abattoir and tannery. The 1984-88 Development Plan also envisages tile, paint and cement production to be started. Additionally, there is scope for the processing of raw materials for domestic use, such as milk, flour, pasta and soap.

3. Obstacles to production

The small size of the local market, competition from stronger economies nearby, and difficulties in supplying the region are all major obstacles to development. Regional political uncertainties and relatively high labour costs have discouraged the creation of new industries despite the existence of a free zone.

4. Policies directed towards the manufacturing sector

The Government's policies for the manufacturing sector have been ambitious - in fact, over-ambitious in the eyes of the World Bank and other major donors. The $500 million investment programme for 1984-1988, which the Government proposed to donors in 1983, included a number of agro-industrial and import-substitution medium- and small-scale manufacturing projects. However, the plans had to be scaled down due to the foreign exchange shortage. A World Bank mission identified a group of projects that could be deferred or cut back, and questioned the usefulness of some projects, including a cement industry project on the grounds that it would far exceed the capacity of local industry. There is no indication that the Government has lowered its level of ambition. Given more favourable economic conditions, there should be some scope for further realization of investment plans.

5. The scope for rehabilitation

The tiny size of the manufacturing sector implies there is relatively little scope for rehabilitation. Among donors as well as in the Government the emphasis is clearly to expand the manufacturing sector and develop new industries rather than to rehabilitate existing ones. There might be some possibilities within the manufacturing sector that supply and service the port and the transportation system used for the transit trade. Given that these plans are being actively promoted by the Government and supported by donors, one would expect to find suitable objects for rehabilitation in that area. It would be on a small scale, however, since there is no particular mention of rehabilitation needs, plans or programmes in the available data.

EGYPT

1. General introduction

With a GDP per capita of $627 in 1985 Egypt is classified as a "middle-income" economy. Due to the emergence of petroleum and gas as dominant resources, the average annual real growth rate in GDP reached 9.1 per cent for the period 1974-81. Reflecting the effect of declining oil prices in the early 1980s on the Egyptian economy, real average annual growth fell to 5.5 per cent for the period 1981-85. The sudden collapse of oil prices in the winter of 1985/86 caused it to drop to a meager 1.6 per cent for 1986. In terms of growth of GDP per capita, the average annual rate fell from 5.3 per cent during the 1970s to some 3 per cent for the period 1981-84.

The share of petroleum and gas in GDP expanded from 6.3 per cent in 1977 to 18.5 per cent in 1980/81. The shares of both agriculture and industry declined markedly. With the reversed trend for the petroleum sector, industry has recaptured some of the relative loss it made during the period 1977-81. However, Egypt's agricultural sector has continued to shrink in terms of GDP share. In 1977 agriculture accounted for 27.5 per cent of GDP; by 1980/81 the share had declined to 20.6 per cent, and by 1984/85 to 15.8 per cent.

Egypt's principal sources of foreign exchange revenues are petroleum, expatriate worker remittances, Suez canal dues, tourism and foreign aid, with worker remittances overtaking petroleum in 1986 as the single largest source of revenue. Of merchandise exports, however, petroleum and related products account for some 70 per cent of the total.

Huge and growing deficits in the balance of payments has been the result of falling oil prices and the related losses of revenues from Suez canal dues, Arab tourism, and remittances from Egyptian workers in other Arab and oil producing economies. The terms of trade have moved against Egypt, which is reflected by the fact that, with 1982 as base year, the index stood at 92.3 in 1985 and at 74.9 in 1986. The current account deficit has risen steadily every year, from 10.1 per cent of GDP in 1981 to $5,381 million in 1986, or 14.1 per cent of GDP.

The IMF reported Egypt's total debt at approximately $38 billion in 1987, or practically equivalent to GDP. The World Bank has reported a DSR for the total debt of 47.2 per cent in 1986. The increasing debt burden coupled with decreasing foreign exchange earnings led to an untenable foreign debt situation, growing arrears, and eventually to a major debt rescheduling in May 1987. Preceding the debt rescheduling a reform programme was instituted with support from the IMF. However, Egypt's external position for the foreseeable future will remain less favorable compared to the 1970s.

2. The manufacturing sector

Manufacturing constituted 13.4 per cent of Egypt's GDP in 1986, virtually the same as in 1975. Manufacturing activities, including oil refining, received fresh impetus and grew at an annual average growth rate of 8.2 per cent in the second half of the 1970s. Annual average rate of growth for the decade 1970-80 was 6.1 per cent, and 7.8 per cent for the period 1981-85.

MVA per capita stood at $101 in 1985, up from $61 in 1975. In 1986 manufacturing employed some 1 million people, illustrating Egypt's leading role in African manufacturing.

The structure of manufacturing has changed since the early 1970s. Consumer goods accounted for 55.7 per cent of MVA in 1973, but for 45.2 per cent in 1982. Capital goods, on the other hand, increased their share of MVA from 23 per cent in 1973 to 25.3 per cent in 1982. The envisaged growth rate for the industrial sector during the Five-Year Plan covering the period 1982/83-1986/87 was 10 per cent, a rate not likely to have been achieved given the sluggish overall economic environment. Soaring imports may be viewed as an indication that the industrial sector is failing to keep pace with domestic demand.

Egypt's largest and oldest industry is the textile industry, processing long-staple and extra-long staple cotton. In 1986 the textile industry accounted for more than 25 per cent of MVA and employed over 355,000 people, close to 35 per cent of total manufacturing employment. In 1975 textiles accounted for 31 per cent of MVA and 39 per cent of manufacturing employment. During the 1970s the foreign exchange shortage resulted in low new investments and insufficient maintenance. According to studies made in 1984 $1.8 billion would be required to upgrade the aging textile industry. The Government has taken a number of steps, including rehabilitation of the cotton-ginning industry, which is assisted by loans from IDA and the Arab Fund for Economic and Social Development.

Other studies have found that Egypt enjoys a comparative advantage in food processing, such as the production of food flavours, vegetable oils, jams and marmelades, biscuits, confectionery and starch. Food processing as a whole in 1986 accounted for 19.6 per cent of gross output and 16 per cent of MVA and manufacturing employment. Food imports are of major concern to the Government. For example, sugar imports cost an estimated $60 million in 1986. Steps to increase domestic production include setting up eight new sugar refineries across the country, doubling the output from about 800,000 tons.

The iron and steel industry employed some 48,000 people in 1986 and accounted for approximately 5 per cent of output and value added. Projects begun earlier continue to be developed - for example, the Helwan complex, finished in 1973, is planned to have its capacity raised to 2.6 million tons. The new joint-venture company operating the Ed-Dikheila steelworks, built by the Japanese outside Alexandria, is also planning to raise capacity. Egypt will then be able to produce 5 million tons of raw steel per year. USAID is financing the construction of a steel pipe plant for the En-Nasr Company, and a great part of Japan's lending to Egypt is to be used for a steel reinforcing bar plant.

The petroleum refining industry is the largest in Africa, with six refineries in operation and a designated trough-put capacity of 370,000 barrels per day. The share in manufacturing output in 1986 was 1.1 per cent, in MVA 2.1 per cent, and employment was close to 13,000 people, or 1.3 per cent of total manufacturing employment. There are large expansion plans, aiming at raising capacity to 775,000 b/d by the end of the decade.

Chemicals, industrial and others, are important sub-sectors in Egypt. In 1986 they together accounted for 10.6 per cent of gross output and 9.8 per cent of MVA. Employment reached close to 87,000 people in 1986, equivalent to 8.5 per cent of total manufacturing employment. The most important industry is the petrochemical industry. Fertilizers are produced at four plants using Egyptian gas as feedstock. There are plans to enlarge the Ameriya plant near Alexandria and to begin production of ethylene, polyehtylene, polypropylene, paraxylene and purified terephtelic acid.

Cement production reached 7.6 million tons in 1985 and imports were 9.1 million tons. The sub-sector as a whole in 1986 accounted for 3.4 per cent of gross output and 5 per cent of MVA. The conversion of a Soviet-built cement works at Asyut has created the largest production line in Africa, with a nominal output capacity of 5,000 tons per day. By 1987 total annual capacity was expected to reach 7.7 million tons and more new plants are being planned, although priority may have to be given to improving output at existing plants which would require a smaller investment.

Metal working industries are all relatively large sub-sectors in Egypt. Transport equipment in 1986 employed nearly 40,000 people and accounted for 5 per cent of MVA. The main activity is car assembly. Fabricated metal products as a sub-sector accounted for 2.9 per cent of MVA, employing 35,000 people; machinery (except electrical) accounted for 3.4 per cent of MVA, employing 25,000 people; and electric machinery accounted for 4.5 per cent of MVA, employing 23,600 people (1986).

Some 75 per cent of the manufacturing sector is Government-owned as a consequence of nationalization in the early 1960s. Now some two hundred large public sector firms dominate the sector. Private industry has grown by an average annual rate of 12 per cent since 1974, compared to 7 per cent achieved by the public sector during 1974-80. The public sector includes Egypt's basic industries - iron and steel, aluminium, fertilizer, heavy engineering, cement, and cotton yarn - while the private sector concentrates on activities that can be carried out by small scale firms, such as garments, food products, leather products, cosmetics, wooden furniture and fabricated metal products.

The trend since 1979 has been an increasing interest of Western investors in Egypt. However, some planned schemes have been postponed lately. The most notable among those is General Motor's much publicized $300 million investment in a passenger car assembly plant in joint venture with an Egyptian partner (Nasco). A key element in that project was the establishment of feeder industries that would produce items for export to GM's plants in Europe to help finance the import of car kits. In another development, the armaments industry has become a more important part of manufacturing, and is viewed as a possible future source of revenue to offset the decline in the traditional revenue earners. Sales of armaments earned Egypt a reported $1 billion in 1982.

The share of manufactures in Egypt's exports is very modest. In 1982 it was estimated (civilian) manufactures were exported for an amount of $253 million, and the same year total merchandise exports were reported at $5,779 million, giving manufactures a share of 4.4 per cent. Yarn and fabric are the

major items, accounting for 51 per cent of total manufactured exports. Basic metals accounted for 33.1 per cent. Other significant export items are cotton, textiles and aluminium. Developed countries are the main recipients of Egypt's exports, with Italy receiving some 18 per cent of the total. 1985 imports were estimated at $1.2 billion, with raw materials and inputs accounting for one third, and capital goods, spare parts and consumer goods the remainder. Transport equipment (kits), machines, livestock, food products, chemicals, rubber, leather, wood, paper and basic metals are the principal imports. The main suppliers of imports are the developed market economies, with the United States and Federal Republic of Germany providing more than 25 per cent.

3. Obstacles to production

Egypt has relatively few natural resources, a large and growing population, and an old and inadequate infrastructure. A World Bank report published in 1987 concluded that considerable inefficiencies are found in the manufacturing sector. The report pointed out that returns on investments were low and that the manufacturing sector was insufficiently diversified and efficient to be able to compete in the international market. Among the problems identified by the report were overstaffing and excessive Government protection. The Government itself has pointed at the shortage of foreign exchange, due to international recession, and to problems of poor incentives and low salary levels among the work-force. In addition, private sector investment has been attracted to service industries rather than to manufacturing.

4. Policies directed towards the manufacturing sector

Economic trends are not encouraging, but the Egyptian Government has made efforts to overcome administrative obstacles. A cornerstone in this strategy is the IMF-approved reform package, whereby Egypt has committed itself to unifying exchange rates, limiting credit expansion, and reducing subsidies, especially on energy. To generate high industrial growth, policy is being directed towards broadening the country's industrial base by promoting investment from Egyptian and foreign sources. One example of these policies is found in the refining industry where, contrary to the trends in other oil producing countries, Egypt plans to invest $1 billion to expand refining capacity. A new refinery is completed - the seventh in Egypt - and a $70 million contract has been awarded to Italian companies for the construction of a Linear Alcohol Benzol plant.

5. The scope for rehabilitation

In terms of industrial needs there is obviously a scope for rehabilitation among many branches of Egypt's struggling manufacturing sector. Primarily there seems to be a need for physical rehabilitation of obsolete plants and equipment. This seems especially relevant for large portions of the aging textile industry as well as parts of the food products and other agro-based industries. Development of these industries is crucial in order for Egypt to overcome its present economic difficulties.

UNIDO is currently operating some 30 projects in Egypt (see Appendix). Of these, only three come under the heading of rehabilitation: (1) a $150,000 project to improve laboratories for semi-industrial services, (2) a $53,500 project for maintenance training relating to fertilizer plants in co-operation with the Austrian Government, and (3) a survey of shoe factories aimed at choosing one for rehabilitation. The survey has been concluded and ABUDA has been selected for rehabilitation.

EQUATORIAL GUINEA

1. General introduction

In 1985 Equatorial Guinea's GDP per capita was $125, compared to $669 for Africa as a whole. In 1969 the income level ranked as Africa's third highest, but by 1979 it had declined to fourth lowest. GDP per capita declined at an average annual rate of 14.6 per cent during the 1970s. Since the ruinous decade of the Macias-regime, Equatorial Guinea has started a long and hard climb towards economic recovery. Milestones along the way have been a return to annual budgets in 1980, a 1982 donors conference which considered $140 million worth of development projects with priority given to agriculture, the January 1985 adoption of a convertibel currency (CFAfr), and the June 1985 first IMF standby credit worth SDR 9.2 million. However, for the 1981-85 period real growth in per capita GDP continued to be negative at 0.3 per cent per year.

The mainstay of the economy is agriculture, both for subsistence and in the production of cash crops for export. The country has the potential of being self-sufficent in food, but food imports accounted for 25 per cent of all imports in 1983. Cocoa, which is grown on the island of Bioko, is the main export commodity. Coffee and timber have traditionally been other principal export commodities.

Since recovery started, the trade deficit has been reduced, but Equatorial Guinea is still heavily dependent on foreign assistance. In 1985 the Paris Club rescheduled $28 million in overdue debt repayments, with Spain being the major creditor. According to the World Bank, total debt was $133.2 million in 1985, which, according to the IMF, corresponded to 175 per cent of GDP in 1986.

The Government actively tries to promote new cash crops such as sugar cane, cotton and sisal. It also tries to develop livestock production. Both this and the large forestry resources in the continental part of the country, Rio Muni, have good potential and are attracting considerable investment by foreign companies. The fishing sector also holds considerable but untapped potential. By far the largest tonnage is caught by foreign interests, especially by Spanish boats. A three year fishing agreement with the EC was signed in 1986 giving Equatorial Guinea $1.88 million annually plus $24 per ton of tuna caught. Another effort by the Government to improve economic conditions includes oil exploration. Prospects are considered good for both offshore and onshore petroleum and gas reserves, and Spanish and French companies have negotiated exploration rights. If these efforts prove successful, economic prospects would be drastically transformed.

2. The manufacturing sector

Manufacturing as a sector of the economy is almost non-existent, employing only 468 people in 1983, and contributing some $4 million to gross output in 1985. Throughout the 1970s manufacturing regressed. According to UNIDO data, the average annual rate of growth for the 1970s was minus 12 per cent, approximately the same as the decline in the general economy during the

1970s. However, since 1980 the rate of growth has been positive. For the 1981-85 period average annual growth was 4.2 per cent, although GDP per capita has continued to decline. The MVA per capita was $7 in 1985, down from $20 a decade earlier.

More than two-thirds of those employed in manufacturing are engaged in cocoa- and coffee processing. Food products as a sub-sector accounted for around one-fourth of gross output of the manufacturing sector in 1983.

Wood processing is the second activity of any significance. Of the 468 employees in manufacturing, 116 worked in furniture (except metal), a sub-sector that accounted for 7.3 per cent of gross output. Ninety people were employed in wood products (except furniture), a sub-sector that accounted for 5 per cent of gross output.

Other recorded sub-sectors include printing and publishing which employed 39 people and contributed 7.9 per cent of manufacturing gross output in 1983, beverages which employed 11 persons and contributed 5.9 per cent of gross output, and fabricated metal production, with 18 persons and 2.1 per cent of gross output.

There is no specific information regarding the ownership pattern of manufacturing, but it may be surmised that most are small, privately-owned enterprises.

The trend is measures by the Government to attract foreign capital to assist in the creation of new industries.

3. Obstacles to production

The constraints to expansion of the manufacturing sector include the present shortage of foreign exchange, the lack of adequate manufacturing tradition and skills, the ruinous state of the economy when the present regime came into power in 1979, the smallness of the market, and the competition from neighbouring countries.

4. Policies directed towards the manufacturing sector

The policies of the present Government have broadly followed the prescription of the IMF and have thus emphasised the role of the private sector and an outward looking and liberal environment for manufacturing, including an attractive code for importation of capital as well as for goods. In other words, the policies are general and primarily directed towards creating new manufacturing industries. Available material does not reveal whether any rehabilitation projects have been undertaken by the Government or whether any manufacturing projects were included in the $140 million worth of development projects identified by the 1982 donors conference.

5. The scope for rehabilitation

By virtue of the size of the manufacturing sector the scope for rehabilitation is very limited. It is also for this reason that economic recovery programmes, both formulated by the Government and by the donor community, have focused primarily on developing new industries rather than concentrating on the few existing ones. However, the long period of apparent mismanagement and neglect until 1979 is sure to have created needs within the industries that existed in the 1960s, i.e. food and wood processing.

UNIDO is currently not operating any project in Equatorial Guinea.

ETHIOPIA

1. General introduction

In terms of GDP per capita, Ethiopia is classified as the poorest country in the world. United Nations statistics show that GDP per capita was $100 in 1985. Economic growth has been constrained by a number of factors since the military seized power in 1974. Regional conflicts have disrupted economic activity across the nation. In dealing with the conflicts the Government has obtained enormous quantities of weaponry, some $4 billion worth. The fighting in Eritrea alone is estimated to cost $1 million per day.

The economy has been reorganized in a socialist fashion, including the institution of centralised planning and nationalisation of industry. Output has also been constrained by a series of droughts in 1972-74, 1980-81, and most seriously 1984-85. Ethiopia's major foreign exchange earner, coffee, was also affected by falling prices between 1979 and 1982 and again in 1987.

The figures for real GDP growth are telling: 3 per cent in 1980/81, 1.9 per cent in 1981/82, 5.6 per cent in 1982/83, -3.9 per cent in 1983/84, -6.5 per cent in 1984/85, and 11.3 per cent in 1985/86, reflecting the effects of the droughts and the swings in coffee prices.

In terms of GDP per capita growth, real per capita income declined during the entire 1970 to 1986 period - by -0.5 per cent per year on the average in the 1970s, and by -1.4 per cent a year from 1981-85 when the most severe drought occurred.

The share of agriculture in Ethiopia's GDP sank from 50.4 per cent of GDP in 1970 to 41.8 per cent in 1985. In terms of employment, agriculture dominates with 80 per cent of the labour force employed in agricultural activities.

The terms of trade have generally moved against Ethiopia since 1970, with an average annual drift of -4.7 per cent, according to the World Bank.

Rising private and public net transfers helped alleviate growing deficits on the current account in 1981-84 and reduce the deficit from $250 million in 1981 to $132 million in 1984. On the whole, however, capital aid has been disappointing for a country of Ethiopia's size and poverty, with $9.90 per capita in 1984 as compared to $25.50 per capita on the average for Sub-Saharan Africa. An improvement has occured since, with the United States raising its food aid considerably in 1985. But along with other western donors it is slow and seemingly reluctant to follow up food aid programmes with development work.

Ethiopia's external debt amounted to $1,989 million in 1986 according to the Economist Intelligence Unit, equivalent to 39.2 per cent of GDP. Concessional loans account for 79 per cent.

2. The manufacturing sector

Manufacturing activities contributed 12.1 per cent of GDP in 1986, up marginally from 9.2 per cent in 1975. However, output growth has been faster than in other sectors of the economy. As GDP declined during the 1970s, MVA per capita remained constant at $10 (in 1980 prices). For the period 1981-85 when per capita GDP continued its fall, per capita MVA recorded an average annual growth of 3.2 per cent. However, the MVA per capita remains among the lowest in Africa, $11 compared to the average of $60.

Manufacturing is largely based on domestic raw materials and concentrated on consumer goods. Capacity utilization is reported to be high by sub-Saharan standards in many large and medium-sized enterprises. Activity is concentrated to the area around Addis Ababa, Asmara and Dire Dawa.

Food processing, particularly sugar refining and flour milling, accounts for a quarter of total MVA and thereby is the leading branch in terms of output value. Employment amounts to some 19,000 people, or 20 per cent of total manufacturing employment. Many existing and planned projects are funded by Eastern bloc countries, including a $11 million edible oil mill at Bahir Dar funded by the German Democratic Republic and completed in 1984. Czechoslovakia is providing finance for two new flour mills under a 1986-90 co-operation programme and has also committed itself to finance meat-packaging facilities and expansion of the abattoir at Addis Ababa.

Textiles is number two in terms of output value, accounting for 17 per cent of value added in 1986. In terms of employment it is by far the leading sub-sector, accounting for 39 per cent of manufacturing employment. In 1975 textiles accounted for 32.5 per cent of MVA and 38 per cent of employment. The $107 million Combolcha textile mill is the largest in the country and was funded jointly by the German Democratic Republic and Czechoslovakia. The $118 million bilateral co-operation programme with the USSR includes a new textile mill. Czechoslovakia's aid programme contains additional finance for textile development, and Indian assistance will be provided for a new weaving plant. In 1984 the European Investment Bank granted ECU 12 million to rehabilitate a textile mill at Bahir Dar and Italy's bilateral aid programme includes provisions for a new textile factory at Awasa.

Despite explorations, no oil reserves have been found in Ethiopia, but petroleum refining accounted in 1986 for 6.1 per cent of manufacturing value added, employing some 1,100 people. The oil refinery at Assab has a capacity of 900,000 tons after a USSR-funded expansion.

Other branches of manufacturing include beverages (in 1986 20 per cent of MVA), tobacco (6 per cent of MVA), construction materials (some 2 per cent of MVA), the export-oriented leather goods industry (2.3 per cent of MVA) and shoes (1.8 per cent of MVA). There is also a $8.2 million plant for the assembly of tractors and the manufacture of agricultural machinery, partly financed by a long-term loan from the USSR.

By value, over 90 per cent of the sector is state-owned.

The trend is foremost the efforts by the Government to overcome problems constraining manufacturing activity. Disputes with Western investors and donors, including the United States, have largely been settled, as illustrated above by the support from the European Investment Bank and Italy.

Ethiopia's exports consist primarily of coffee which generates approximately 60 per cent of total export revenues on the average, depending on prevailing world market conditions. Most manufactured products are sold on the local market, but sugar, semi-processed hides, skins and other leather work, and oil seed products are exported. Manufactured exports increased from $30 million in 1979 to more than $80 million in 1985/86, owing primarily to an expansion programme of the export leather industry. Textile exports have also increased in recent years. Imports are dominated by light and heavy capital goods, food, crude oil and transport vehicles. The United States still is the single largest receiver of Ethiopia's exports, despite the political grievances, while the USSR provides most imports.

3. Obstacles to production

Ethiopia is endowed with few natural resources. The economy has been characterised by low agricultural productivity, a small industrial base, shortages of skilled manpower, weak infrastructure, and the strains of fluctuating commodity prices. Output has also recently been constrained by regional conflicts, the series of droughts (especially differences of opinion between management and workers, and in 1984-85), nationalizations in 1975, foreign exchange shortages; lack of new investment, raw materials and spare parts.

4. Policies directed towards the manufacturing sector

Production continued through the drought years 1984-85 by depleting stocks of raw materials and spare parts. Therefore, the present ten year plan attaches great importance to industrial development, with half of the planned investment earmarked for 216 industrial projects, a quarter of which are improvements to existing enterprises. The emphasis is on import substitution, particularly of machinery and transport equipment, industrial inputs and semi-finished products.

5. The scope for rehabilitation

The major candidate branches for rehabilitation would be those based on local raw materials which would earn or save foreign exchange, i.e. food processing, textiles and leather industries.

Among the 17 projects UNIDO currently operates in Ethiopia (see Appendix), several are large scale. One to rehabilitate the pulp and paper company provides $71,200 to train staff and to up-grade accounting procedures and machine operations.

GABON

1. General introduction

Gabon is the third largest producer of oil in sub-Saharan Africa (after Nigeria and Angola). In 1984, when crude oil output was 8.7 million tons, the petroleum sector accounted for 48 per cent of GDP, 84 per cent of exports, and 66 per cent of total state revenue. This oil wealth, combined with a very small population (around 1 million), has given Gabon the second highest GDP per capita on the African continent - $3,948 in 1986. However, it has also exposed the economy to fluctuations in the world oil market and to the danger of depleting oil resources.

Oil production reached its peak in 1976 with 11.6 million tons. Since then production has declined, and it is estimated that known reserves will be exhausted by the late 1990s. The oil sector's share of GDP started to fall in 1985, when it dropped to 20 per cent. The 1986 collapse in international oil prices caused exports to fall by almost a third and their share of exports to decline to 65 per cent.

Gabon is also well endowed with hydropower and valuable forestry and mining resources. In order to tap some of those resources, the Government has invested some $3 billion in the 657 km Transgabonais railway, completed in 1986 after 12 years of work, and one of the biggest construction projects in the world. Agriculture's contribution to GDP is a modest 8 per cent; in 1986 foodstuffs accounted for 16 per cent of imports.

Gabon's trade balance has come under increased pressure as oil revenues have declined. Until 1984 the trade surplus more than offset the negative net deficit on services. (Services related to the petroleum sector are particularly large.) As oil revenues plummeted in 1986, the current account moved into a deficit of $947 million. In 1987 Gabon rescheduled its foreign debt, which corresponds to 43.9 per cent of GDP, with both official and private creditors. According to the Government's projections, debt will continue to increase, exacerbating both the need to resume foreign development assistance programmes (phased out during Gabon's prosperous years), and the need to diversify the economy away from its heavy dependence on the petroleum sector.

2. The manufacturing sector

The growth of oil, and to some extent mineral extraction and the advent of the Transgabonais railway project, has allowed the manufacturing sector to expand. As a proportion of GDP it remains very small, however. In the mid-70s the share of manufacturing in GDP was 4.3 per cent; by 1985 it had only expanded to 6.2 per cent. MVA per capita in 1970 was $62, but reached $250 by 1985, well above both the African average of $60 and the average of $168 for all developing countries. Manufacturing in 1981 employed some 16,800 people, between 15 and 20 per cent of total employment.

The most important industry in 1986 was petroleum refining. According to UNIDO data, this sub-sector in 1982 accounted for 29 per cent of gross output and 9.3 per cent of MVA; in 1981 it employed 371 persons, 2.2 per cent of the manufacturing labour force. The growth in value added from 1975-85 was a meager 0.3 per cent.

Price-cutting in Europe and the opening of new refineries in Cameroon and the Congo have reduced Gabon's output of refined oil products from 1.3 million tons in 1980 to around 600,000 tons in 1985. This was roughly one-third of the operating capacity of the two refineries at Port-Gentil, SOGARA and COGER. The former caters to the domestic market and the latter sells mostly to Europe. In an attempt to increase output, investments have been made to link the SOGARA refinery with the more modern installations of COGER. Attached to the SOGARA refinery is a 10,000 ton capacity bitumen plant. The petroleum-related sector also includes shipyards and metal working facilities.

The second most important industry is wood processing. In 1986 74,800 cubic meters of plywood were produced. Timber exports are an important source of foreign exchange earnings. In 1986 value added's share was 20 per cent, gross output's share was 12 per cent, and employment totalled 5,350 people, almost a third of manufacturing employment.

Foodstuffs in 1982 reached a 9.5 per cent share in MVA and 10.6 per cent share in gross output; in 1981 employment was 2,400 people, or almost 15 per cent of those working in the manufacturing sector. Food products grew by 10.2 per cent in real value added terms between 1975 and 1986. In 1986 production included approximately 17,000 tons of sugar, but the sugar industry has been slow to develop and production is well below capacity. The one flour mill produced 35,100 tons of flour in 1986, and two vegetable oil refineries failed to reach targeted output levels of 5,170 tons of edible oil. Coffee hulleries and manufacturing of jam and alcohol have not proved profitable.

Other manufacturing industries include several breweries and a soft drinks plant, cigarette production, mineral concentrates, soap, paint, industrial gas, textile printing and clothing, cement and cement clinker.

The combined turnover of the major manufacturing enterprises was half a billion dollars in 1985 - 40 per cent in the petrochemicals and refining industries, some 30 per cent in food and beverages, and 12 per cent in timber and furniture. Despite this, the sector remains relatively undeveloped.

The ownership pattern is dominated by the large joint ventures between the Government and foreign, mostly French, companies which make up the petroleum and petrochemical sub-sectors. The Government also retains shares in some major food processing industries (vegetable oil, for instance), mineral processing and cement production. On the other hand, most enterprises in the wood processing sub-sector are private.

During the early years of independence the trend was to expand the export-oriented industries of mining and forestry. More recently the Government has sought to develop large-scale natural resource-based industries. Due to a number of constraints (see below), however, some planned

projects have been scrapped, among them what was to be the world's largest cellulose plant, SOGACEL at Kango. This project was initiated in 1975 and finally dropped in 1984 when the Government felt it could not afford the investment. In other branches projects have been realized. For example, cement production has grown strongly in recent years and expansion is in progress at the national paint and cement works. (Cement production is expected to fall as the Transgabonais railway is finished, however.) Of note also are the expansion of local breweries, a new mineral water bottling plant, and the construction of flour milling and animal feed plants and a sugar refinery with a capacity of 30,000 tons. A ferro-manganese plant, run by Sogaferro, may eventually be constructed, and dry batteries using manganese dioxide are now manufactured locally. Plans have been drawn up for an iron and steel works, which would use national iron ore and be geared to the domestic market, and for the construction of factories for plastic articles.

Exports of manufactures is heavily dominated by refined petroleum products such as motor gasoline and fuel and lubricating oils. There is also some export of raw and refined sugar, veneer sheets and some re-export of wood pulp. Gabon still almost totally relies on imports of products such as textiles, chemicals, iron and steel, other metals and paper products. France remains by far the most important trade partner, purchasing some 43 per cent of exports in 1986 and providing 56 per cent of imports. Hopes of increased regional trade have by and large failed, but Gabon exports some petroleum products to other UDEAC countries and imports many manufactured products from them, especially from the Congo.

3. Obstacles to production

Expansion of the manufacturing sector is primarily constrained by the general adverse economic conditions caused by developments in the oil market. The recession in 1986, caused by the fall in oil earnings, was reflected in the manufacturing sector by an estimated 25 per cent fall in the combined turnover of the country's principal enterprises. A major consequence is a shortage of foreign exchange for the purchase of spare parts, new machinery and even raw materials. New investments are also constrained. Moreover, the sector's expansion is restricted by a very narrow domestic market, competing import substitution industries in neighbouring countries (including Gabon's partners in UDEAC, the regional customs union) and last but not least the very high labour costs.

4. Policies directed towards the manufacturing sector

In light of the deepening financial crisis of latter years, Government planning has given priority to agriculture. By doing this it hopes to stem the country's urbanisation, decrease the need for imported food, and develop new sources of foreign exchange earnings. Therefore, the agricultural sector has been spared the perceived necessary cuts in the Development Plan's expenditure - but not industry (except mining). Nevertheless (as noted above) new industries have been added and more are under way, made possible by liberal policies regarding foreign investments. Most new projects are therefore financed externally. Foreign-owned companies are obliged to invest 10 per cent of their profits on a tax free basis in local industries.

5. The scope for rehabilitation

While the need may be greater for expansion, there also seems to be some scope for rehabilitation, primarily in the petroleum sector where the negative future production trend is likely to prevent new investments, but also in other sub-sectors that have existed for some time and enjoy more favourable market conditions, such as sugar and wood processing.

UNIDO is at present not operating any projects in Gabon.

THE GAMBIA

1. General introduction

Agriculture is the backbone of Gambia's economy, accounting for around 25 per cent of GDP, over three quarters of the labour force and almost all foreign exchange receipts. The principal activity is groundnut cultivation and processing. Cotton, rice, maize and sorghum are also grown, while fishing and tourism have become major sources of foreign exchange earnings.

Gambia's economic performance is largely a function of its principal export product - groundnuts. The fluctuations in the weather and international prices of groundnuts are recorded in the figures for real GDP growth: 9.8 per cent in 1982/83, -10 per cent in 1983/84 (according to EIU estimates)' and -2.8 per cent in 1984.85. Growth resumed a positive course in 1985/86 with 3.3 per cent, and with an estimated 6 per cent in 1986/87.

Gambia's GDP per capita - expressed in 1980 prices - stood at $431 in 1970 and at $388 in 1986, according to UNIDO data. The average annual real rate of growth for the same period is thus recorded close to zero and, due to currency depreciations, probably negative. Until 1986 the currency was pegged to the British pound, but as part of the IMF designed adjustment programme, it is presently under a free floating regime. The results of this drastic reform include - on the positive side - elimination of the black market for local currency, and - on the negative side - a sharply increased inflation rate. Inflation reached 63.4 per cent in 1986, but for the first half of 1987, the rise in consumer prices was reported to have moderated.

With only groundnuts, fish and some fish products to export, Gambia consistently has had a trade deficit - in 1980 almost twice the value of all exports. The recovery programme has brought austerity and reduced imports, cutting the trade deficit to fractions of export revenues - 9.5 per cent in 1984 and 19.1 per cent in 1985. Since 1983 the current account has showed a surplus for the first time in the 1980s, another result of the recovery programme. However, this achievement was balanced by a growing outflow of long-term capital. Gambia remains heavily dependent on foreign aid, which in 1985 totalled $51.9 million, of which $38 million were grants. (For comparison, total export revenues in 1985 were $62.9 million.) Aid flows have remained fairly constant since 1980. Total debt, however, has continued to surge. Disbursed debt grew from $105 million in 1980 to $228 million by 1986, equivalent to 157 per cent of GDP. For the period 1986-90 debt service is projected to amount to $18-20 million a year, and revenues of export of goods and services are projected to range from $60 million to $80 million a year - a DSR Gambia cannot absorb. The reschedulings that have taken place several times in recent years with both the Paris and the London Club are therefore likely to continue.

2. The manufacturing sector

Manufacturing accounted for 6.7 per cent of GDP in 1985, up from 6.1 per cent in 1975. MVA per capita grew from $30 to $56 between 1975 and 1985, and had an average annual rate of growth of 8.3 per cent between 1981-85, while GDP per capita declined during the same period. This rapid expansion

notwithstanding, manufacturing remains tiny. Total MVA in 1986 was $8 million and recorded manufacturing employment in 1986 stood at less than 2,000 people, 0.6 per cent of the labour force.

The formal manufacturing sector consists of 40 to 50 enterprises of which three-fifths employ fewer than 20 workers. Banjul Breweries Ltd. is the only manufacturer among the enterprises listed as the country's major companies (most are trading companies).

The most important manufacturing activity is buying, processing and exporting groundnut products. According to UNIDO data, food products as a sub-sector accounted for more than half of employment and output and some 35 per cent of value added in 1986.

The second largest sub-sector is beverages. Brewing and soft drink manufacturing in 1986 accounted for between 10 and 11 per cent of output and value added and employed 140 people, nearly 8 per cent of total manufacturing employment.

Furniture, except metal, is the third ranking sub-sector with a gross share of 3.4 per cent, value added of 5.9 per cent, and employing 300 people, 16 per cent of manufacturing labour.

Other manufacturing activities include fish freezing, and textiles, paint, soap and brick manufacturing.

The Government controls most economic activities, but ownership in the sector is mostly private.

The trend is predominantly negative to manufacturing. Agriculture and infrastructure are given higher priorities both in the National Development Plan and by donors. Efforts to raise yields of groundnuts and other crops - as well as manufacturing of food products and textiles - will, however, necessitate future investments. For example, a cotton development project, financed by the ADB, is expected to give fresh impetus to a ginnery which was completed in 1977 but has not fulfilled expectations.

Groundnuts and associated products typically account for some 90 per cent of domestic exports. The remainder consist of fish and fish products. Imports, which are four to five times greater, consist of everything from basic food items to machinery and equipment. Ghana is by far the most important export market, taking a third of total exports. Imports come mainly from the United Kingdom, France and the United States.

3. Obstacles to production

The smallness of local markets, shortage of technical expertise and management, scarcity of raw material, and local business attitudes preferring trading and investment in property in favour of manufacturing, are some of the major factors obstructing the expansion of Gambia's manufacturing sector.

4. Policies directed towards the manufacturing sector

The general policies of the economic adjustment programme, instituted in cooperation with the IMF, the World Bank and other donors and creditors, provide reforms to liberalize economic policies, stimulate private investment, and reduce the Government's direct control over economic decisions. However, it is still too early to register any specific results of the changed policies.

The available material did not indicate specific rehabilitation programmes for manufacturing.

5. The scope for rehabilitation

The small size of the economy and the manufacturing sector precludes any comprehensive programme for rehabilitation in Gambia. Candidate industries would be agro-based activities such as groundnut processing and cotton ginning.

There are no ongoing UNIDO projects.

GHANA

1. General introduction

After several years of economic stagnation, Ghana experienced an acute economic crisis in 1983, reflecting serious structural deficiencies in the economy such as lack of a diversified agricultural sector, overvalued currency, high importation costs for energy, two periods of drought, and expulsion of 1 million Ghanaians from Nigeria. With the support of the IMF and the World Bank, Ghana then introduced one of the most ambitious economic reform programmes in Africa.

The programme is beginning to yield results. GDP was $4,686 million in 1985; real GDP growth, which was negative from 1980-83, was 6 per cent in 1984, 3.3 per cent in 1985, and was expected by the IMF to be around 5 per cent in both 1986 and 1987. GDP per capita, which was $345 in 1985, grew by 0.9 per cent in 1985 and 2.8 per cent in 1986, according to the IMF. Inflation, recorded at 123 per cent for 1983, was down to 25 per cent in 1986, short of the target of 15 per cent but still a major improvement.

Despite higher prices for cocoa, the main export good, and improved terms of trade, however, the current account remains a concern. The deficit was $220 million in 1987, equivalent to 4.8 per cent of GDP. Ghana's external debt was some $2.3 billion in 1986, about 46 per cent of GNP and generating a DSR of more than 50 per cent. Despite the heavy debt burden, it is expected Ghana will be able to avoid a debt rescheduling because of increased aid on concessional terms.

2. The manufacturing sector

Manufacturing was given high priority after Ghana's independence. A relatively wide range of industrial enterprises was set up from 1957 onwards, with the largest including the Valco aluminium smelter, saw mills and timber processing plants, cocoa processing plants, brewing, cement manufacture, oil refining, textiles and vehicle assembly. Due to various adverse factors - internal as well as external - early progress faltered and production stagnated, especially after 1970. After several years of negative growth, manufacturing fell to 6.3 per cent of GDP in 1985, compared to 10.5 per cent in 1975. In constant prices MVA was recorded at $22 in 1985, down from $49 in 1975. The negative developments are also reflected in total manufacturing employment, which fell from 77,000 in 1975 to 59,000 in 1983.

It is reported, although not yet reflected in available statistics, that the first phase of the Economic Recovery Programme (ERP) covering the 1986-88 period has shown some success, with increased output in food-processing, textiles, tobacco, pharmaceuticals and timber products.

Available UNIDO data covers the years prior to the ERP. In terms of value added in constant (1980) prices, the leading branch in 1984 was textiles, which accounted for 20 per cent of value added, down from 39 per cent in 1976. With 9,300 people employed, this sub-sector accounted for 16 per cent of manufacturing employment in 1983. The decline in employment - from 16,400 people in 1975 - largely reflects falling domestic cotton supplies as well as various constraints obstructing the manufacturing sector.

With respect to the textile industry, a 1985 UNIDO study found that the quality of work was low and that production was geared totally towards the domestic market. The study reported that machinery would be adequate for at least another three years. In order to improve the quality and facilitate exportation of textiles, major investments would have to be undertaken. It was estimated some $240 million was required for the period 1986-88. The sub-sector is expected to be one of the beneficiaries of reforms under the ERP.

Wood products, including furniture, also accounted for some 20 per cent of value added in 1984 and for around a quarter of manufacturing employment in 1983. However, employment in absolute numbers fell during the 1975-83 period, from 18,000 people to 14,700. Wood products such as sawn timber are important export commodities and the Government has therefore made major investments in the forestry and saw milling industries. It has been reported the production of timber has revived, with an increase in 1985 to 580,000 cubic metres compared with less than 500,000 cubic metres in 1982. Production from the two state-owned and 24 private saw mills is expected to double over the 1985-90 period.

Food processing branches had a share in MVA of 11.5 per cent in 1983, down from 13 per cent in 1975, while the share of employment rose from 10 per cent in 1975 to 11.6 per cent in 1983. Food processing includes plants for cocoa processing, the major export industry, and producers of palm and other vegetable, grain and animal oils and fats. It also includes dairies, bakeries, a cannery, fish processors, meal processing units, and sugar refineries. The single largest production unit is the Cocoa Processing Co. Ltd. which operates under Government control and has 600 employees. The performance of this sub-sector has improved since 1984. For example, palm oil production rose to 50,000 tons in 1986 compared to 13,000 tons in 1982, and cocoa production rose to 225,000 tons in 1986/87 compared to a low of 158,000 tons in 1983/84.

Beverage and tobacco industries together accounted for 41 per cent of value added in 1983. They employ some 6,000 people equivalent to 10 per cent of manufacturing employment. The largest enterprise is the Achimota Brewery Co. Ltd. in Accra.

Printing and publishing accounted for around 2 per cent of MVA in 1983, the same as in 1975. Employment in 1983 was recorded at 3,300 people, down from 3,800 in 1975.

The non-ferrous metals sub-sector is largely made up of one aluminium smelter plant at Tema, operated by Volta Aluminium Co. (VALCO), which is owned by multinationals. This is among the largest and most capital-intensive industries. Although capacity is 200,000 tons, 1985 production was 48,000 tons, and only 42,000 tons in 1982. The sub-sector accounted for nearly 6.4 per cent of MVA in 1983, with 2,000 persons employed.

Industrial and other chemicals accounted for 8.7 per cent of value added in 1984 and employed 3,400 people in 1983.

There is one petroleum refinery in Ghana, accounting for 6.8 per cent of value added (1984) and employing 626 persons (1983).

Ownership differs within the sector, even among the larger and capital-intensive units. For example, VALCO is owned by foreign companies, while the petroleum refinery is wholly controlled by the Government. Many small- and medium-sized industries are private, but the Government owns two saw mills, for instance.

The trend seems to have taken a turn for the better after a long period of decline. Using the foreign exchange auction, a key element of the ERP, many manufacturers have been able to purchase more capital equipment and spare parts, and thus increase output. The Government is planning a thorough rationalization of the large state-owned sector. A $55 million loan from the World Bank supports this effort. Five hundred state-owned enterprises with varying needs of rehabiliation have been identified. The Government has estimated 200 of those enterprises need financial reconstruction, since they are not profitable enterprises at present. Thirty enterprises have been studied indepth, and the three receiving highest priority are State Fishing Corporation, State Hotels Corporation, and Tema Shipyard and Drydock Corporation.

Several rehabilitation efforts have been undertaken within the cocoa industry - some with the help of foreign assistance - such as the rehabilitation of the Tema Food Complex financed in part by the Arab Bank for Economic Development. Ghana Sugar Estate is to be rehabilitated to produce alcohol, and a glass factory at Aboso with a capacity of 25,000 tons a year is to be reopened after several years of incperation.

Among new projects are a $36 million project to increase palm oil production, investment in a new cement plant using local raw materials, Chinese funding for new rice mills, and the construction of a citronella distillation plant at Bonso. Ghana is also involved with Togo and Cote D'Ivoire to build a major clinker factory.

Cocoa comprises 50 to 80 per cent of exports, with processed cocoa accounting for a rising share as the industry is rehabilitated and expanded in line with the ERP. Switzerland buys most of the cocoa. The only other manufactured export of any significance is wood products, with less than 5 per cent of total exports. Imports consist of food, fuel, and most required capital and intermediate goods.

Switzerland, the United Kingdom and the Netherlands together purchased some 43 per cent of total exports in 1983. Most imports come from the United Kingdom and other Western industrialized countries. Among regional trading partners, Togo leads, supplying 4 per cent of imports and purchasing 17.6 per cent of exports in 1983.

3. Obstacles to production

Before the 1983 foreign exchange crisis caused shortages of imported machinery, spare parts and raw materials, the rate of capacity utilization in Ghana's manufacturing sector was only 25 per cent on the average (1981). By 1985 it had risen to only 33 per cent. The introduction of import controls, rampant inflation, overvalued currency and frequent power cuts greatly

increased costs. These factors, together with poor planning, lack of co-ordination, and duplication in major sub-sectors such as textiles and beverages, have contributed to the low capacity utilization rates.

4. Policies directed towards the manufacturing sector

The general policies directed towards the manufacturing sector follow the scope of the ERP which Ghana has introduced with the support of the IMF and the World Bank. The main objectives of the programme have been: the realignment of relative prices in favor of directly productive activities and exports, coupled with the removal of controls; the rehabilitation of infrastructure; the restoration of fiscal and monetary discipline; and the encouragement of private savings and investments. Among the measures taken by the Government are increased taxes, reduced public spending and massive devaluations. The latter have partly been in the form of an auction system, by which enterprises or individuals in priority areas of the economy can bid for foreign exchange. This has been a principal reason for some of the recorded improvements. Since the ERP programme has been enacted, capacity utilization increased to 30 per cent once the supply of inputs improved. Original targets were 50 per cent in 1984 and 75 per cent in 1986, but they have subsequently been scaled down, and the 40 per cent set for 1986 was unlikely to be achieved.

5. The scope for rehabilitation

Ghana displays a very distinct scope for industrial rehabilitation and has already undertaken detailed planning for it. Major donor countries have expressed a keen interest in supporting Ghana in these efforts. Candidate industries have been identified in virtually all major branches including wood, textiles and food processing (sugar, edible oils and flour milling).

UNIDO is currently operating five projects in Ghana, but none are explicitly concerned with rehabilitation.

GUINEA

1. General introduction

Guinea has the potential of becoming one of the more prosperous countries in the region due to its mineral potential, its ample water resources, and climatic and soil conditions favouring a wide variety of agricultural crops. In terms of GNP per capita, however, Guinea is ranked among the 25 poorest countries in the world.

In 1985 GDP per capita was $280 with real average annual growth of 0.8 per cent since 1970. This was better than the 0.3 per cent recorded for Africa as a whole, but well below the 1.8 per cent recorded for all developing countries.

The economy is based essentially on agricultural and pastoral production, which forms the livelihood of about 80 per cent of the country's 6.1 million people and accounts for nearly 45 per cent of GDP. Industrial activity is heavily concentrated on mining, and mineral exports account for almost all export earnings. However, the mining industry has operated with very few linkages to other sectors of the domestic economy, thereby exacerbating earlier tendencies towards a dualistic economy.

The agricultural sector has suffered serious setbacks, largely related to the effort by President Sekou Tourè and his Government to run the economy through a highly centralised system which restricted private enterprise in all sectors of the economy.

Since the military seized power in 1984 a more liberal economic regime has been introduced. A new currency was introduced in January 1986 in conjunction with a 93 per cent devaluation and an IMF stand-by credit. This has been interpreted as foreshadowing Guinea's eventual entry into the franc zone, which it left in 1960.

During the 1970s the performance of the mining industry was fairly positive, while other sectors of the economy suffered from lack of investments and low productivity. When export earnings began to stagnate in the late 70s, an increasing balance of payments constraint was added to Guinea's other economic problems.

While the trade balance regularly has been positive, the current account and the overall balance of payments have been in deficit. There are no details available on current account items, but it is reported the deficits have been fairly substantial. The deficits were largely financed by accumulating arrears on debt payments, and by 1986 total external debt stood at $1.6 billion, equivalent to some 85 per cent of 1983 GNP. Around $200 million was rescheduled in the Paris Club in April 1986 and reschedulings with private creditors were expected to follow suit. Debt service was estimated by the World Bank in 1985 at $67 million, equivalent to some 12 per cent of mineral export earnings and 3.6 per cent of GNP.

2. The manufacturing sector

The manufacturing sector is small and concentrated to Conakry. Between 1964 and 1971 twelve projects were established, all government-owned, with the goal of meeting domestic demand. As a result, the value of output was reported to have increased by some 20 per cent per year during the 1960s. However, in 1985 manufacturing accounted for only 3.2 per cent of GDP according to UNIDO. This would imply a total output of some $54 million that year. The MVA per capita stood at $9 in 1985, one dollar higher than 15 years earlier.

The growth of total manufacturing on a real average annual basis is recorded at 2.6 per cent between 1970 and 1985 and 3 per cent between 1981 and 1985, quite the opposite development from the African continent and all other developing countries. However, it is difficult to trace the source and therefore the significance of the accelerated growth in the early years of the decade.

There is no data on the sub-sector level. However, the sector includes a textile factory with an annual capacity of 24 million meters of fabrics, and another textile factory is being rehabilitated, funded by the European Development Fund.

The food processing industry includes the only manufactured products for which domestic production satisfied domestic consumption in 1983 - vegetable oil and refined sugar. There are two major companies active in fishing and fish processing, both joint ventures between the Government and French and American companies, respectively. There are also plants for fruit canning and juice extracting.

Manufacturing output is expected to rise as an aluminium plant near Boké with a capacity of 1 million tons per year is established with the help of Arab funds. Friguia and the Société Miniüre et de Participation Guinée-Alusuisse are interested in extracting further bauxite deposits. The latter company, a joint venture between the Government and Alusuisse of Switzerland, plans to establish an aluminium smelter at Tougué.

Other manufacturing activities include construction of a clinker crusher with a capacity of 250,000 tons per year; a soft-drinks bottling plant which was privatized in 1986; and manufacturers of plastic tiles, shoes, bags and industrial paints.

The dominant owner of manufacturing enterprises is the Government but this is being changed. Foreign companies have formed joint ventures with the Government to develop Guinea's resources of minerals. A few small- and medium-sized enterprises are owned by private domestic interests.

The trend is to privatize, liberalize and accomodate foreign capital, both official development aid and private company investment. A significant part of the activities is rehabilitation of existing industrial plants (see below).

3. Obstacles to production

Apart from the small size of the economy and the manufacturing sector itself, the overvalued currency, power and raw material shortages, poor management, insufficient labour skills and inadequate domestic purchasing power are factors that explain why manufacturing capacity has been chronically underutilised.

4. Policies directed towards the manufacturing sector

Since 1984 Guinea has followed a path of liberal and outward looking economic policy. The recovery programme's main target is a growth rate of 4.6 per cent by the end of the planning period 1987-91. The principal contribution is expected from the private sector, especially from fishing, industry, construction and private works. However, overall economic reforms have so far been implemented slower than anticipated in the plans.

Efforts to seek financial and technical assistance to renovate and operate plants were undertaken by the previous Government but have been intensified as part of the new policies. Uneconomic units are to be shut down and only those of particular national interest will be kept in state hands. The Government has announced that of the 35 state enterprises, seven would be discontinued, four would be reoriented into different activities, and 13 would be overhauled prior to their planned sale in whole or part to the private sector. The remaining eleven enterprises will remain in the public sector, but most of them will undergo some major reform.

By the beginning of 1987 the process of reorientation was well advanced and bids from prospective foreign joint venture partners were being appraised. It is intended that, with a new investment code in place and with the devaluation having improved prospects for import substitution and for some limited exports, rehabilitation of existing capacity and creation of new industrial and commercial enterprises by domestic and foreign private sector interests will get under way. The World Bank is providing finance to encourage small scale enterprises operated by Guineans.

5. The scope for rehabilitation

Within the framework of the Guinean economy there is clearly substantial scope for industrial rehabilitation, especially in agro-based industries such as food processing and textiles - industries catering to basic needs and lacking the foreign investment of, for example, the mineral-based industries.

UNIDO presently operates six projects in Guinea (see also Appendix). Two are large-scale projects, and several fall under the heading of rehabilitation and within the Government's own programme for rehabilitation. One $2.4 million project assists in strengthening and repairing equipment at Conakry's Center for supply and maintenance of industrial equipment.

GUINEA-BISSAU

1. General introduction

Guinea-Bissau's economy is one of the poorest in the world. It relies on imports for fuels, virtually all manufactured goods, and the greater part of the country's food requirements. Export earnings are derived almost entirely from groundnuts and palm kernels. According to UNIDO data, GDP per capita was $175 in 1985 (down from $226 in 1975), ranking Guinea-Bissau as one of the ten poorest countries in the world. Real GDP growth in 1985 was recorded at 4.4 per cent, and in 1986 at -1.0 per cent.

Agriculture accounts for just over half of GDP, which totalled $175 million in 1984. Agricultural production, mainly rice for domestic consumption and groundnuts for exports, has improved since 1980 because of relatively favourable weather conditions and better price support to the producers. Food importation continues to weigh heavily on the trade balance, however.

Given the calamitous state of the economy by 1980, efforts in recent years have focused on managing the external deficits, supported mainly by the IMF, the World Bank, UNDP and some bilateral donors. The main features in the recovery programme have been: cuts in real salaries and wages, increased producer prices, more staff for economic planning, stricter budgetary spending, curtailed growth of money supply, and sharp devaluations. The latest devaluation in April 1987 brought the peso from P265 to P650 per dollar; however, the unofficial exchange rate has remained well above the official P800 per dollar in December 1987. A more definite indication of the massive devaluation's effect will be 1987's trade figures, which were not yet available.

The current account improved substantially in 1986. The deficit more than halved compared to 1985, from nearly $49 million to $24 million, reflecting the austerity measures introduced during the year. Reserves remain precariously low, however, and Guinea-Bissau will need continued support from its donors. Total foreign aid was $65.4 million in 1985, surpassing export revenues five and a half times. Grants totalled $44.5 million.

Disbursed public and publicly guaranteed medium- and long-term debt was $293 million by 1985, about 162 per cent of GNP and up from $103 million in 1980. Bilateral creditors account for 78 per cent of the total. Debt service ratio reached 78 per cent in 1985, and in 1986 Portugal, the principal creditor, agreed to reschedule.

2. The manufacturing sector

Manufacturing in Guinea-Bissau is a tiny economic sector even by sub-Saharan standards. Manufacturing in 1977 employed some 1,800 people. According to the UNIDO data, the value of output in 1985 was (in 1980 prices) $5.5 million and MVA per capita almost neglible at $3. The sector contributed 1.7 per cent of GDP in 1974 and 1.5 per cent in 1985, reflecting also the negative economic growth during that period. MVA per capita regressed on the average by 2.6 per cent per year at constant 1980 prices during the 1981-85 period.

The largest manufacturing plant is a brewery, originally built for the Portuguese troops and still partly owned by Portuguese interests. It has been producing well below its annual capacity of 15,000 litres of beer and 5,000 litre of soft drinks since the Portuguese left.

Among newer plants there is a fruit juice factory at Bolama, a cotton ginnery at Bafatï with a capacity of 3,400 tons of cotton fibre a year, and a $20 million agro-industrial complex at Cumeré, with sections for dehusking 50,000 tons of rice and 70,000 tons of groundnuts a year and producing vegetable oil, soap, and animal feed.

Fishing agreements with the USSR, France, Algeria and Portugal are giving a boost to the fish processing industry. Fishing is the second most important export industry. Hides and skins are processed and some are exported.

A Citroen car assembly plant, forced to close in 1984 due to lack of components, has been reopened with a capacity of 500 vehicles per year.

Other parts of the sector consist of a few small plants for brickmaking, groundnut shelling, baking, rice and palm milling, and the production of foam mattresses, prefabricated housing and soft drinks.

In 1984 80 per cent were employed in the public sector. The mixed sector, predominantly the fishing industry with capital from the USSR, France, Algeria and Portugal, employed some 5 per cent. The private sector is predominant in agriculture and trade.

The trend is to provide more incentives for private sector industries. The reopening of the Citroen plant was one indication of this; another is privatization of state trading monopolies.

Exports consist of some processed groundnuts, palm kernels, fish and timber. Imports cover most needs. Guinea-Bissau's major trading partner is Portugal, which accounts for 50 per cent of exports (1984) and nearly 30 per cent of imports. Other important export markets include India for cashew nuts, and Spain for fish and fish products.

3. Obstacles to production

The small size of the local market, the lack of industrial skills including shortage of technical and management resources, and until 1974, the disruptions caused by the war have discouraged production as well as investment in manufacturing.

A major dilemma is the mobilisation of existing resources, as illustrated by the fact that only 5-7 per cent of the potential 250,000 tons per year fish catch is achieved. The area devoted to farming and commercial forestry probably could be tripled.

4. Policies directed towards the manufacturing sector

Efforts to recover the economy after 1980 have focused on managing the foreign exchange situation and the debt. The recovery programme is supported by the IMF, the World Bank and major donors. In order to restore internal as well as external balance, real salaries and wages have been cut, producer prices have been increased by almost 70 per cent, marketing systems liberalized, the currency sharply devalued, domestic credit expansion curtailed, and public sector demand restrained.

The economy was previously geared towards increased state control, but since 1980, and even more pronounced since 1986, economic policies have favoured an increased role for the private sector. However, the policies are controversial in the country, and positive results will probably have to come soon in order for these policies to be continued.

In the 1988-91 Development Plan priority has been given to agriculture, including fishing and forestry. The effect for the manufacturing sector, therefore, is that agro-based industries will be favoured. Reflecting this is the building of a sugar refinery with an annual capacity of 10,000 tons which will be able to satisfy all domestic needs with supplies from new irrigated plantations. The Government has also announced plans to rehabilitate the Cumere complex on a reduced basis; a 20,000-25,000 tons per year groundnut oil extraction unit would be installed and other units established for the production of inedible oil, soap and animal feed.

5. The scope for rehabilitation

The scope for rehabilitation in Guinea-Bissau is limited by the small size of the manufacturing sector as well as the size of the country as a whole, the shortage of technical and management resources, and the extremely pressured balance of payments situation. Candidate industries could, however, be located within the food processing industries such as groundnut or palm kernel processing, and fish processing.

UNIDO is currently operating six projects (see Appendix), two of which concern rehabilitation. One $49,000 project aims at improving two fish processing plants by reducing waste, up-grading maintenance and training the staff. Another project provides the Center for Industrial Development with an expert in administration.

KENYA

1. General introduction

Kenya's economic growth since independence in 1963 has been rapid, but with substantial fluctuations. It has been based upon the "easy option" of import substituting industrialisation - with a significant role for foreign capital - and transfers of land from large to small farm use and from low value to high value crops. Due to a combination of the oil price rise, international recession, and widespread drought, real annual average GDP growth rates for the 1970s as a whole were barely above the (extremely high) population growth rate (3.9 per cent). In 1985 real growth improved slightly, but the per capita growth rate in GDP remained negative. A coffee boom in 1986 resulted in a real rate of GDP growth for that year of 6.5 per cent, according to the IMF. The 1987 growth rate was expected to remain above 5 per cent; thus for the first time since 1981 a positive, and relatively large, increase in real per capita income was achieved. In 1986 GDP per capita was $402.

Structural change has been limited. The share of agriculture in GDP has fallen and Government services has risen. The main foreign exchange earners (apart from petroleum products based on processed imported oil) are still coffee, tea and tourism, which accounted for some 50 per cent of exports of non-oil goods and services in 1985.

During the 1980s Kenya has regularly recorded deficits of varying magnitudes in its trade and current accounts. Thanks to the coffee boom the current account deficit came down to $81 million in 1986. However, reflecting lower export revenue expectations, the IMF projected a deficit of $340 million for 1987, equivalent to 4.6 per cent of GDP.

The terms of trade were moving against Kenya even before the oil price increases of the 1970s. The modest improvement in tea prices in 1985 and the 1986 boom in coffee prices moderated this trend, but only temporarily. In response to its tendency towards foreign exchange crises, Kenya has turned to the IMF for standby arrangements on seven occasions since 1978, to the World Bank for two structural adjustment loans, and to the high interest eurodollar market for loans of several hundred million dollars.

In January 1988 Kenya and the IMF concluded the latest rounds of a standby and an arrangement under the structural adjustment facility. The public total debt amounts to some $3.3 billion, equivalent to around 44 per cent of GDP, according to estmates by the IMF for 1987. The debt service in relation to exports of goods and nonfactor services was likewise estimated at 35 per cent, up from 19 per cent in 1985.

2. The manufacturing sector

Although Kenya is the most industrialized country in East Africa, manufacturing accounts for less than 1 per cent of GDP. In terms of employment, manufacturing employed close to 198,000 people in 1986, accounting for 10.5 per cent of total wage employment. Growth and diversification of

industry have been rapid since independence, and from 1970 - when manufacturing accounted for 7.2 per cent of GDP - until 1980, manufacturing recorded an average annual rate of growth of more than ten per cent. For the period 1981-84 manufacturing showed a slower rate of average annual real growth at 3.1 per cent. According to the IMF, value added in 1986 for manufacturing grew by 5.9 per cent, and it was expected to grow by some 5 per cent for 1987.

The favourable performance in these later years in many sub-sectors of manufacturing reflects several positive developments. Improved agricultural production has increased the supply of inputs to agro-based industries and has also increased demand for manufactured goods. The sharp upturn in foreign exchange earnings in the coffee boom year 1986 allowed the importation of needed inputs for the sector, while the fall in oil prices reduced the cost of production. Removal of sales tax on some items and the reduction of controlled prices of certain manufactured goods also helped improve the performance in some manufacturing sub-sectors.

Food products is the most important sub-sector in terms of share in MVA with 24.7 per cent in 1986. Altogether food industries employed 42,000 people in 1985, just over 21 per cent of total manufacturing employment. The average annual growth rate of value added in food industries was 4.1 per cent for the period 1975-86. The production in this sub-sector in 1986 included some 350,000 tons of sugar (produced in the seven sugar district refineries throughout Kenya), 340,000 tons each of maize meal and wheat flour, and 150,000 tons of various pineapple products.

Beverages is the second largest sub-sector with 8 per cent of MVA in 1986, but the 5,218 employees in 1985 represent only 2.6 per cent of total manufacturing employment for that year. A major producer is Kenya Breweries Ltd, which is part of East African Breweries Group and operates four breweries in Kenya. Output in the whole sub-sector in 1986 included 302 million litres of beer, 182 million litres of mineral waters and 0.5 million litres of spirits. The growth in this sub-sector's value added was on the average 3.2 per cent a year during 1975-86.

Kenya has about a dozen textile mills. Textiles and clothing together accounted for a 9.8 per cent share of MVA in 1986 and employed 33,200 people in 1985, or 16.7 per cent of total manufacturing employment. The growth of value added for the period 1975-86 was around 4.5 per cent a year in these two sub-sectors.

The chemicals industries made up 10 per cent of total manufacturing value added in 1986 and employed 12,600 people. Industrial chemicals expanded its value added by 5 per cent a year during 1975-86, and other chemicals by 9.8 per cent a year. Production included ethanol processed from molasses for use as fuel additive, nitrogenous fertilizers, and tyres by Firestone East Africa Ltd.

The Mombasa petroleum refinery, 50 per cent owned by the State and the rest by a group of seven oil companies, accounted for 3 per cent of MVA in 1986 and employed 560 people. Established in 1963, the refinery can handle 4.2 million tons of crude a year, but is in great need of modernization. The average annual growth in value added 1975-86 was 11.5 per cent.

The transport equipment sub-sector accounted for 4.7 per cent of MVA in 1986 and employed nearly 27,000 persons, or 13.5 per cent of manufacturing employment. The growth in value added during the period 1975-86 was no less than 19.1 per cent per year. The sub-sector is made up largely of three motor vehicle assembly plants producing trucks, commercial vehicles, pickups, minibuses and four-wheel drive vehicles from kits supplied by General Motors, British Leyland, Ford, Volvo, Peugot, Fiat, Isuzu, Toyota and Volkswagen. About 20 per cent of components are domestically produced.

Growth of value added per employee during the period 1975-86 shows variations across sub-sectors with transport equipment displaying the highest growth rate of some 21 per cent. Food industries show a slight positive growth of 0.8 per cent, but textiles, shoes, cement, wood and furniture industries all show a negative development in this respect, reflecting various constraints and difficulties (see also Section 3).

The pattern of ownership is dominated by the private sector, as indicated by the fact that of total manufacturing employment (165,000 persons), some 130,000 persons work in the private sector. A large portion is also foreign-owned or controlled. However, there has also been heavy State investment in manufacturing, particularly in firms attractive to foreign capital. Reflecting this and the heavy protection offered to industry, Kenya's industrial structure is unusually strongly skewed towards large-scale units and commodity groups that are relatively capital-intensive.

The trend in policies is mixed. On the one hand, the Government has imposed stricter rules for foreign investors, causing some foreign companies to divest. On the other hand, the Kenyan Government is under pressure from the World Bank and others to liberalize its rules and regulations. There are examples of new foreign investors committing themselves. China, for instance, has agreed to establish a joint venture for production of colour television sets, solar heating systems and other electronic equipment.

The overwhelming majority of manufactured exports consist of processed fuel and lubricants from the Mombasa refinery, which is totally dependent on imported crude. Otherwise, manufactured exports consist mainly of the marginal disposal in neighbouring countries of goods essentially produced for the home market. Since Kenya is not a cheap labour economy, processed primary products, particularly pineapple and other food products, represent the most promising prospect for Kenya. Imports consist of industrial machinery, iron and steel, petroleum products, fertilizers, and artificial resins and plastic materials. The United Kingdom remains the most important trading partner, but the neighbouring countries represent major potentials for Kenyan manufactured exports.

3. Obstacles to production

The downturn in foreign exchange availability in recent years is the major obstacle facing Kenya's manufacturing sector. Devaluations of the shilling have made imported raw material and spare parts more expensive. The drought in 1984-85 severely hampered agricultural production, which resulted in falling supply to agro-based industries, such as sugar refineries. As a

result, sugar had to be imported both in 1985 and 1986. The cotton-based textile industry was also affected by the drought, but there the fall in production was exacerbated by low producer prices, erratic payment procedures and inefficient marketing.

There is also some uncertainty regarding the political development, which restrains new investments both by domestic and foreign investors. The dominant role of foreign capital is to some extent backfiring on Kenya under the present conditions, given the stringent rules of origin applied by the PTA for East and Southern Africa if companies are to qualify for tariff reductions.

4. Policies directed towards the manufacturing sector

Since 1980, industrial policy has been shifting from protected import substitution towards trade liberalization and export promotion. The 1986 Sessional Paper, outlining the Government's strategic economic thinking, maintained this commitment, stressing in particular the need for Kenyan industry to become more competitive. The growth rate target is 7.2 per cent per year, based on both expansion of the domestic market and improved export competitiveness. The 1986/87 budget contained a series of measures to promote small-scale industries, in particular the establishment of new industries in areas other than Nairobi and Mombasa (decentralization). Because the Government has decontrolled producer prices, factories can now buy directly from farmers. Regarding foreign investments, remarks by President Moi do not appear to be a prelude to any change in Kenya's traditionally hospitable attitude to foreign investment.

The volume of manufactured exports has actually fallen since 1973. However, the growth target for manufactured exports in the 1983-88 Development Plan is 25 per cent a year, and the above-mentioned Sessional Paper sets the target at 6 per cent a year over the rest of this century.

5. The scope for rehabilitation

From a macroeconomic point of view, the scope for industrial rehabilitation in Kenya, at least on any significant scale, is mixed. To its advantage, Kenya has by regional standards a large and diversified manufacturing sector, i.e. there is a broad selection of candidate industries as well as easily accessible export markets. In broad terms, the food processing industry is a major candidate industry for rehabilitation. It is one of the most important industries by any criteria, has a long history in the country, and has a good regional export potential.

UNIDO is presently operating eight projects in Kenya (see Appendix), of which at least one - the rehabilitation of Synthetic Fibres, Kenya, Ltd. - is directly concerned with rehabilitation.

LESOTHO

1. General introduction

After a fairly rapid growth of GDP - from very low levels - during the 1970s, Lesotho's GDP has increased only marginally during the 1980s. Average growth was down to 0.5 per cent per annum during the mid-1980s. Per capita GDP, which increased from US$ 229 in 1975 to US$ 311 in 1980, has stagnated around US$ 300 during the 1980s.

The economic slowdown is partly the result of the closure of the country's main diamond mine. The GDP share of mining and quarrying fell from some 9 per cent of GDP in the late 1970s to 3.3 per cent in 1984. The decline of agriculture is another reason. The sector's GDP share fell from 27 per cent of GDP in 1979 to 15.6 per cent of GDP in 1984, but it still provides income to 70 per cent of the labour force. Agricultural decline is a consequence of rapidly rising rural population densities which have caused widespread erosion. There have thus far been few attempts to improve and modernize farming methods, and other sectors of the economy provide too little employment. The major sector in the economy now is services, providing 58 per cent of GDP in 1984.

Lesotho is both economically and politically highly dependent upon South Africa. Miners' remittances - almost one-third of the labour force is employed in South African mines - now account for some 50 per cent of national income. South Africa is Lesotho's major trading partner. The exploitation of Lesotho's major untapped natural resource - hydroelectricity - will be executed as a joint venture with South Africa, which will also receive water. The Highland Water Scheme's impact on Lesotho's economy will be enormous; its cost alone is estimated at four times the country's present GDP. Lesotho is a member of the South African Customs Union (SACU), which implies, inter alia, free entry of South African products, against which Lesotho producers are in many cases unable to compete. The country's dependence on South Africa is exacerbated by its land-locked position.

Lesotho's debt burden is fairly modest, although it doubled between 1980 and 1985, reaching US$ 172 million or 30 per cent of GNP, and increased to $200 million in 1987. Due to the high percentage of concessional loans, debt service has been kept low (6 per cent in 1985).

2. The manufacturing sector

Data on the manufacturing sector are scarce. Its 1986 contribution to GDP (including artisanal production) has been estimated at 3 per cent; the modern manufacturing sector, consisting of at most some 50 enterprises, would account for approximately one-half of this figure. The sector's GDP share has doubled since the early 1980s, but due to the country's rapidly rising population, per capita MVA has remained at US$ 16 for the past five years. Total employment has been estimated at 8,700 in 1985. The majority of enterprises employs fewer than 100 persons.

Few post-1975 branch level data were available. The 1975 data show that food products and "other" manufactures dominated the sector in output terms, accounting for 23 per cent each. In MVA terms, however, non-metallic minerals dominated with 22 per cent in 1980, followed by textiles and wearing apparel (14.8 per cent) and printing and publishing (13.3 per cent). Textiles and wearing apparel were also the major employer with 29.6 per cent of the manufacturing work force in 1975, followed by wooden furniture with 22.5 per cent. In connection with the Highland Water Scheme, a building materials enterprise and two metal products enterprises have been recently established. In the absence of sufficient data, no review of structural change could be made.

No data were available on manufactured exports. Although these may have been insignificant in the past, they are likely to have grown in recent years: South African enterprises (e.g. in the footwear and textile industries), attracted by favourable investment incentives, have used the country as a manufacturing basis for exports to South African and international markets. Manufactured imports consist largely of machinery and transport equipment and consumer goods.

Ownership in the sector is largely private, with an unknown but considerable share of South African ownership. The Government's Lesotho National Development Corporation (LNDC) has entered in a number of joint ventures with private industries. Total employment in industries with LNDC participation amounts to some 4,000.

Future developments will very much depend upon South African investors. At present, South African-owned garments and footwear factories are successfully exporting from the country. These may be joined by light engineering enterprises. LNDC is also stimulating the establishments of (unspecified) import-substituting industries. Generally, the footloose nature of South African investment and the politically volatile situation in the region makes it difficult to speculate about longer-term trends.

Although little is known about the small-scale industry (SSI) sector, labour-intensive SSIs producing simple goods for the domestic market would appear to have some growth potential. During the 1986/87-1994/95 period, some 800 jobs are to be generated in the sector as a result of government programmes.

3. Obstacles to production

As long as overseas buyers of re-labelled South African exports do not announce an embargo on these goods, it is likely that the present growth of industry as a whole will continue. There does not, however, seem to be much scope for the development of indigenous entrepreneurship in manufacturing (SSI excepted), given the omnipresence of South African investment and goods. There is a tendency for professionals and other qualified workers to seek employment in South Africa's "homelands". This weakens the human resource base for domestic industrial development, including the industrial institutions' framework.

4. Policies directed towards the manufacturing sector

Industrial planning and policy execution comes under the Ministry of Trade and Industry; little industry-specific planning, however, appears to have taken place in the past. Since 1986, UNIDO has been supporting industrial planning.

The Draft Fourth Plan (1986/87-1989/90) gives priority to export-oriented industries, mainly those oriented towards the South African market. In part, these are to be based on a more intensive use of domestic agricultural products. However, the scope for domestic resource-based industries (pottery and bricks excepted) is limited unless a radical improvement and reorientation of agricultural production takes place.

Although active in all economic sectors, LNDC has the specific task of stimulating industrial development. In 1984, the tax exemption for companies investing in Lesotho was extended from six to 15 years; non-nationals are also allowed to enter into long-term lease contracts for land used for industrial and commercial purposes. The incentives, however, generally do not match those offered by South Africa's "homelands". It is expected that some 7,600 new jobs will be created in LNDC-assisted enterprises during the Fourth Plan. No breakdown by industry was available. For small-scale domestic industry, the Basotho Enterprises Development Corporation (BEDCO) has been formed. In recent years, it has successfully stimulated bulk-buying projects and promoted wood-working and garment enterprises.

Lesotho is a member of SADCC. It has been proposed that Lesotho would become the locus for several industries oriented towards the SADCC market, including textiles, salt refinery and agricultural implements. These projects have not been realized thus far.

5. The scope for rehabilitation

The scope for rehabilitation in the formal sector seems limited, given the dominant presence of successful South African enterprises. In the informal domestic sector, absence of data prevents an assessment of rehabilitation needs. It has been suggested in a 1987 World Bank study that BEDCO, in spite of its modest resources, could improve its performance as a small-scale industry promoter. This would involve a reduction of its credit operations and increased attention to training. No programme appears to have been formulated on the basis of this recommendation.

LIBERIA

1. General introduction

The various sub-sectors of the services sector, totalling some 47 per cent of GDP in 1985, dominate the Liberian economy. The major part of earnings in the services sector consists of revenue from ship registration fees, since Liberia is the world's largest flag state. Agriculture, employing the greater part of the population, accounted for 19.3 per cent of GDP in 1985, up from 15.2 per cent in 1975. World Bank estimates for 1985 show that the agricultural sector accounted for 37 per cent of GDP, which may include primary processing of rubber. Although these figures are radically different, the growth tendency of agriculture is visible in the World Bank figures as well. Growth of the sector's share seems mainly due to expanding rubber production, combined with overall stagnation in the rest of the economy.

The economic stagnation (per capita income fell from US$ 490 in 1980 to US$ 350 in 1985) is mainly a result of low prices for rubber and iron ore, the country's major exports; together they accounted for over 80 per cent of foreign exchange earnings in 1985. The activities of the Firestone Company, by far the country's largest enterprise, moreover, have few linkages to the rest of the economy. Rubber is only processed to the extent that it is needed for shipping.

A factor that has contributed to the decline of the economy in the 1980s is the internal unrest, which has, inter alia, resulted in extensive capital flight. Shortcomings in the management of the economy which have been a chronic problem are now exacerbated by a continuous turnover of key personnel in ministries and other Government bodies concerned with economic development.

The Government has done little to stop the growth of debt which has been contracted to finance its expenditures. Total external debt stood at US$ 1 billion in 1986, 121 per cent of GDP. Six debt reschedulings took place between 1975 and 1985, but no serious attempts were made to implement adjustments which might have resulted in improved economic performance and a greater ability of the country to pay its arrears. Instead, the Government has taken recourse to such expedients as printing money and delaying payment of civil servants, measures which have exacerbated the situation. In 1987, Liberia's unwillingness to implement changes resulted in a stop of IMF/World Bank loan disbursements. A United States financial experts mission is now assessing the country's economic situation. It is expected to suggest radical changes in the Government's economic management; whether these will be implemented, however, is likely to depend on changes in the administration that are just as radical.

2. The manufacturing sector

The contribution of the manufacturing sector to GDP has decreased from 8.4 per cent in 1980 to 7.5 per cent (World Bank: 5 per cent) in 1985. Over the 1980-1984 period, per capita MVA decreased from US$ 41 to US$ 29. The manufacturing labour force decreased from 3,900 in 1975 to 2,000 in 1986. These data refer presumably to the larger-scale establishments only. A 1983 USAID publication puts industrial employment at close to 6,000; this includes small-scale tailoring, bakeries, etc. Data on the sector are often unreliable.

Such data as do exist show that the sector only has two branches which display consistent growth: beverages and non-metallic mineral products (rubber and iron ore processing would also have to be included, but information is not available). Production in the beverages branch expanded from US$ 8.8 million in 1975 to US$ 27.3 million in 1985; the figures for non-metallic mineral products are US$ 5.1 million and US$ 13.3 million, respectively. The food products sector ranks third, but its share has decreased. While 1975 output was US$ 7.4 million, 1985 output was US$ 6.9 million. An even stronger decrease was registered in the chemicals sector, where output sank from US$9.6 million to US$ 4.6 million. Recently the furniture and metal products branches have shown growth promise, but these industries are still small. The country has a petroleum refinery, but no recent data on its production are available.

Most industrial enterprises are small, the average being 15.4 employees. The refinery (and possibly the rubber processing plants on the plantations) are much larger, but no details are available on these. The small-scale sector is dominated by garment making and wood products manufacturing.

For the future development of the sector, the role of small- and medium-scale enterprises (SME) is considered to be crucial. They provide a reservoir of entrepreneurship and, with their high domestic-resource content, the sector would contribute to saving foreign exchange. The most promising industry in this respect is wood products, which has a good domestic raw material base. Moreover, capital costs are modest and employment creation effects are strong. In the large-scale sector, rubber and iron ore processing will continue to play a role; however, the links of these basic processing activities to the rest of the manufacturing sector are very weak. A large-scale scrap metal recycling plant, involving equity participation by a Pakistani firm, has been established recently. The re-usable, re-rolled steel is to be used locally, while the non-ferrous metal is to be exported to other West African countries.

Trade in manufactured products is dominated by crude rubber on the export side. If crude rubber is excluded, manufactured exports accounted for only 3.1 per cent of total export value in 1984; the main products in this case are vegetable oils and fats (palm oil), accounting for 50 per cent of manufactured exports, and wood. Manufactures dominate imports, with the most important items being transport equipment, machinery and basic manufactures.

3. Obstacles to production

The decrease of primary exports foreign exchange earnings has made it increasingly difficult for the manufacturing sector to acquire sufficient inputs, spare parts and equipment. Other obstacles include: poor maintenance, over-staffing, frequent power cuts, weak management, limitations of the domestic market, uncompetitiveness of Liberian products vis-à-vis imports, and a weakly developed industrial credit and planning system. Financial marketing and managerial constraints are especially strongly felt in the SME sector. Inter-industrial linkages are weak; there is no ling between basic processing of iron ore and rubber and other industrial activities. Government agencies that have a bearing on industry suffer seriously from a shortage of competent and motivated staff.

4. Policies directed towards the manufacturing sector

On the whole, the Liberian Government has been committed to a private-enterprise oriented industrial development strategy, as expressed in a generous investment incentive strategy. Public manufacturing ownership strongly increased for a time during the early 1980s; however, since public management soon ran into serious problems, the policy has now been reversed. Industrial development planning and programming is carried out by the Ministry of Planning and Economic Affairs; the Ministry of Commerce, Industry and Transportation is in charge of "general industrial policies in support of the manufacturing sector". The division of tasks between the two Ministries cannot be clearly established from the available documentation. An important Government agency for industrial development is the National Investment Commission (NIC), concerned with promoting industrial growth through, inter alia, the provision of technical and financial assistance. NIC has a special department for SME support. A free zone has been established near Monrovia, but it has failed to attract investors.

Industrial policy making has thus far been rather inefficient. Under the 1986/87-1988/89 Economic Recovery Programme (ERP), greater priority is to be given to industry, especially SME. Total planned allocations to the manufacturing sector equal $7.9 million, of which the external contribution is expected to be as high as 77 per cent. A contingency plan has also been drawn for this period in which the manufacturing sector's share is $2 million, allocated wholly to the SME sector. The priority projects are broadly in line with the policy advice of multilateral technical co-operation agencies including UNIDO. The three major concerns of the ERP within the manufacturing sector are (a) revitalizing the SME sector; (b) strengthening intersectoral linkages within manufacturing and its integration with the rest of the national economy (e.g. rubber and palm-oil processing); (c) the development of metal-based industries and technological upgrading within existing enterprises.

Under ERP, industrial policy making and execution capability in the Ministries is also to be improved, and a number of infrastructural bottlenecks are to be removed.

5. The scope for rehabilitation

Although rehabilitation is unlikely to be successful if the general political and economic environment of the country does not improve drastically, and although assessments are hampered by the absence of sufficient good-quality data, a 1988 UNIDO Industrial Development Review has identified a range of companies requiring rehabilitation and capable of benefiting from regenerative activities. Most of these are found in the chemicals and plastics branch, with others in metal products, food products and furniture. The main problems identified were:

- contracting markets or strong market presence of competing imports;
- inappropriate or obsolete machinery;
- financial difficulties.

These problems are interrelated, and the study therefore points out the need for comprehensive rehabilitation programmes. These should:

- establish criteria for the extension of rehabilitation assistance;
- identify the level of rehabilitation required over the short- and medium-term, its composition (technical assistance, import financing, access to credit etc.) and the domestic and foreign components of this assistance;
- establish appropriate channels for the selection of manufacturing units considered worthy of rehabilitation;
- set up an institutional network for the delivery of rehabilitation assistance and for monitoring its use; and
- consider the early establishment of a technical unit within National Investment Commission (NIC).

The latter would become a key unit for the transfer of modern management techniques and the provision of consultancy services to domestic manufacturing enterprises.

LIBYA

1. General introduction

After Libya began to export oil in 1961, it was transformed from one of the poorest countries in the world into one with a GDP per capita of $7,589 (1985). Approximately half of the contribution to GDP comes from the oil sector. Between 1970 and 1980 GDP per capita grew by an average annual rate of 5.1 per cent, reflecting the rapidly increasing oil revenues of the 1970s. For the period 1981-85 the average annual rate of growth in per capita GDP was -5.4 per cent. Oil revenues peaked in 1980 at some $22 billion, and fell to $5 billion in 1986. This reduction from previous levels has had severe effects on the economic activity of the country and per capita GDP.

Due to its oil wealth, Libya has developed rapidly in fields such as social services, and has undertaken ambitious physical infrastructural projects. Development priorities have also included agricultural self-sufficiency, expansion of heavy industry based on cheap energy supplies, and promotion of the non-oil productive sector.

The rate of growth has decelerated from nearly 8 per cent in 1981 to a meager 1.7 per cent in 1985. This contraction led to repeated revisions of the targets in the 1981-85 Development Plan. A third Development Plan, covering the period 1986-91, had still not appeared by October 1987, as targets had to be reassessed and many projects cut. Overall, there are very few economic areas that have not been affected by the slump. One is military spending, which, according to some estimates, has remained at a level of about $3 billion per year since the 1970s. Secondly, the much publicised Great Man Made River Project, estimated to cost $3 billion in its first out of three stages, seems to receive continued budgetary allocations despite the general shortage of foreign exchange.

The expulsion of large numbers of foreign workers is another effect of the recession. Some 570,000 foreigners were working in Libya in 1983, notably 174,000 Egyptians and 74,000 Tunisians, of which more than 30,000 were expelled.

Petroleum totally dominates Libya's foreign trade, accounting for 99 per cent of total exports. Part of that, however, consists of refined products, natural gas and petrochemicals. As export revenues have declined sharply in recent years, imports have had to be curtailed in order to prevent a balance of payments crisis. Imports amounted to some $7.3 billion in 1981, but were reduced to $4.44 billion by 1986. As a result the (civilian) current account showed a very modest deficit of $13 million. This was equivalent to 0.1 per cent of GDP, down from minus 13 per cent in 1981 - the first year of declining oil revenues. Total foreign exchange reserves have fallen from $13.1 billion in 1980 to $3.6 billion in 1984, huge arrears have accumulated on trade debts, and Libya's interest in barter agreements has grown considerably. Total foreign debt (exclusive of most trade-related arrears) in 1985 was estimated at $3.2 billion, most of it short-term.

2. The manufacturing sector

Manufacturing accounted for 4.1 per cent of GDP in 1985, up from 1.3 per cent ten years earlier. The average annual rate of growth from 1970-85 was 16.7 per cent, with 21.2 per cent in 1970-80 and 9.7 per cent during the first five years of the 1980s. By comparison, MVA per capita grew at an average annual rate of 12.2 per cent during 1970-85, 16.4 per cent during the 1970s, and 5.6 per cent from 1981-85. In 1985 the MVA per capita stood at $311, more than five times the African average. The IMF reports even more favourable growth figures: for the period 1981-84, 11 per cent in real average annual growth of value added in the industrial sector, and a further 26 per cent in 1985, reflecting a sharp increase in the output of refined petroleum products. As a result, the IMF has recorded that the share of manufacturing in real non-oil GDP rose from 5.3 per cent in 1981 to 8.8 per cent in 1985. UNIDO data shows that manufacturing in 1980 employed 16,500 people.

Government investment in the sector during the 1970-86 period resulted in 139 new establishments during the production stage. These included 52 food industry projects, 23 chemical and petrochemical factories, 17 mineral and engineering factories, 16 textile, clothing and leather goods factories, and 8 wood and paper industry factories. As a result, the value of non-oil production rose from $1,610 million in 1970 to $15,280 million in 1983, reducing the petroleum sector's share of GNP from 63 per cent to 50 per cent.

The largest manufacturing sub-sector still is petroleum refineries which accounted for a little more than 40 per cent of gross manufacturing output and 23.2 per cent of value added in 1980, the latest year covered by UNIDO data. The major refineries are at Misurata, Zawiya (which opened in 1974 and was enlarged in 1977), and Tobruk, where a unit with a capacity of 20,000 barrels per day (b/d) was opened in 1986. The largest unit is at Ras Lanuf which was begun in 1978 and started production in 1985 with a capacity of 120,000 b/d, half the originally planned capacity. The total refinery capacity is about 370,000 b/d, and actual throughput is believed to have been around 200,000 b/d in 1986.

Food products accounted for some 16 per cent of gross output and 10 per cent of value added in 1980, declining from 1975 when the corresponding figures were almost 24 per cent and 15 per cent, respectively.

Major petrochemical installations are located at Marsa el Brega where ammonia and ethanol plants came into production in 1977 and additions were made later. In 1986 a new unit for processing natural gas was under production. More additions are planned at Ras Lanuf. A contract for a 330,000 tons per year ethylene unit was awarded in 1987, but other planned contracts have yet to be awarded. The plans include units for manufacture of high and low density polyethylene, polypropylene, ethylene glycol, butadene, benzene and methyl tertiary butyl ether. Total ammonia production reached 520,000 tons in 1986, mostly produced at the Marsa el Brega complex.

Fertilizer production is planned to expand considerably. Urea is produced at Marsa el Brega and significant additions are planned at Sirte, including units for urea, ammonium nitrate, ammonium sulphate, and phosphate fertilizer. All the additions, however, belong to those projects which have been delayed due to lack of funds.

An iron and steel complex at Misaruta has partly been completed. The plant includes a direct reduction iron works, two steel mills with a capacity of 670,000 tons per year and 650,000 tons per year, respectively, and hot and cold rolling mills. A second phase was planned to raise output to 5 million tons per year, using local iron ore deposits at Wadi Shatti.

Other manufacturing branches of any significance are small-scale tobacco, wood, paper, textiles and soap. Together they accounted for about a third of gross output and value added in 1980. Tobacco accounted for 27.5 per cent of gross output and 38.9 per cent of value added in 1975, but in 1980 the shares had declined to 12.2 per cent and 15.9 per cent respectively.

According to UNIDO data, the most rapid growth between 1975 and 1980 is recorded for the sub-sector "other non-metallic mineral products", which tripled its nominal value added and increased its share of total manufacturing value added from 11.2 per cent in 1975 to 14.6 per cent in 1980. In terms of growth of real value added for the period 1975-85 the same sector shows the fastest growth - 18.13 per cent - followed by petroleum refineries with a growth of 7.87 per cent, food products with 6.86 per cent, and tobacco with a modest 1.11 per cent.

The entire oil-sector is under Government ownership through the National Oil Company (NOC). For exploration and drilling there is co-operation with foreign oil companies, notably American, but the refineries and the petrochemical industry are under NOC.

The trend is to postpone planned projects due to lack of funds. Spending on manufacturing has been below budget throughout the 1980s. Spending on heavy industry was 83 per cent of the budgeted allocation in 1985. Light industry was even more seriously affected with only 75 per cent of budgeted allocation spent. The largest projects in the 1981-85 Development Plan to be postponed were the fertilizer complex at Sirte, an aluminium complex at Zuwara, and the petrochemical complex at Ras Lanuf.

3. Obstacles to production

The delay of new projects is primarily a result of the turmoil on international oil markets and Libya's dependence on oil exports for foreign exchange earnings. The foreign exchange shortage also adds to the national shortages of men and material.

Despite the advances in manufacturing, there has been considerable underutilization of capacity in several industries such as engineering, food products, and building materials. To a large extent the excess capacity has been one consequence of the mass expulsion of expatriate workers, but it is primarily linked to the cuts in development plans, forced upon Libya by the turmoil on the world oil market.

4. Policies directed towards the manufacturing sector

The rapid expansion of the manufacturing sector in recent years reflects the high priority given to its development in line with the policy to diversify the economy. According to the OPEC new agency some $62,500 million were spent between 1970 and 1983 to develop industry and reduce the dependence

on the petroleum sector. As a result, the contribution to GNP from such non-petroleum production rose from 37 per cent to 50 per cent. All new industry is planned by the General Public Organization for Industrialization.

Development priorities have included expansion of heavy industry based on cheap energy supplies, and promotion of the non-oil productive sector. The 1981-85 Development Plan initially allocated 22 per cent of investments to industry. However, the contract of oil income has caused repeated revisions throughout the planning period. A third Development Plan, covering the period 1986-91, had not appeared by October 1987.

5. The scope for rehabilitation

Many industrial enterprises are likely to be in need of rehabilitation as a result of the severe conditions during recent years. Candidate industries will primarily be found in the traditional branches such as processing agricultural products, carpet weaving, tanning and leather working and shoe making.

UNIDO is operating nine projects, of which six are large-scale projects (see Appendix). Among them is a $5.9 million project to assist in strengthening the Libyan Cement Company.

MADAGASCAR

1. General introduction

The Malagasy economy is dominated by agriculture, which accounted for 40.6 per cent of GDP in 1984 and some 80 per cent of export earnings. The sector employs over 80 per cent of the labour force. The services sector accounted for 49.6 per cent of GDP in 1984.

The country contains considerable mineral deposits; however, with the exception of chrome, their scattered and isolated location has thus far prevented large-scale exploitation.

Madagascar's economy has registered an almost continuous decline from the early 1970s to 1983/84. Per capita income was US$ 440 in 1970 and decreased to US$ 289 in 1986. After the implementation of a number of economic reforms, the economic situation has stabilized in recent years. GDP growth, however, is still out-stripped by population growth.

Most of the problems of the economy can be traced to the mid-1970s, when the whole of the economy was placed under Government control. Foreign enterprise was nationalized, price fixing was generally introduced, and marketing of agricultural crops became a Government monopoly. In general, agriculture was neglected in favour of industrial investment, much of which proved non-viable.

The consequence was a serious decline of economic activity in all sectors of the economy. Imports of farmers' domestic products grew and exports decreased. Decreasing export earnings were not only a consequence of decreasing agricultural production but also of decreasing world market prices for Madagascar's traditional exports. In spite of severe cuts in imports (which again resulted in a shortage of essential goods for a.o. agriculture and manufacturing), the country had to borrow massively. In 1987, the disbursed debt stood at US$ 3.2 billion; it has exceeded GNP since 1985. Debt has been rescheduled on various occasions, while arrears have mounted.

From the mid-1980s onwards, Madagascar has implemented economic reforms under IMF and World Bank pressure. These have succeeded in stabilizing the situation and have paved the way for new financial assistance. The international donor community is obviously confident that the economy's improving performance will enable the country to tackle the debt issue in the future.

2. The manufacturing sector

The manufacturing sector accounted for 10.5 per cent of GDP in 1975 and 6.3 per cent in 1984. Per capita MVA decreased from US$ 42 to US$ 29 over the same period. Modern manufacturing employed 49,000 persons in 1984. No figures were available on artisanal production, but the large-scale sector comprised only about 100 enterprises in 1983/84.

The most important branches in the sector are food and beverages and textiles and wearing apparel. Food and beverages accounted for 41.8 per cent of gross output, 34.3 per cent of MVA and 48.7 per cent of employment in 1984. In that year, textiles and wearing apparel accounted for 35.5 per cent of gross output, 43.3 per cent of MVA and 29.7 per cent of employment. Very little information is available on the major products of these industries.

Although virtually all manufacturing branches are represented in the sector, the contribution of other branches is invariably very small. Paper and printing appears to be the most important among these, with 6.3 per cent of gross output and MVA in 1984. Chrome ore concentrates, not included in the available industrial statistics, should also be mentioned. The industry's production has declined strongly, however - from 176,000 tonnes in 1978 to 50,700 tonnes in 1983. In recent years, production appears to have been increasing again.

The decline in industrial production has led to a shift in branch shares over the years. The combined share of the minor industries was larger in 1975 than it is today: in 1975, they accounted for 36.7 per cent of gross output, 37.6 per cent of MVA and 32.9 per cent of employment; in 1984, these shares were 22.8 per cent, 21.4 per cent and 21.6 per cent. The decrease has been virtually uniform over all the minor branches. Manufacturing, in other words, is less diversified now than it was in the mid-1970s. It is not clear that this trend has yet been reversed, although there are some signs of overall recovery (real MVA rose again by 7 per cent in 1985).

Government ownership plays a key role in the manufacturing sector. The Government owns or controls 70 modern sector establishments, one-fifth of the total in modern manufacturing. These establishments cover a wide range of industrial activities, from meat and sugar processing to textiles, fertilizers and metal products. All industries that are considered of strategic importance are Government-controlled. It may therefore be assumed, although figures to support the assumption are not available, that public sector enterprises dominate production and that their performance is decisive for the performance of the sector as a whole.

Manufactured exports were dominated by textiles (almost 40 per cent) and petroleum products (some 15 per cent). The petroleum refinery, however, has been closed down. Wool also accounted for 15 per cent. Remaining exports were leather and chrome ore. Both sugar and clove oil accounted for approximately 7-8 per cent of manufactured exports in 1984.

Imports are dominated by manufactures. Some 50 per cent consisted of energy products in 1984. Road vehicles accounted for 10 per cent. Other important manufactured imports, apart from chemicals, were capital goods and intermediate products for industry, indicating the sector's strong import dependence.

Madagascar disposes of a large natural resource potential: minerals, forest, abundant agricultural land and ocean fish. The present policy changes are likely to stimulate the agricultural sector in particular. Given the good raw material base and assuming further improvements in its exploitation, domestic resource processing industries could play a central role in future

industrial development. These industries could include cotton textiles, footwear, pharmaceuticals and food processing. Chrome processing and metal products could become important over the long term.

3. Obstacles to production

The problems in the sector are mainly the result of inappropriate Government policies. The wholesale nationalization of key economic activities in the mid-1970s took place without much regard to the basic principles underlying viable economic activities. Lack of autonomy for company management, unrealistic price fixing methods, and inadequate attention to the viability of new projects (kept alive behind high tariff walls) are mentioned as the major negative consequences of policies followed in the past. Problems were compounded by the neglect of the physical infrastructure and of industrial services. Economic decline resulted in foreign exchange shortages which again severely restricted imports of manufacturing inputs and spare parts; because it also restricted imports of new equipment, the sector's capital stock is consequently obsolete and prone to breakdowns.

Neglect of the rural areas (e.g. rural infrastructure) and unattractive buying prices for agricultural products led to stagnation of agricultural production, especially such industrial inputs as cotton and groundnuts. The positive impact of recent development policy reorientations is beginning to be felt now; further improvements will, however, depend on efficient longer-term policies.

To an extent, markets are a constraint to industrial development. Low per capita income and austerity measures will in the coming years preclude a major expansion of the domestic market. Demand for a number of Malagasy products has fallen in Europe, the country's major overseas market; barriers to entry in overseas markets are another constraint.

4. Policies directed towards the manufacturing sector

The available material provides few details on manufacturing policies. Available information on public enterprises and their present reforms, however, would in many cases also have a bearing on manufacturing.

In the past, a large number of non-viable enterprises was established by the Government. Like other loss-making enterprises, these were continuously subsidized by the Government to prevent closure, perpetuating their weaknesses and worsening the country's financial problems. Few attempts had been made to expand the public sector in a coherent way; the result was an unbalanced structure of the sector.

The present reforms include:

- reduction of administrative interference;
- reduction of price controls;
- more scope for private enterprises;
- disbanding a number of public enterprises;
- tighter financial discipline in public enterprises;
- improved longer-term planning.

It is not clear whether these reforms have already been introduced in all public enterprises. A new investment code that went into effect in 1985 offers more scope for private and foreign investment. A range of fiscal and other incentives is available, depending on a project's size, contribution to the economy, and employment created.

5. The scope for rehabilitation

Before the question of plant-level can be effectively addressed, many changes are still needed to improve the environment in which industry operates.

As indicated above, it is not clear yet whether the new measures to stimulate industry have been implemented everywhere, or whether they have been implemented successfully in all cases. Moreover, Government agencies dealing both with industrial planning and public sector enterprises need to be made more efficient and must improve staff expertise. In addition, the information system on the industrial sector should also be improved and expanded. Both the full implementation of the announced measures and the improved performance of industry-related Government agencies would do much to strengthen industry.

The available material indicates that closure of public sector enterprises will be unavoidable in a number of cases. However, no details are given either on the industries or the criteria of their closure.

An unidentified number of public enterprises, presumably including manufacturing enterprises, is presently being reorganized. In the absence of data, the scope for reorganization in the public sector is unknown. An indication of the extent of the problem is the overall capacity utilization rate, which has been estimated at 50 per cent.

Funds for rehabilitation are presumably included in the multilateral assistance made available in recent years. The IMF has made available SDR 260 million since 1981; US$ 630 million was pledged in 1986. The World Bank made SDR 50 million available in 1983. Part of these funds has been used to finance imported inputs and spare parts, resulting in immediate productivity gains in a number of heavily import-dependent industries. Unidentified donors provided US$ 14 million for the rehabilitation of textile plants.

At this early stage of rehabilitation, much importance is attached to the auditing and technical evaluation of companies. This forms the basis of feasibility studies and expected future performance studies. Shortage of qualified staff appears to be a major constraint in the evaluation process. Great importance has also been attached to identifying possibilities for strengthening inter-industry linkages and links with private enterprise.

A US$ 399,200 UNDP/UNIDO project is to assist a public-sector furniture and wooden ships enterprise in Madagascar. The main components are an improvement of the enterprise's administration and a diversification of production away from ship building which is no longer considered a viable operation. Renewed growth of the enterprise is expected to have important but unidentified local spin-off effects.

MALAWI

1. General introduction

Malawi is classified as a least developed country by the United Nations, having a per capita income (1985) of US$170. The economy was primarily agricultural until recently, but due, inter alia, to the depletion of land resources the agricultural sector's contribution to the economy is decreasing. The quickly growing services sector is now the largest in the economy: its 1987 GDP share has been estimated at 47.4 per cent. Export earnings from agricultural crops (tobacco, sugar, tea) will, however, remain of crucial importance for the economy's performance, and agriculture is still by far the most important employer.

A serious constraint to economic development is the high cost of transportation. For its overseas trade, Malawi depends on rail and road connections through Mozambique, which have been interrupted repeatedly in past years. Rerouting through the United Republic of Tanzania, Zimbabwe and South Africa is costly and time-consuming; in the long term, the improvement of the transport routes through the United Republic of Tanzania is expected to improve the situation.

Malawi's economy grew rapidly during the 1970s, mainly as a result of successful agricultural policies. The growth potential of the agricultural sector, however, was limited: population/land ratios were already high by African standards, and most of the sector's production is provided by smallholders using traditional methods. Moreover, world market prices for Malawi's agricultural exports fell. The 1980/81 oil shock considerably increased the cost of energy imports, and inefficient public enterprises have increasingly become a drain on the economy as well. In recent years, Malawi has become host to large numbers of refugees from Mozambique, adding a large burden to the economy. Finally, the open general licenses which encouraged exports to Zimbabwe in the past were revoked by Zimbabwe when that country joined the PTA.

The Government's widening budget deficits of the 1980s were covered by loans. Disbursed public and publicly guaranteed debt stood at US$ 909 million in 1986, or 73 per cent of GDP. As the country was unable to service this debt, rescheduling became inevitable in 1982-83. Adjustment programmes were then implemented which resulted in improved economic performance, but the unfavourable external environment has reversed much of this progress. A major programme to improve agricultural performance, the World Bank/ADB supported National Rural Development Programme, has not made much impact thus far. The country had to apply for another rescheduling in 1987.

2. The manufacturing sector

The manufacturing sector grew rapidly during the 1970s, but growth slowed in the early 1980s, and the sector contracted during 1986 and 1987. The sector's share of GDP was 11.9 per cent in 1976 and 12.1 per cent in 1987. No further increase in this share is expected during the next decade. Per capita MVA has stagnated at around US$ 26 since 1980. Performance in the 1980s was badly affected by the overall economic recession and transport problems.

Total manufacturing employment was 68,000 in 1986. This excludes informal manufacturing, which has been estimated at 150,000 although the exact size is unknown. In the formal sector, employment is highly concentrated in large-scale plants (those with more than 200 employees).

Food products manufacturing now accounts for approximately 40 per cent of the country's MVA; food, beverages and tobacco together account for one-half the MVA. The next most important branch is textiles and wearing apparel, whose MVA share was 14.8 per cent in 1983. Less important branches include wood products, printing and publishing, chemicals and fabricated metal products. The largest enterprises are found in tobacco and tea processing, textiles, wood products, vegetable oils and meat processing. More than 60 per cent of the manufacturing labour works in food, beverages and tobacco.

Manufactured exports are not expected to rise significantly during the remainder of the decade. (Export growth is mainly being sought in diversifying agricultural exports.) Textiles and sugar were the chief manufactured exports. Major imports are industrial inputs and machinery, transport equipment and consumer goods.

Structural change during recent years has been limited. The food products and beverages industries have increased their shares in manufacturing output and value added. Although strong employment increases took place in the chemicals, plastics and machinery sectors, there was no corresponding increase in their contribution to production. Industries engaged in the processing of crops for exports would be encouraged if growth in the agricultural sector were to resume. Manufacturing of intermediate goods could also increase considerably due to the favourable performance of exports and investment. Production of goods mainly for the domestic market seems to be limited by the slow growth in consumer expenditure, although increasing import substitution is likely to affect output favourably during 1988-1992.

Prospects for expansion of manufactured exports are, on the whole, limited to the resource-based food processing industries. Significant scope exists for expanding regional manufactured exports, but this depends crucially upon the establishment of viable long-term regional agreements on the integration of manufacturing production and investment. Initiatives within SADCC and PTA are very important for expanding manufactured exports from Malawi. Rapid growth of export-oriented industries is feasible only in the context of a regional harmonization of trade and investment policies aided by bilateral and multilateral assistance.

Large-scale parastatals and foreign-owned plants dominate the manufacturing sector. The parastatals tend to be involved in a range of other economic activities besides manufacturing. Parastatals such as ADMARC, MDC and Press Holdings often collectively own an enterprise. Such interlocking has, on the one hand, helped to stabilize industrial development; on the other, it has increased the concentration of economic power and contributed to organizational complexities.

3. Obstacles to production

Given the high import dependence of the sector, the transportation bottleneck constitutes a very serious problem which largely explains the slowdown of growth in the non-food sector. Declining exports have also led to a foreign exchange shortage, which again is a constraint on importing inputs and spare parts. Domestic engineering services are insufficiently developed to service the sector's aging capital stock properly. The difficult transport situation also forces manufacturers to keep large stocks of both inputs and finished export products, creating liquidity problems. In addition, the limited natural resource base of the country precludes extensive structural diversification. Rigid price fixing has made adaptation of production to changed economic circumstances difficult, but price controls are now being relaxed.

In the case of small-scale manufacturing, problems have been compounded by lack of credit and the low buying power of the population, especially in rural areas where wage labour is uncommon. The high degree of monopolization in manufacturing is another obstacle to growth in the small-scale sector. In the formal sector, low domestic demand has also resulted in excess capacity. Moreover, inter-industry linkages are not well developed. The wood products industry has suffered from raw material depletion, unsuitable location of sawmills, and technical/management problems; forward linkages (e.g. with the furniture industry) are not sufficiently exploited. The sugar industry is handicapped by quotas and depressed world market prices.

4. Policies directed towards the manufacturing sector

Malawi's development policies have always stressed the agricultural sector, with industry in a supporting and complementing role. Support for industry includes modest tariff protection, low duties, tax allowances, and investment incentives. Although foreign investment is welcomed, the Government has initiated industrial development in a number of cases through parastatals (see above).

Structural Adjustment Programmes were adopted in consultation with the World Bank and IMF to cope with the growing economic difficulties of the 1970s and early 1980s. The most important consequences of the Programmes for manufacturing are changes in the incentives system and organizational reforms (e.g. privatization) in the parastatals. The growth of the sector's contribution to overall development, especially through exports, is recognized as a priority, and technical co-operation is actively sought.

UNIDO sponsors the Government's Small Enterprise Development Organization of Malawi (SEDOM); this has, inter alia, resulted in the establishment of a small enterprise estate at Blantyre.

Within the framework of SADCC, a number of manufacturing products were identified as having potential in the regional market. Little progress, however, seems to have been made in establishing a greater presence in these markets, increasing capacity utilization rates of existing industries, or attracting investment to expand or establish such SADCC-oriented industries.

5. The scope for rehabilitation

The absence of exact data on capacity utilization, etc., makes it difficult to arrive at a clear picture of rehabilitation needs and possibilities. More information would be needed. It is clear, however, that in the textile sector ways would have to be found to reduce excess capacity in knitwear, blanket, towelling and netmaking manufacturing. Export expansion is not very likely, since neighbouring countries protect their own textile industries. Nor is the domestic market likely to expand much in the near future, given the low growth projections for income.

The World Bank has provided a US$ 6.4 million loan for rehabilitation of the saw-milling industry (modernization, reduction of excess capacity). This involves closing two uneconomic units, privatization, and improving log supplies, processing and technical management. Successful implementation of the project should help to balance supply/demand for wood products by 1990. Improved plantation production and linkages with downstream industries are also being studied as part of the project.

The performance of the small-scale sector could be stimulated by improving linkages between large- and small-scale enterprises, e.g. through subcontracting. At present, a technical assistance project is being prepared in a UNDP/UNIDO/UNCTAD industry and trade sector support framework to help revitalize the country's medium- and small-scale industry. Overall improvements of the small-scale sector would depend to a large extent, however, on rising income levels and hence on the success of overall development policies; increasing the pace of SADCC co-operation might also provide new market for certain SSIs.

MALI

1. General introduction

Mali's economic development has been seriously hindered by the country's location in Africa's desert/Sahel belt and its landlocked position. Although the country contains good mineral resources, including bauxite, manganese and iron, few of these have been exploited or properly explored so far. The country's per capita GDP was US$ 366 in 1986.

The great majority of the population works in agriculture, which accounted for 50 per cent of GDP in 1985; the services sector followed with 37 per cent. Only a small part of economic activities takes place in the monetized sector; GDP and GDP share figures as well as many other economic data are therefore no more than rough approximations. Raw cotton and live animals are the country's main exports.

During the 1973-1982 period the economy registered an average annual growth rate of 4.3 per cent, but growth contracted during 1980-1987. Apart from persistent droughts, the rigidity of the Government's economic policies is blamed for the slowdown. This, however, is contradicted by the fact that a slow liberalization of the economy has been taking place since 1981. In early 1980, a privatization campaign was announced under which 13 public companies were to be sold or liquidated, and 17 were to be partially opened to private capital. The economic stagnation might in part be caused by another factor - worsening terms of trade for raw cotton.

Economic policies have in the past been formulated in the framework of Five Year Plans, the last of which covered the 1981-1985 period. No new Plan has since been announced although a new one may have been drafted for the 1987-1991 period.

Lack of interest on the part of investors and limited domestic financial resources have forced the Government to rely on external borrowing. Much of the external debt is concessional, but the debt service ratio started rising rapidly in the mid-1980s; it stood at 16.8 per cent in 1985 and is likely to rise to 30 per cent and more in the 1990s. No formal rescheduling has taken place so far, as the Government and the IMF sharply disagree on the measures needed to improve the country's economic performance.

2. The manufacturing sector

The manufacturing sector's contribution to GDP has been estimated at 7 per cent in 1985. The figure was 12 per cent in 1978 and dropped to 6 per cent in 1979. The sharp drop is most likely a consequence of drought-related decreases in agricultural production, affecting both the manufacturing sector's raw material base and - as a consequence of decreasing national income - the sector's domestic market. Per capita MVA was US$ 12 in 1984.

The most important industrial branch is textiles, which accounted for 44.4 per cent of turnover and 48.4 per cent of employment in 1981. Domestically produced raw cotton appears to be the industry's main input. Textile production is followed by food products. Food and beverages together accounted for 29 per cent of turnover and 5.1 per cent of employment in 1981. The tobacco industry comes third, with 7.8 per cent of turnover and 5.1 per cent of employment. 1984 data show that the textiles sector accounted for 57 per cent of MVA, followed by agro-based industries with 25 per cent of MVA. Other industries are of minor importance; for many branches, no data are available.

Total employment in manufacturing was estimated at 13,435 in 1981. This excludes artisans, whose number may be close to 100,000. Only 10 industrial establishments employed more than 100 workers in 1982. The largest enterprise is COMATEX, a Government-owned textile factory with 2,650 employees. The Government owns or holds shares in virtually all of the larger enterprises. A number of enterprises are co-managed by specialists from the People's Republic of China.

The manufacturing sector shows few signs of structural change. Over the 1975/76-1981/82 period, the major industries - textiles, food products, beverages - all saw their shares in MVA decrease slightly. Very small gains were witnessed in leather, wood and paper products. None of these are important industries as yet. Only the tobacco sector grew conspicuously during this period, increasing its share by 17 per cent.

The share of manufactured exports in total exports was 13.3 per cent in 1982. Cotton products (fabrics, cottonseed cake) accounted for slightly more than one-half of this figure. Other exports include groundnut oil and hides. Manufactured imports were far more important, accounting for 80 per cent of total imports in 1982. Machinery and transport equipment accounted for 31.1 per cent of total imports in 1982. Petroleum products followed with 22.8 per cent.

In the absence of reliable data, little can be said about possible developments in the sector. Much will depend on stability and growth in agricultural production. The fact that food industries constitute over 50 per cent of the recent projects approved under the Investment Code would indicate continued confidence in this branch, although its growth rates have been negative since 1980. The tobacco industry (one single enterprise) is likely to continue growing. The light growth trend in the forest products industries (wood and paper products) must not be taken as a sign of strong future development because the industry's raw material base is limited. In the mineral products industry, some growth is discernable; phosphate exploitation and processing (at present some 1,500 tonnes/year) is to be expanded. Gold and silver mining started in 1984, and plans call for the mine to eventually produce 1.8 tonnes of gold and 0.5 tonnes of silver annually. No indication exists as yet of conspicuous future growth of other mineral-based industries. During the last few years, domestically produced plastic consumer goods, consumer chemicals (e.g. bleach) and metal products have begun to establish themselves in the market. Data on these industries are as yet too scarce to pass judgement on their future development.

3. Obstacles to production

As indicated above, much of the manufacturing sector's production depends on domestic agricultural exports. Also, the economy as a whole (and hus the domestic market for industrial products) is highly dependent on the state of the agricultural sector. Stable growth of agricultural production would thus be a precondition for manufacturing growth. Other obstacles include:

- the very low degree of monetization in the economy, reducing demand;
- shortages of technical and managerial skills;
- inflexible price-fixing systems for key products;
- deficient supply/marketing channels;
- uncompetitiveness of domestically produced products;
- insufficient consumer-orientation of public sector production;
- obsolete equipment and spare parts shortages.

4. Policies directed towards the manufacturing sector

No information was available on the present state of manufacturing development planning. Under the 1981-1985 Five Year Plan, private enterprise was given wider scope and special attention was given to medium- and small-scale enterprises. To help achieve this, project execution was decentralized. Stimulating medium and small-scale enterprise is seen as the best way to increase manufacturing employment. It is also felt that this policy focus will help to tap and develop the domestic entrepreneurial potential available in the small-scale and artisanal sector. A new Investment Code, to provide more stimuli for private manufacturing, is to replace the 1976 Code. Details on the new Code were not yet available. UNIDO is asking the Government to improve the policy environment for industry.

5. The scope for rehabilitation

Available information indicates that the country's major enterprises operate far below their capacity. For example, COMATEX presently operates at 50 per cent of capacity; 20 per cent capacity utilization appears common in other units. A number of groundnut processing units have had to shut down. Technical and managerial problems play a role, but the main problems to be solved are low agricultural productivity, weak policy and programme formulation and execution, and low demand.

A US$ 65,000 UNIDO project for the rehabilitation of a kariti-nut processing plant was launched in 1987. While stressing the need for an in-depth study of the technical and managerial characteristics of the plant, the project identifies supply and marketing as the main issues to be addressed. With regard to the latter, creation of new products and outlets are recommended.

MAURITANIA

1. General introduction

Mauritania's economy is largely based on three activities: nomadic herding, fisheries and iron ore mining. Nomadic herding, the major activity of the population, has been badly hit by droughts over the past decade. This is the main reason for both the fluctuations of, and the decrease in, the GDP share of agriculture (which includes herding and fisheries). The sector's 1984 share was 33.9 per cent. Iron ore mining has been affected by low world market prices and the consequences of war in Western Sahara. Its GDP share, however, has remained a fairly constant 12 per cent. Per capita GDP decreased from US$ 536 in 1975 to US$ 328 in 1986, and seems to have decreased further (in real terms) since.

The Mauritanian Government has placed special emphasis on irrigated farming in an effort to regain its past self-sufficiency in cereals and meat. In practice however mining and manufacturing have been given preference, and in recent years fishing has become the key factor in development. The Government's policy has been successful in gradually increasing the country's share in earnings from fish resources in Mauritania's coastal waters. While foreign vessels took most of the catch without payment in the past, recent years have seen stricter licensing and the establishment of joint ventures with foreign companies.

Iron ore is the only major product of the mining sector at present. Gypsum, copper, uranium and phosphate are also found, and an ongoing UN-supported assessment of mineral resources is likely to discover further deposits. Exploiting these would require large investments. The diversity of mining products, however, would help to stabilize mining income, which is now mainly derived from a single mineral.

Mauritania's limited foreign exchange earnings were insufficient to finance economic expansion; therefore, many projects were initiated, especially in the late 1970s, and the country borrowed on a large scale. Total debt stood at US$ 1.6 billion in 1986, more than twice the country's GNP. Repayments have become a problem, as foreign exchange receipts have stagnated, and some of the large projects (an oil and a sugar refinery) failed to generate income. Debt reschedulings have thus far kept the debt service low; however, as the prospects for economic growth are uncertain, the country is likely to run into serious repayment problems in the 1990s.

2. The manufacturing sector

The manufacturing sector's contribution to GDP stood at 5.9 per cent in 1985. Data on the sector are scarce, but it would appear that this percentage is fairly typical of the sector's GDP share in the past decade. Most of the enterprises in the sector are very small: only eight plants employed more than 50 persons in 1980, and the formal sector's share in total employment was estimated at 2 per cent. Informal handicrafts are believed to employ half a million people. Per capita MVA was approximately US$ 35 in the mid-1970s.

Food processing is by far the most important manufacturing activity, accounting for over 90 per cent of MVA in 1980. Within the sub-sector, fish processing has become the major industry. By itself, the industry accounts for approximately one-third of the sector's contribution to GDP. Processing, however, seems to be of a very simple type, since the industry's exports consist minly of frozen fish. A far greater potential exists for on-shore fish processing, but so far most processing has taken place on foreign factory ships under Mauretanian license, thus limiting the contribution to domestic industrial development.

Other major activities mentioned in one source are bakeries and butchering. The remaining industries of some importance are textiles, footwear, chemicals, iron ore concentrates, and a small metal products factory.

The industry which at present shows most promise for the future is fisheries. Most of Mauritania's efforts to retain a larger part of the industry's earnings have thus far gone into increasing the efficiency of licensing, increasing Mauritania's share in existing foreign operations, and expanding the activities of domestic fishermen. It is estimated that potential domestic artisanal production is 40,000 tonnes/year, and total potential domestic demand 15,000 tonnes/year. At present, only 2,000 tonnes/year is provided by domestic fishermen. Increasing cold storage and fish processing capacity is one major aim of the Government.

The country's only significant manufactured exports are iron ore concentrates and fish products. All equipment and most of the manufacturing sector's inputs are imported.

3. Obstacles to production

In spite of the limited data availability on the sector, the obstacles to its further development have been reasonably well documented by multilateral organizations involved in various development programmes. Overall problems include the small size of the domestic market; serious infrastructural shortcomings; the shortage of capable managers, technicians and skilled workers; and the absence of a diversified raw material base. In the public sector (which, in the case of manufacturing, seems restricted to an iron ore concentration plant), management problems appear to have been compounded by other inefficiencies in plant operations; also, installed capacity has not always been chosen on the basis of properly executed feasibility studies. The artisanal sector suffers from marketing problems, production technology inadequacies and - in some case - raw material shortage.

In the formal sector, some potential for exports to the region is also thought to exist in individual cereal products, man-made fibre textiles, plastics and building materials. Mauritania also contains gypsum, a domestic raw material important to the latter industry and not found elsewhere in West Africa.

4. Policies directed towards the manufacturing sector

The Ministry of Industry and Mining is responsible for the formulation and execution of industrial development policies and measures. The available information does not permit the establishment of a systematic overview of these; it is not even obvious that systematic overall policy formulation takes place for the sector.

The 1985-1988 Economic and Financial Recovery Programme, drawn up after the failure of the 1981-85 Plan (a result of the economic difficulties from the early 1980s onwards), foresees only a limited role for the manufacturing sector. Some 3 per cent of the US$ 162 million budget is devoted to industry. One major aim is to improve linkages between the economic sectors, especially between the agricultural sector and processing industries. Fish processing is also to be strengthened during the coming years, although the relationship between these measures and the Recovery Programme is not clear.

The Investment Code is to be revised to encourage private investment further, especially investment oriented towards exports and employment creation. Protection is to be reduced to force industries to become more competitive; at the same time, industry's access to imported inputs is to be improved. Price fixing, which has already been abolished for most products during recent years, will no longer be applied to industrial production.

In support of the private-enterprise orientation of the Recovery Programme, a UNDP/UNIDO project will be implemented to reinforce domestic institutional support to the manufacturing industry (information, investment promotion, etc.) and to reinforce consultancy services to individual enterprises.

5. The scope for rehabilitation

Under the Recovery Programme, the public enterprise Société Nationale Industrielle et Minière, which presumably includes ore concentration facilities, is being rehabilitated with a US$ 20 million World Bank loan. As the international market remains depressed, cutting costs to arrive at a more competitive price for Mauretanian ore is essential. One measure in this connection has been the laying-off of 25 per cent of the enterprise's work force. No information on other measures was available. The industry's long-term viability remains uncertain in the face of the world market situation. The resource base would not constitute a serious obstacle, although costly ore enrichment facilities would have to be completed to make use of lower-grade ores which mainly constitute the raw material reserves.

UNIDO is presently discussing with Mauritanian authorities the execution of a pre-feasibility study for the rehabilitation of the country's only sugar refinery. This study would focus on the economic viability of continued operations of the mill. Apart from operational problems, the mill has also suffered from a decreasing market for its products.

To the extent that information is available, the problems of other enterprises in the large-scale sector seem mainly due to competition between legal and illegal imports. In some cases, lower prices of imported inputs would make these enterprises' products more competitive; however, import liberalization as foreseen at present may well prove that some of these firms are not economically viable.

In the small-scale/artisanal sector, ILO is pursuing projects to organize the metal-working, leather and camel-hair carpet industries. The latter's main problem is its very rudimentary production technique. Since there is a certain tourist market for camel hair carpets, a permanent group production facility is to be set up where better equipment is to be available, and some training (production, design) provided. Reinforcement of metalworking will be emphasized in the artisanal jewellery-making industry. In the absence of suitable experts, no progress appears to have been made in the leather (tanning) industry. Details on the costs of the projects were not available.

MAURITIUS

1. General introduction

Mauritius is among Africa's highest income countries, with a 1986 per capita GDP of approximately US$ 2,200. The economy is dominated by the services sector, which accounted for approximately 40 per cent of GDP in 1986; much of the income in the sector is tourism-generated. The agricultural sector accounted for some 12 per cent of GDP in 1986, with a correspondingly low share in employment. Sugar is the main crop. Real GDP growth in the 1982-1986 period averaged 12 per cent annually. The country has recently intensified its economic ties with South Africa (tourism, trade, investment). It is not clear from the available material to what extent the political situation in Southern Africa could influence future economic development on the island.

In recent years, the Mauritian Government has started to implement an agricultural diversification programme. The total reliance on sugar cultivation (which takes up 90 per cent of arable land) is clearly perceived to increase the country's vulnerability. As a result of the programme, Mauritius is already self-sufficient in a number of basic foodstuffs.

Mauritius has become an attractive location for foreign investors because of its low wages, skilled labour force, good international transport connections and very favourable financial legislation. The country's exports, moreover, are not subject to EEC tariffs. As a result, the country's Export Processing Zone (EPZ) has been very successful (see below).

Mauritius has borrowed on a fairly large scale since the late 1970s in order to finance its economic development projects. Total debt stood at US$ 482 million in 1987, or 27.3 per cent of GDP. The country's successful export drive has kept the servicing burden low: the 1986 debt service rate was 7.3 per cent, down from 16.2 per cent in 1983.

2. The manufacturing sector

With over 20 per cent of GDP in 1987, the manufacturing sector is the second most important GDP contributor. In recent years, its growth was appreciably faster than that of the economy as a whole: the 1982 GDP share of the sector was 12.1 per cent. The 1986 real growth figure for the sector as a whole has been estimated at 12 per cent. Per capita MVA grew from US$ 154 in 1980 to US$ 181 in 1984. Total manufacturing employment was 99,000 in 1986.

The sector is dominated by food products, but its share has decreased since the mid-1970s. In 1975, the branch accounted for 71.8 per cent of gross output, 56.7 per cent of MVA and 33.4 per cent of employment; the 1986 figures were 46.7 per cent, 27.5 per cent and 21.1 per cent, respectively. Sugar is by far the most important product; in recent years, fish processing has also gained in importance.

The most rapidly growing branch is wearing apparel, with production concentrated in the Mauritius EPZ. Wearing apparel accounted for 6.3 per cent of output, 10.6 per cent of MVA and 25.2 per cent of employment in 1975. The 1986 shares were 21.3 per cent, 31.5 per cent and 47.3 per cent. The EPZ employed 83,000 persons in 1987, 92 per cent of whom worked in the textile industry. In spite of the discrepancy with other employment figures, it is safe to say that the EPZ is the country's major employer. Apart from food and textile products, there are few significant industries in the country.

Large-scale establishments are found mainly in the sugar industry. The EPZ firms employ 150 to 200 persons on average. There appears to be no Government ownership in industry; firms in the EPZ are foreign-owned.

Manufactured exports consist primarily of sugar and textiles. Sugar exports have decreased in recent years, from US$ 300 million in 1982 to US$ 250 million in 1985. The volume exported has fluctuated between 500,000 and 600,000 tonnes in recent years. EPZ exports have grown much faster, from US$ 140 million in 1982 to almost US$ 370 million in 1986. In contrast to sugar exports, however, the net earnings from EPZ exports are rather small, as virtually all inputs are imported; net EPZ export earnings were approximately US$ 70 million in 1985. There is a slow trend towards higher local value added. The EPZ imports also constitute the major manufactured imports category, accounting for 20 per cent in 1985. Other important manufactured imports are machinery and equipment, petroleum products, and chemicals (mainly fertilizer and fertilizer components for the sugar cane industry).

It is likely that present manufacturing trends will continue, i.e. growth of the EPZ/textiles sector, and a decrease of the food products industry's shares. Within the food products industry, fish processing is still a minor industry, but the expansion of capacity for deep sea fishing is expected to increase substantially the volume of landed catch. Agricultural processing could to some extent diversify away from sugar milling if the Government's present programmes for agricultural diversification are successful. The recently proposed tea processing plant is an example. To support the Government's agricultural development policies, a fertilizer plant is to be built.

3. Obstacles to production

In view of its limited domestic market the country will remain dependent on exports. At present, however, both the sugar industry and the textiles/EPZ sector have to cope with low prices and quota in overseas markets. EPZ textile production has the disadvantage of generating very few spin-offs that would benefit domestic industry. The EPZ's extreme reliance on textiles makes the sector very vulnerable for world market fluctuations. The sugar industry has suffered from declining cane production and plant obsolescence; its performance, however, is now improving.

4. Policies directed towards the manufacturing sector

No information was available on recent manufacturing policies or plans, but it is clear that the Government does not rely solely upon EPZ production as the source of future industrial growth. With European Investment Bank (EIB) assistance, a small-scale enterprise project is to be launched, which will include industrial establishments. To stimulate the sugar industry, an Action Plan for the industry was submitted by the Sugar Authority in 1985. The major components are factory rationalization, raised productivity of small cane planters, increased production of bagasse-based energy, and research and diversification efforts.

5. The scope for rehabilitation

The available literature does not indicate any need for reorganization in the sector apart from the sugar industry. The Action Plan for the sugar industry was used by the World Bank and the Mauritian Government to formulate a Bank-assisted Sugar Action programme in 1986. Support will also be provided by the EIB. Factory rationalization and rehabilitation is an integral part of a range of measures to be implemented to strengthen the industries. The total amount available under the Programme is US$ 30 million; plant modernization and reorganization will account for 80 per cent of this amount.

The rehabilitation programme will consist of several steps:

- A detailed analysis of the financial performance of the mills, and of the present financial incentives/disincentives operation. Especially with regard to financial performance, few uniform data enabling inter-factory comparisons are available;

- A comprehensive study of pricing and taxation options for future operations; the development of an incentives framework to ensure adequate investment in the industry and to facilitate the concentration of milling capacity into fewer, more efficient units;

- Replacement of obsolete machinery;

- Research on new products and more efficient utilization of milling by-products such as bagasse;

- Improving the mills' contribution to bagasse-based energy generation.

The project will finance the foreign cost of a five-year programme and will fund expansion of remaining milling capacity to cater to cane from the closed mills. Investments are considered relatively modest, partly because some capacity expansion is a by-product of rehabilitation, and partly because equipment and machinery from the closed factory is used to expand capacity.

MOROCCO

1. General introduction

In 1984 Morocco's GDP per capita was $917, which can be compared to the average of $948 for developing countries as a whole. Due to its dependence on agriculture, Morocco's GDP growth rate is strongly affected by weather conditions. As a result, growth fluctuates a great deal, but the average annual GDP per capita real growth rate for the 1970s was 3.1 per cent. Reflecting a combination of adverse circumstances such as prolonged drought from 1981-84, depressed world prices for phosphates, and debt repayment problems, the growth rate in real GDP oscillated between -1.3 per cent in 1981 and 4.3 per cent in 1985. The downturn is also reflected in the per capita GDP average annual rate of growth for the period 1981-84, which fell to 1.1 per cent.

In 1985 the agricultural sector provided employment to 41 per cent of the labour force of 5.7 million people, and its contribution to GDP was 18.4 per cent. The service sector, employing 35 per cent of the labour force, is dominated by commerce. The mining industry, with phosphates as the cornerstone, contributed 8.6 per cent to GDP in 1985. Phosphates have traditionally been Morocco's leading export commodity (although tourism and worker remittances generate as much foreign exchange), followed by agricultural produce, particularly citrus fruits. However, Morocco has become increasingly dependent upon food imports. In addition, energy has always been a problem, since Morocco lacks any significant energy resources. Morocco receives bilateral aid principally from France and the United States and multilateral assistance from the World Bank, the IMF and other international agencies involved in development co-operation.

Like many other developing countries, Morocco borrowed heavily during the 1970s. The strategy for growth in broad terms was to expand public investment, finance the expansion with the then favourable export revenues, and - on the basis of anticipated continued high export prices and cheap loan capital - borrow to meet the increased energy costs. As a result, foreign debt increased sharply in the late 1970s, and in 1983 a period of repeated reschedulings with both public and private creditors was initiated. Since then, Morocco has tackled the structural problems of its economy with co-operation and support from the IMF and the World Bank. The strategy has shifted towards one of export-led growth. Major efforts to curb public overspending have been made, and the Government is actively encouraging private sector industry and introducing more liberal trade and exchange rates. According to most observers, the results have been encouraging, partly helped by good harvests and partly from improved terms of trade as a result of the decline in oil prices and the depreciation of the dollar. The IMF reports growth rates for real GDP in 1985 and 1986 of 4.4 and 5.8 per cent, respectively, and a current account deficit of 2.5 per cent of GDP for 1986, down from 11 per cent in 1984. However, total debt remains high and still exceed GDP 110 per cent in 1987. In 1986 the debt service ratio before debt relief was 62 per cent and thereafter 32.2 per cent.

2. The manufacturing sector

Given manufacturing's long history in Morocco and the relatively high degree of diversification, it is a relatively small sector. In 1984 it accounted for 16.7 per cent of GDP; MVA per capita was $153. The share of GDP has not changed much since 1970, when it stood at 16.6 per cent. The average annual growth rate in MVA for the period 1970-80 was 5.6 per cent, and it decreased to 2.6 per cent for 1981-84. However, this figure is still higher than for developing countries as a whole, which experienced a 1.9 per cent growth rate in MVA in the early 1980s.

The principal manufacturing activity is transforming phosphate into phosphoric acid and fertilizers. This activity recorded the highest rate of growth in value added during the period 1975-85 with 10.4 per cent. The chemical industry is centred at Safi, where Maroc Chimie's first plant was opened in 1965. The Safi complex now has a capacity of 1.8 million tons of phosphoric acid and close to 0.8 million tons of triple superphosphate. The total production of phosphoric acid was 1.42 million tons in 1984, up 15 per cent from 1983. In 1985 output dropped to 1.25 million tons, but future expansion, financed with French aid, has been planned. The phosphate industry is run by the parastatal OCP. In 1985, 30,118 persons were employed in metropolitan Morocco and 2,511 persons were employed at the Western Sahara centre of Bou Craa.

The largest branch in Morocco's manufacturing sector is food products, accounting for 19.3 per cent of MVA in 1985. The 1976 MVA share of 21 per cent, combined with employment growth outstripping value added growth for the period 1975-86, resulted in a negative growth rate of value added per employee of 1.7 per cent. The food products sector employed 40,768 persons in 1985. The Economist Intelligence Unit, however, reported employment in food processing at 70,000 people in 1981 while the sector's share of total industrial value in Morocco that year was 40 per cent. Despite these discrepancies, it is an established fact that the food processing industry is a vital part of manufacturing activity in Morocco, taking some 25 per cent of total investment and producing both for exports (canned fruits and fish) and for domestic consumption (flour, vegetable oils, etc.). A large quantity of grain is converted locally into flour, but imported wheat is also processed at a number of mills. There are currently 13 sugar beet factories with an annual processing capacity in excess of 400,000 tons of raw sugar, as well as three cane works. Annual production capacity for raw sugar is 534,000 tons, sufficient to meet 90 per cent of local demand. Production has declined from 405,867 tons in 1984 to 362,116 tons in 1985. As a result, sugar imports rose to 283,200 tons. In 1985 total refining amounted to 650,261 tons, down 3 per cent from the previous year. Fish processing and fruit and vegetable processing have recorded slack growth rates in recent years, contrary to optimistic expectations based on the fact that manufacturers may now market directly rather than through the Office de Commercialisation et d'Exportation.

The textile and clothing industries in 1985 accounted for 14 per cent of total MVA and employed close to 75,000 persons - over a quarter of the manufacturing workforce. In the mid-1960s these sub-sectors suffered from overstocking, but in the 1970s turnover grew at an average annual rate of 10 per cent a year. Value added in constant prices grew by only 1 per cent a year during 1975-86.

The engineering industry consists mainly of auto assembly plants. A limited range of components are produced locally, including tyres, radiators, batteries, filters, fuel tanks, gaskets and some electrical parts. Railway goods, wagons, and mineral and tanker wagons have for many years been assembled by SCIF in Casablanca. Most parts, except specialised items like ball bearings, are made locally.

Other industries which have expanded rapidly since independence include cement, building materials, ceramics and paper. There are nine cement factories with a capacity of well over 5 million tons a year, although domestic production in 1985 reached only a total of 3.7 million tons. In 1981 almost all iron and steel had to be imported. However, a steel rolling mill has been developed at Nador under the supervision of British consultants. When it began production in 1984, it had to import billets to manufacture 420,000 tons a year of products, including wire and reinforcing rods and bars. Plans to build a 700,000 tons a year steelworks have been postponed due to lack of funds.

Growth of value added per employee for the period 1975-86 was negative in all major branches, ranging from -17.2 per cent for transport equipment, -11.3 per cent for glass and related products, to -1.7 per cent for food industries. Only four sub-sectors showed a positive development in this respect: non-ferrous metals with 3.4 per cent growth, and petroleum refineries, industrial chemicals and wood products with less than 1 per cent positive growth each.

The majority of Morocco's manufacturing production originates from large-scale state-owned enterprises (the state sector accounts for 20 per cent of GDP, and the share in MVA is much higher). Many large-scale state enterprises, i.e. for phosphates and tobacco, were created under the colonial period. Private ownership, on the other hand, dominate small-scale consumer-oriented industries.

The trend is a shift away from large-scale, publicly-owned enterprises engaged in import substitution towards an increased role for private sector industry, particularly small- and medium-sized businesses with export potential. This is the result of a new investment code introduced in 1983 as well as reductions in pricing controls, import quotas, and tariffs and administrative procedures required for private and foreign investments and for importation of inputs for export-oriented industries.

Manufactures make up a substantial part of Morocco's total exports. In 1985 the share was 49.4 per cent, with phosphates accounting for 20 per cent, food products 7.3 per cent and other manufacturers 22.1 per cent. The fastest growth has been recorded in the textile industry, which grew by 30 per cent in 1985. In 1985 manufactures accounted for about a third of total imports, capital goods accounted for 17 per cent, and consumer goods other than food 7.1 per cent. Morocco's most important trading partners are the United States and EEC countries, particularly France and Spain. The entry of Spain and Portugal to the EEC directly affects Morocco's export potential. However, in exchange for Spanish access to the rich fishing waters off Morocco's Atlantic coast, fairly favourable export quotas have been received. It is expected

that Morocco's manufactures will have free entry to the EEC market, and that industries such as canned fish, fruits and vegetables, beverages, yarns, garments, knitwear, carpets, fabrics, leather and shoes will be at the forefront of Morocco's goal of export led growth.

The major obstacle facing Morocco's manufacturing industry is the shortage of foreign exchange. It hampers not only the importation of raw material, spare parts, and other necessary inputs to domestic industry, but constrains also the scope for new investments as well as the revamping of existing production units and production methods. Behind the shortage of foreign exchange are many factors, some external, such as the low export prices of phosphates and importation quotas in the EEC countries. Other obstacles to production include still relatively high tariffs on imports of raw material and other inputs; complex and time consuming administrative procedures; infrastructure deficiencies, particularly in telecommunications, ports, storage, transport, and the cost of energy; and, regarding export-oriented manufacturing, inadequate marketing and commercialization services for exportable products and inefficient institutions to assist exports. The public enterprises are suffering from low investment caused by fiscal austerity, and from inappropriate financing and inadequate pricing of output. There is a shortage of local counterpart funds for externally financed projects, and investment planning is poor with inappropriate project selection procedures.

4. Policies directed towards the manufacturing sector

During the 1970s Morocco expanded its economy through loan-financed public investment programmes. Since then the strategy has shifted towards export led growth, coupled with severe restraints on public expenditures, especially investments. Instead, private investments are encouraged via liberal investments codes and liberal trade and exchange rate policies. The switch in policies has produced some positive results - for example, 25 new industrial sites have been prepared, provided with services and access, especially for small and medium sized private and foreign companies. A proposed three-year development plan for the period 1986-88 included priorities such as improved production in the fishing sector through creation of joint development companies, emphasis on economic decentralisation and regional development, and an increased role for the private sector. Only essential projects would receive state funding, and the state involves itself directly only in projects with a strategic socio-economic relevance.

5. The scope for rehabilitation

The need for industrial rehabilitation will be evident in many branches of Morocco's manufacturing sector. Since no specific mention of it is made in the material covered for this report, it is difficult to assess which particular branches would show the best scope. With certainty there is considerable scope within the textile industries, depressed by trade restrictions for the past decade, and likewise within many food (including fish) processing industries, some of which are old yet are vital components in the prevailing policy climate of export promotion.

UNIDO presently operates six projects in Morocco (see Appendix), but none is directly concerned with rehabilitation.

MOZAMBIQUE

1. General introduction

Mozambique is one of Africa's poorest countries. Per capita GDP decreased from US$ 253 in 1975 to US$ 126 in 1986. A slight increase of approximately 5 per cent is estimated for 1987. The services sector is the largest contributor to GDP, with a 1984 share of 42.2 per cent. Charges for transit trade (from Zimbabwe, for example) provide the country with most of its foreign exchange. The great majority of the population, however, works in (subsistence) agriculture, which accounted for 38.7 per cent of GDP in 1984. The country's agricultural, fisheries, forestry, mineral and energy resources are underexploited; in fact, with the exception of forest resources, no systematic stock-taking of the country's resources has been conducted. In recent years, prawns (unprocessed) have become the country's major export. The only other important export is cashew nuts.

When it became independent in 1975, Mozambique was handicapped by very low levels of development. Virtually all positions requiring even the most modest skills were filled by Portuguese, who left the country en masse. A third blow to the economy was the steep decline in vital foreign exchange earnings from South African tourism and transit traffic, and from miners' remittances: South Africa immediately responded to the country's independence by an economic boycott.

The civil war, supported by South Africa, is the single most important factor in the country's economic decline. A 1987 estimate of the economic cost of the war was US$ 5 billion, or roughly 5 times the average GDP in recent years. Fighting takes place in all provinces, and the destruction of the transport and power infrastructure and of crops that serve as manufacturing inputs are but two of the most obvious aspects of war that influence industrial production.

The direct and indirect costs of war and the steep decrease in foreign exchange earnings have resulted in heavy indebtedness. By 1985, external debt was 42 per cent of the country's GDP; by late 1986, total external debt was estimated at US$ 3 billion. Even if the Economic Rehabilitation and Development Programme (ERDP) were to be a success, the country would still be unable to pay off much of its debt in the future. Extensive debt rescheduling has taken place; even so, some Scandinavian countries consider the likelihood of repayment so slim that they have cancelled their debt. Part of the debt to Portugal has been converted into equity in Mozambique's enterprises.

Until 1987, Government policies for economic development had been a failure, partly because of the war and partly because of unrealistic objectives (see Section 4). The ERDP focuses on raising agricultural production while taking the war situation into account.

2. The manufacturing sector

Since independence, the manufacturing share of GDP has hovered around 8 per cent. The 1984 figure was 7.4 per cent. Per capita GDP decreased from US$ 29 in 1975 to US$ 12 in 1984. Data on the sector are scarce, and the reliability of the available data is unclear.

The most important branch in the modern sector in 1980 was food products and beverages, accounting for 41.2 per cent of MVA. Textiles and wearing apparel followed with 12.8 per cent. Tobacco (6.6 per cent), chemicals (6.9 per cent) and machinery and transport equipment (5.2 per cent) were the remaining industries of some significance. At the time of independence, some heavy industry (e.g. petroleum refining, railway rolling stock) existed. The overall performance of these has decreased by two-thirds during the period 1981-1985. Data on employment, branch-level output and cottage industries were not available.

Virtually no structural change can be discerned in the available data. Production data for individual industries show that, whereas slow growth occurred during the 1975-1981 period (approximately 1 per cent on the average for the whole period), output decreased in all cases after 1981. Cement production dropped from 261,000 tonnes in 1981 to 76,000 tonnes in 1985; textile production decreased from 17.9 million sq.m. to 9.0 million sq.m.; and rice processing decreased from 23,000 tonnes to 12,000 tonnes.

Government ownership has become increasingly important after independence. In 1982, the Government owned or partly controlled 73 per cent of the most important industrial enterprises. Outright ownership is less common t[illegible] ownership according to the "intervention" system under which an outside [illegible]ager is appointed by the Government to run an enterprise.

Few data are available on trade in manufactures. Sugar accounted for 9 per cent of total exports in 1985. The only remaining significant manufactured exports are petroleum products. Its share in exports could not be determined, but it would be less than that of sugar. Spare parts and equipment accounted for some 20 per cent of total imports; their share in manufactured imports would be closer to 50 per cent.

The absence of sufficient data on the sector and the country's resources, together with the continuing state of war in the region, makes it very difficult to assess future trends in manufacturing. In recent years, a number of enterprises have been established with foreign assistance, most of which belong to the textiles and engineering industries. No information of their impact upon industrial development is available yet.

3. Obstacles to production

The major obstacles to industrial development are the same as those to overall development: war, low levels of initial development, and a domestic resource base that has not been systematically explored. The low level of development at the time of independence is still felt, for example, in the rudimentary transport system and the serious shortage of skilled workers, technicians, managers, and industrial planners. Industries that existed at the time of independence could generally not be modernized, and as a result, their obsolete machinery is subject to frequent breakdowns and their products are no longer competitive. The domestic market is very limited due to low incomes and marketing problems. Shipping of exports has been seriously affected by war, but the transport situation is now improving. Inappropriate agricultural policies have further reduced the low productivity of the agricultural sector, and hence the raw material position of many industries.

4. Policies directed towards the manufacturing sector

Very little information was available on Government policies for the sector. The Ministry of Industry and Energy is responsible for industrial policies and projects. The Ten-Year Plan (1981-1990) stressed capital-intensive projects in the chemicals, heavy engineering, iron and steel and fertilizer industries. It is not clear to what extent these projects were realized, but the Plan was recognized to be a failure after some years. A concentration on smaller-scale industries using local resources is noticeable from 1983 onwards.

While stressing agriculture, ERDP also expects industry to grow by 12 per cent annually up to 1990. A large part of the growth is to result from expanding domestic demand, through stimuli for the agricultural sector and improvements in the marketing/transport infrastructure. To support future policy-making, a major study of the industrial sector is to be carried out by UNIDO. It will survey existing industrial capacity and recommend future strategies. The study will be sponsored by UNDP/World Bank.

In January 1988, a new Investor's Guide for Mozambique was being finalized with UNIDO assistance. Incorporating recent amendments to foreign investment legislation and information on ERDP, the guide identifies investment opportunities and rehabilitation projects, and provides a number of project profiles.

5. The scope for rehabilitation

The catastrophic state of the manufacturing sector can be deduced from the fact that capacity utilization in major industries was between 10 and 40 per cent in 1983; since then, the figure must have become considerably lower.

An assessment of the full scope for rehabilitation would depend on several factors: a return to peace, the availability of better information on the sector (foreseen in the WB/UNDP/UNIDO project), and the success of policies for the agricultural sector. The functioning of many enterprises will also depend on improvements in the physical infrastructure.

Meanwhile, a number of rehabilitation projects have already been initiated. Details were only available on rehabilitation projects with UNIDO involvement. These include a bakery pilot centre (US$ 716,292), improvements in production organization and financial management in garment co-operatives (US$ 55,000), rehabilitation of foundry and metal workshops (US$ 25,100), and rehabilitation of yeast plants. (Details of the latter project were not available.)

The immediate objective of the bakery project was the establishment of a modern bakery to assist in alleviating the supply problems of a staple food. The plant is to serve as "the nucleus of the whole bakery rehabilitation programme". Although the bakery is now functioning successfully, there is no indication that it plays a role in a bakery rehabilitation programme, or that such a programme is under way.

The garment project's intention was to improve economic and financial management in the OMM Garment Co-operatives. It trained 40 managers from the 13 OMM production centres. The main problems identified were poor record keeping, wasteful and inadequate production methods, and inefficient production planning and control. Managers were made aware of these problems in eight-week training courses and taught skills to overcome them. The evaluation report considered the training period too short, which reduced the effectiveness of the training. Moreover, a number of other essential problems in the co-operatives were not solved (such as raw material supply), which made it difficult to put the training into practice. Future action would have to involve:

- expanding the programme;
- improving the overall management system of the co-operatives;
- technical support to co-operatives (improvements in machinery and production methods).

The metallurgy project is aimed at improving product quality and production efficiency in the CIFEL enterprise, Mozambique's main producer of rolled steel and castings. Obsolescence and capacity under-utilization are its main problems.

Although it is recognized that the problems of the metallurgy sector require overall improvements in the economic environment before they can be fully solved, a number of steps were undertaken to enhance CIFEL's performance. Noteworthy increases in production ar ' profitability were achieved by reorganizing management, maintenance and production. Training also played a role and was extended to other enterprises. Plant modernization, establishing a mini-steel plant to supply CIFEL, and securing markets constitute the next step in the project.

NAMIBIA

1. General introduction

Namibia's economy is dominated by mining. Mining provides some 75 per cent of the country's export earnings and constituted 36.1 per cent of GDP in 1986, down from 43.6 per cent in 1980. Diamonds and uranium are the major mining products, although lead, copper and silver are also exported. In 1986 the agricultural sector's contribution to GDP was only 7.6 per cent although it employed half of the population. Agricultural growth is inhibited by the fact that most of the country consists of desert. Ocean fisheries, however, is an area of great potential, and fish (frozen and processed) is exported in considerable quantities. Heavy overfishing of some species has been a problem in recent years. Recently, sizeable offshore gas fields have also been discovered.

Largely as a result of decreasing world market prices for minerals, Namibia's GDP has fallen from US$ 1,765 million in 1980 to US$ 1,650 million in 1985. There have been virtually no attempts to diversify the economy away from mining. Namibia is administered by South Africa, whose territorial division of labour has relegated the role of a mineral raw materials producer to Namibia. In this respect, the presence of the "interim Government" makes little difference. If and when the country gains its independence from South Africa, it may find itself with considerable foreign debt, contracted to offset declining minerals receipts. The 1988 total foreign debt may reach approximately Rand 1,000 million. The obligation to repay debts contracted prior to independence is, however, considered debatable.

2. The manufacturing sector

The manufacturing sector is small; its GDP share has fluctuated around 5 per cent since 1980 and it employs some 10 per cent of the labour force. Data on the sector are very scarce.

The only significant industry with available data is food processing which accounted for 64.6 per cent of MVA in 1980. Fish processing, including canning and fish meal/oil preparation, is an important activity in the branch; however, few details on the activity were available. Apparently, no manufacturing based on processing of mining products (mainly diamonds and uranium) takes place in the country. Minor industries include the manufacture of mining equipment, other metal goods, construction materials and assembly operations. Altogether, the sector would seem to comprise at most two dozen plants, virtually all located in or near Walvis Bay.

No information was available on manufactured exports and imports. It is assumed that most enterprises are South African owned. On the basis of the available information, no review of trends in manufacturing can be made.

3. Obstacles to production

The very small size of the domestic market and South Africa's dominance are the reasons that few attempts have been made to develop manufacturing apart from fish processing. A good mineral raw material base exists, however, and limited expansion and diversification of the agricultural sector would in principle also be possible.

4. Policies directed towards the manufacturing sector

A draft national development strategy, drawn up by a joint Government/private sector committee, was submitted to the interim Government in September 1985. This sets out development objectives in very broad terms, with no specific growth or sectoral targets, and emphasizes that the retention of a free market economy and the private sector should be the basis for economic growth and increasing employment opportunities. No details were available on the role of manufacturing in the strategy.

Government involvement is limited to the operations of the First National Development Corporation (FNDC), which was set up in 1978 as a merger of existing development corporations operating in the "homelands" to act as a partner of the private sector in new projects. Although a statutory body, it does not provide regular accounts or details of its activities. Its operations have attracted criticism in recent years for focussing too strongly on capital intensive projects (which have apparently not always functioned) rather than on small agricultural and industrial projects.

5. The scope for rehabilitation

There is no indication that rehabilitation is an issue. Since the United Nations does not recognize the present administration, no projects would be undertaken.

NIGER

1. General introduction

With a 1986 per capita income of US$ 354, Niger is among Africa's least developed countries. Both the country's landlocked position and its location in the Sahara/Sahel zones are serious obstacles to development.

The most important economic activity is agriculture, which employs over 90 per cent of the population and which had a GDP share of 41.6 per cent in 1986. The services sector accounted for 35.2 per cent of GDP in 1984. Niger is rich in minerals (inter alia, phosphate and iron ore) but only uranium is mined in significant quantities. The country's economic performance is in fact highly dependent on uranium exports since they account for 80-90 per cent of the country's foreign exchange earnings. Decreasing uranium earnings and drought caused a serious GDP decline during the first half of the 1980s. Since 1985, GDP is growing again, mainly as a result of improving agricultural production. Another drop in GDP was predicted for 1987, but the estimate will probably have to be revised upwards to take into account that year's high uranium earnings.

Niger made a first attempt at long-term planning in 1980, when a five-year plan was launched. Its implementation was halted after the strong decline of uranium earnings. To overcome its economic problems, the country accepted and implemented a Structural Adjustment Programme that was financed by the World Bank and the IMF. The Programme emphasized streamlining Government services and privatization of a number of parastatals.

The 1987-1991 Five-Year Plan gives priority to agricultural self-sufficiency and efforts to halt desertification. The mining sector is to be diversified, and manufacturing performance is to be cautiously strengthened.

Niger's foreign debt grew substantially during the first five-year plan period. With decreasing uranium sales, repayments were delayed, and debt reschedulings have taken place regularly since 1983. The debt service ratio stood at 24.8 per cent in 1986, and total foreign debt was close to US$ 1 billion in 1986. If the country's recent and reasonably good economic performance continues, new debt reschedulings may no longer be necessary.

2. The manufacturing sector

There are various estimates regarding the manufacturing sector's contribution to GDP. The share is estimated to be 1.5-4.0 per cent. The modern sector employed some 3,700 persons in 1975. Seven enterprises accounted for more than 50 per cent of the total in modern manufacturing, and for 75 per cent of MVA. Artisanal production is thought to employ approximately 35,000 persons. Per capita MVA was US$ 14 in 1984.

The most important industrial branches in the modern sector are textiles and wearing apparel. In 1982, the branch accounted for 42.1 per cent of gross output, 31.6 per cent of gross output, 31.6 per cent of MVA and 30.6 per cent of employment. Beverages followed with 18.9 per cent of gross output, 29.0 per cent of MVA, and 15.2 per cent of employment. Most of the branch's

share is contributed by a single brewery. Chemicals is the third most important branch, with a largely consumer-oriented production (batteries, soap, perfumes).

An analysis of structural change in recent years is difficult since up-to-date information on the sector is scarce. Shift in branch shares may moreover be due to non-structural reasons, such as the temporary closure of one of the larger plants. The significant decrease in the share of the food products branch (no longer a major industry in the early 1980s) is due mainly to years of consecutive drought which affected the availability of inputs and thus led to plant closures. Its share is likely to have increased again after good harvests in 1985 and 1986.

Absence of information also makes it difficult to assess future trends. At present, prospects seem brightest for the textile industry. Two individual industries, milk products and tanning, did well in the rly 1980s, but recent data are unavailable. Plans have been announced to expand milk products manufacturing. Government spending on industry during 1986-1990 should lead to a strengthening of small-scale versus large-scale manufacturing, but lack of information again makes it impossible to determine which small-scale industries are to benefit most, and what the long-term prospects are.

The Government owns or holds shares in 21 of the country's largest manufacturing enterprises, and thus is a major factor in industrial development. The most important of these enterprises are in the food products, beverages, textiles and printing industries. Under a structural adjustment programme, a number of these are being privatized. A June 1988 meeting in Niamey identified 16 private sector manufacturing projects for which investment was sought. Most of these were in the food products, consumer chemicals and non-metallic minerals industries.

Niger does not export manufactures on a significant scale, according to available data. The country imports petroleum products, building materials, machinery and road vehicles, and the full range of consumer goods.

3. Obstacles to production

In addition to Niger's unfavourable location, other obstacles to industrial development are the small size of the domestic market, the heavy competition of Nigerian imports on the domestic market, the strong fluctuation in overall economic performance (caused by droughts and changes in the world market for uranium), and shortages of qualified labour and personnel in key agencies for industrial development. The latter has in the past contributed to the formulation of unrealistic policies and projects for the sector.

4. Policies directed towards the manufacturing sector

The Ministry of Commerce, Industry and Transport is directly responsible for industrial development and industrial policy formulation. The Ministry of Planning sets overall development objectives and seems to influence industrial policy and programme formulation as well, since it plays a key role in the present structural adjustment process (see below).

Development policies for industry have in the past set unrealistic targets. For example, under the 1979-1983 Five-Year Plan output and value added were to be tripled and quadrupled, respectively. In both cases, only a doubling was achieved in current prices, and in constant prices growth was only 27 per cent and 37 per cent, respectively. Only 10 per cent of the export target was achieved. The 1984-85 Intermediate Consolidation Programme was an attempt to improve on the Five-Year Plan's performance. It was to reconsider the Government's role in the economy and to introduce the application of improved management procedures and economic performance standards. Its results appear to have been marginal.

In the World Bank's Structural Adjustment Programme, the role of manufacturing was rather limited. The following measures were formulated for the sector:

- intensification of links with agriculture;
- rehabilitation of a number of enterprises;
- relaxation of price controls;
- liberalization of imports of essential inputs;
- reappraisal of the tariff system;
- tax reductions;
- reduction of energy prices.

No details on the results of the programme were available at the time of writing. The revision of the Investment Code (which is not specifically industry-oriented) as part of the Programme is expected to lead to a simplification of the rules and procedures for foreign investment. Foreign investors are also to be given greater freedom in conducting their business. On the other hand, the expected reduction of tariff and non-tariff barriers implies that investors focusing on the domestic market must expect to meet increased competition from imports. Special incentives are to made available to small-scale, labour and domestic-resource intensive enterprises and enterprises located outside Niamey, the main centre of manufacturing.

For the industrial sector, the following objectives have been formulated in the Development Plan for the 1987-1991 period:

- improved technical and management training;
- improved formation;
- liberalization of pricing policies and simplification of the tax structure;
- restructuring the system of import duties/protective tariffs;
- simplified administrative procedures;
- restructuring/privatization of Government enterprises;
- stronger integration with the national resource basis, and general stimulation of linkages;
- identification of potential future growth industries.

An important Government agency providing support to small- and medium-scale enterprises (a.o. for reorganizations) is the Office de Promotion de l'Entreprise Nigérienne (OPEN). OPEN receives World Bank and UNIDO support to help it overcome its financial and staff shortages.

NIGERIA

1. General introduction

The Nigerian economy has been highly dependent upon oil earnings since the 1970s. Petroleum now accounts for over 90 per cent of export earnings and three-fourths of Government revenue. Mining has become the key sector of the economy, although its 1985 GDP share (10.9 per cent) was smaller than that of services (36.3 per cent) and agriculture (26.0 per cent). Receipts from oil exports have dropped dramatically: in 1986, total oil export earnings were US$ 6.5 billion, almost one-half of their 1985 level, and less than one-third of their 1980 level. Other mineral resources include coal, iron ore and uranium, but these have remained largely untouched thus far.

During the oil boom years, the agricultural sector - once a major exporter - was neglected to such an extent that Nigeria became a large importer of agricultural products. The agricultural development issue remains an important one, as the great majority of the population still lives in rural areas.

At the height of the oil boom from 1974-1978, real GDP growth was 29 per cent, but GDP in 1986 was only 7 per cent higher than GDP in 1973, in real terms. Although the vast revenues of the boom period were used to initiate a wide variety of large projects - road and port construction, the establishment of a new federal capital, eductional improvements, expansion of the industrial sector - many of the projects were ill-suited to the needs of the country and funds were mismanaged on a large scale. As a result of the economic downturn, only 40 per cent of the planned investment under the 1981-1985 Plan was realized. No overall plan has been formulated since. The economic difficulties exacerbated the country's political instability. Economic reform measures implemented after 1985 led to unrest, but the present Government appears to be able to retain political control.

On the basis of (expected) oil earnings, Nigeria has borrowed massively. External debt amounted to US$ 25 billion in 1985; domestic debt to Government suppliers and other creditors was 28 billion Naira in 1985. Together, these figures roughly equal the country's GDP. As oil earnings dropped steeply after 1981 and much of the debt matured in the mid-1980s, the country found itself in a serious debt crisis. The 1986 debt service ratio would have been close to 50 per cent.

Nigeria subsequently negotiated debt reschedulings with its major external creditors, but a longer-term arrangement was reached only after the Government started implementing a Structural Adjustment Programme (SAP) in 1986. The main elements of the programme are: stimulation of the agricultural sector and agricultural exports, reducing the country's import dependence, economic liberalization, and the establishment of a foreign exchange market which has been instrumental both in the devaluation of the Naira and in a more efficient allocation of available foreign exchange.

2. The manufacturing sector

Although the country has a large and varied industrial sector, its contribution to GDP is limited. After rapid growth in the 1970s, when the GDP share rose from 2.9 (1975) to 10.4 per cent (1980), stagnation set in. The 1984 share was 5.2 per cent. Per capita MVA was US$ 45 in 1984, down from US$ 53 in 1980. The sector employed 326,000 workers in 1983. This would seem to exclude small-scale/artisanal production, on which little information is available. Some 125,000 medium- and small-scale industries were in existence in 1983. The major branches in 1983 were food and beverages, textiles, petroleum refining, chemicals, metal products, and machinery transport equipment. Their percentage shares were:

	Gross output	MVA	Employment
Food and beverages	22.3	26.1	18.2
Textiles	11.1	9.9	18.1
Petroleum refining	10.8	12.6	1.4
Chemicals	9.2	8.9	5.8
Metal products	6.4	5.5	9.1
Machinery/transport equipment	16.0	16.7	7.7

Structural change since the mid-1970s has been concentrated in three industries: food and beverages, textiles and machinery. While the overall share of food and beverages has changed little, the share of beverages within the sub-sector has increased considerably - to more than 50 per cent of MVA and some 40 per cent of output. The textile industry, which was the second most important after food and beverages in the mid-1970s, now ranks fourth. Machinery has doubled its share in the sector's output since the mid-1970s and its share in MVA has increased by some 500 per cent.

Future developments in the sector will very much depend upon the country's ability to overcome its present economic decline: over 40 per cent of the manufacturing labour force was laid off during 1985-86 and the contraction of manufacturing activities was expected to continue during 1987. A resumption of growth is dependent upon stabilization of the overall economic situation and successful implementation of structural readjustment programmes, which stress, inter alia, a greater reliance on domestic raw materials. Petrochemicals, beverages and a selection of food products, machinery and textiles would appear to be industries with the clearest growth potential. The decline of the latter industry could be reversed if raw cotton production could be revived since there is a large, unsatisfied domestic demand for textile products.

Until the mid-1970s, most manufacturing enterprises were foreign-owned. Nigerianization policies and public sector investment have since resulted in a dominant position of domestic ownership, although foreign capital still accounts for 40-60 per cent of investment in large companies. Especially the public sector has expanded strongly: during the 1975-1980 period, investment in public manufacturing enterprises may have been twice as high as private investment. Under the Fourth National Development Plan (1981-1985),

73 per cent of manufacturing investment was to be provided by the public sector, especially in large-scale projects. Under the 1986-1988 SAP, the role of the private sector is to be strengthened, including the privatization of parastatals. (No further details on privatization under SAP were available.)

Nigeria's exports are wholly dominated by petroleum products. There is some export of assembled vehicles, palm oil and rubber, but no recent data are available on these. Considerable quantities of Nigerian manufactured goods are known to be exported to neighbouring countries, but no details on these exports are available. Nigerian industry is highly import-dependent. Machinery and transport equipment accounted for over 40 per cent of total imports in 1984; an estimated 60 per cent of the raw materials for the sector is imported.

3. Obstacles to production

The misguided efforts to stimulate industrial development in the 1970s resulted in a number of very costly projects which seriously drained Nigeria's resources. Moreover, these projects often proved ill-suited to the needs of the country, and even under better circumstances their contribution to the economy would have been doubtful. Many of them have only been able to function behind extensive tariff and non tariff protection. Linkages among industries and other sectors of the economy were neglected; the same was true for the industrial infrastructure. Other problems in the sector include unrealistic and inflexible industrial pricing policies, complicated industrial investment procedures, and a shortage of capable managers. Import licensing, abolished in 1986, has been a major obstacle to industrial development in the past.

As a consequence of the economic decline, foreign exchange has become very scarce; in addition, the devaluation of the Naira has made imports very expensive. The highly import-dependent sector thus faces severe supply problems, although with regard to agricultural raw materials the situation has improved somewhat after the recent good harvests. Nigeria's internal market, potentially one of Africa's largest, has shrunk because of the overall economic decline and the austerity measures of recent years. The recession, finally, has also caused serious neglect of the transport and power infrastructure.

4. Policies directed towards the manufacturing sector

The Ministry of Commerce and Industry is responsible for policy formulation and execution. It is receiving UNIDO assistance in the formulation of new policies and programmes for the industrial sector.

Under the Fourth National Development Plan (1981-1985) (FNDP), rapid manufacturing growth was one of the three principal development priorities, after agricultural expansion and strengthening of the economic infrastructure. The FNDP stressed rapid economic growth, especially in the non-oil commodity-producing sectors, and greater local private participation in the ownership and management of enterprises. With several large-scale investments initiated under FNDP, real manufacturing growth was projected to average 15 per cent annually.

Although the Fourth Plan's large-scale, high-growth approach resembles previous plans, it showed an appreciation for the larger role that domestic resource-based industries would have to assume.

The continued decline of the economy prevented the realization of most of the objectives in the Fourth Plan. After discussions with the IMF and World Bank, a Structural Adjustment Programme (SAP) was launched in 1986. Key elements in SAP (which is to be completed this year) are: devaluation of the naira, expansion of non-oil exports, liberalization of imports of finished goods, continued foreign exchange control for, inter alia, inputs needed for manufacturing, liberalization of investment, and privatization. Few details are available on specific measures for the manufacturing industry; however, three policy guidelines are clear:

- rationalization of the sector through greater exposure to foreign competition, management improvement, the discontinuation of unprofitable product lines and production methods, and more efficient energy utilization;
- increased use of locally available raw materials, increased emphasis on repair and maintenance (implying increased domestic production of spare parts);
- development of new local resource-based industries with good links to other industries.

5. The scope for rehabilitation

Most of the manufacturing sector's capital stock was acquired during the 1970s. There is now not only a need for replacement but also for a re-structuring of production facilities to use locally available raw materials. As the foreign exchange available for such revitalization measures is very limited, there is obviously scope for external assistance. A 1985 World Bank report has calculated the overall cost of external support to the economy's rehabilitation at US$ 10.7-15.3 billion. The manufacturing sector's share, which would be substantial, is not indicated.

Such technical measures, however, should be set within a framework which includes increasing the efficiency of management and production in those industries that are likely to be viable in the future. It is very difficult at present to answer the question of long-term viability as, inter alia, the results of SAP are not yet known. There is still no indication that either the economy as a whole, or manufacturing in particular, is on the road to recovery: the continued reduction of overall plant utilization rates, from 40 per cent in 1984 to some 30 per cent in 1986, is a clear indication. Moreover, too little information is available at the plant level to identify individual industries that could benefit from support programmes even under the present unfavourable conditions.

One industry that would answer the present demand for more domestic resource-based industries is cement, as Nigeria contains large limestone deposits. UNIDO is involved in a US$ 4,780,578 project to rehabilitate and expand a cement plant in northern Nigeria. UNIDO's activities will involve:

- examining production problems;
- improving the production system;
- introducing a preventive maintenance system;
- training programmes for plant personnel.

It is not clear from the available documentation whether more general issues which can seriously affect the plant's future performance - such as likely developments in the domestic and regional market or the state of the area's road and power infrastructure - have been taken into consideration.

RWANDA

1. General introduction

During the 1970s, the Rwandan economy experienced rapid growth. Since 1980, however, growth has slowed down, with per capita GDP stagnating around US$ 220. The slowdown is partly the result of lower coffee earnings since coffee constitutes the country's major export. Increasing tea and pyrethrum exports only partly offset the losses. Additional problems are the high population densities on arable land (traditional agriculture is reaching its growth limits) and the country's landlocked position which greatly increases transport costs of imports and exports. The agricultural sector provided 45.5 per cent of GDP in 1984, and employed 93 per cent of the labour force. Services followed with approximately 30 per cent.

One of Rwanda's major development problems is its limited natural resource base. The Government aims at increasing agricultural growth through intensified agriculture. Although the yields of key crops have risen during the past ten years, the country has become dependent on food imports. The majority of farmers is still engaged in subsistence agriculture and uses traditional methods. Another growth strategy has been the rapid expansion of (public sector) manufacturing; this strategy has not been very successful (see below). The country's present economic priorities are:

- import management;
- stimulation of exports;
- improved transport;
- reduction of public expenditure;
- reduction of foreign debt.

The present Government's cautious economic policy is clearly expressed in the latter priority: Rwanda's debt is relatively small, with disbursed debt amounting only to 19.3 per cent of GNP in 1985. The debt service was at 7.6 per cent in 1986, and is unlikely to rise above 15 per cent during the remainder of the 1980s.

2. The manufacturing sector

The manufacturing sector accounted for some 5 per cent of GDP in the mid-1980s; data on the sector show considerable discrepancies between sources. The small-scale artisanal sector employed more than two-thirds of the 40,000 manufacturing labour force, and generated some 60 per cent of MVA in the mid-1980s. Per capita MVA in 1984 was US$ 41, up from US$ 31 in 1975.

Food processing (including beverages and tobacco) is by far the most important industrial activity, accounting for 72 per cent of gross output and 77.3 per cent of MVA in 1984; its share in the sector is slowly decreasing. The major products are beverages, cigarettes and sugar. Recent growth industries are soap and corrugated iron. Their respective shares in gross output rose from 7.3 per cent (1977) to 12.9 per cent (1984) and from 3.1 per cent (1977) to 8.6 per cent (1984). Other industries do not contribute significantly to overall manufacturing output and MVA. Altogether, there appears to have been little structural change over the past two decades.

The promotion of small- and medium-scale industry would therefore seem the best way to increase the manufacturing sector's contribution to GDP and to provide urgently needed non-agricultural employment. In the almost total absence of data, however, it is difficult to say which of the small-scale manufacturing activities is likely to be a strong grower. A 1986 Government report identifies meat, cereal, fruit and vegetable processing, and wood products as future key small-scale industries. With the increase of lake fishing, fish processing could come to play a modest role in the future as well. Finally, centralized ore concentration/smelting of ore mined by small- and medium-scale enterprises would seem viable.

Rwanda exports few manufactures; most exports consists of agricultural products (coffee, tea) and tin ore which undergoes some rudimentary processing. The country imports nearly all its industrial inputs and equipment. Implementation of a number of tariff reductions, agreed upon in principle by the PTA, would boost exports to the region, as would a devaluation of the over-valued Rwandese franc. No significant expansion of overseas exports is likely.

3. Obstacles to production

Manufacturing is confronted with a variety of problems. The small size of the population, overwhelmingly employed outside the monetary economy, restricts the internal market. International trade faces the obstacle of long and costly transport along routes in poor condition that have often been unsafe. There is a shortage of skilled labour and technical/managerial personnel. In the late 1970s, Government intervention in the sector resulted in the establishment of a number of industrial activities which are heavily protected from competition and not economically viable. These import-substituting enterprises have remained highly dependent on expensive imported inputs and equipment. In planning these enterprises, little attention appears to have been given to domestic resource costs, proper accounting, scale economies and product quality. Moreover, overall planning was very incoherent. The above-mentioned problems have hit the large-scale sector more seriously than small-scale industry.

4. Policies directed towards the manufacturing sector

Overall responsibility for policy formulation and industry promotion lies with the Ministry of Mining, Industry and Artisanat. Policies and projects for industry, although not systematically elaborated, are formulated in the context of Five Year Plans; until the late 1970s, however, there was very little direct intervention in the sector.

Under the 1977-1982 Plan a number of public enterprises were established. Industry was to become a main factor in accelerated growth; in the absence of sufficiently motivated and capable private entrepreneurs, the Government took on the role of a catalyst of industrial development. The availability of bilateral aid for Government-owned projects was another factor. Most of the enterprises were large-scale by Rwandan standards. Their problems (outlined above) were compounded by political intervention in enterprise management and by the absence of project monitoring mechanisms.

Otherwise, the environment for industry is relatively liberal, and foreign investment is eligible for a number of fiscal advantages. The various advantages are usually available only for fairly large projects (US$ 100,000 for domestic, US$ 200,000 for foreign investors), but a Ministerial committee is studying the possibility of extending the benefits to smaller-scale operations as well since these are likely to be more efficient in the domestic context. A Special Guarantee Fund is available for small-scale enterprise, but only a few firms have benefited from it so far. It is not clear to what extent the Fund caters especially for the manufacturing sector. To increase the effectiveness of the Funds, eligibility criteria are now to be both clarified and simplified.

To improve the performance in the industrial sector, the Government has initiated a Programme de Relance in 1985. (No information was available on the role of industry in the 1982-1986 Investment Plan.) With World Bank assistance, the industrial incentives system is to be overhauled and public sector enterprises are to be made more efficient. This will involve a gradual reduction of protection, better monitoring of projects, greater management autonomy, improved planning of future investment, and a complete reappraisal of the public-sector enterprises and their role in the economy. During 1985-87, UNIDO implemented a project which assisted the Rwanda Government in identifying and initiating new industrialization projects, formulating industrialization strategies, and improving the industrial environment.

5. The scope for rehabilitation

A major problem in assessing the need for rehabilitation is the shortage of reliable data at the sectoral, branch and enterprise level. In order to improve the accounting procedures and budget information of public enterprises, the Centrale Comptable et Organisation (CCO) was established in 1984. It was not given legal status, however, and it is uncertain whether this has now been acquired. This notwithstanding, the CCO has made a number of in-depth studies and established budgets for a number of public sector enterprises. The Ministry of Finance and Economy, responsible for monitoring the Government's investments, does not appear to have done this in a systematic way, partly as a result of inadequate staffing.

Available data for public enterprises show that the milk processing plant may not be viable since the market is too small. The quality of its product, moreover, fluctuates and competition from neighbouring countries is too strong. The sugar plant suffers from insufficient cane supplies and overstaffing. If both problems could be solved, domestic demand should be sufficient to deplete the sugar supply since most sugar is at present imported. The pyrethrum plant suffers from technical problems and competition on the international market; in fact, product standards are not considered acceptable in overseas markets.

Since 1985, UNIDO has been involved in a US$ 27,300 project to rehabilitate a small-scale ornamental stone quarry. The enterprise has both a good resource base and market potential, but production methods and equipment need improvement. Measures envisaged are the acquisition of good quality second-hand machinery in Europe (to minimize investment needs), improving the range and quality of products, and more active marketing.

SAO TOME AND PRINCIPE

1. General introduction

The major sectors in the economy of Sao Tomé and Principe are agriculture and public administration, both accounting for close to 30 per cent of GDP. The available data do not specify which activities come under public administration. The large share is probably due to the inclusion of public enterprises which would usually be included under other economic sectors. Real GDP growth has been negative in recent years (-9.0 per cent in 1981-1984) due to declining cocoa production, the country's major product and the only significant export. Although cocoa production is rising with the implementation of a plantation rehabilitation programme, cocoa earnings remain low because of unfavourable price trends. GDP per capita decreased from US$ 519 in 1980 to US$ 286 in 1986.

In spite of its favourable natural environment and small population, the country is highly dependent on food imports. Foreign debt, which stood at US$ 92 million in 1986 (a figure that would seem to be considerably higher than GNP), was mainly incurred to pay for these imports. The 1986 debt service ratio was 38.7 per cent. Rescheduling was to be discussed at some point in 1988.

Meanwhile, to improve the performance of the economy, a structural adjustment programme was formulated to be financed by a long-term African Development Fund loan. A key element of the programme will be a far-reaching liberalization of the economy. Small-scale private food production, trade and artisanal production are being encouraged. Foreign investment is to be encouraged on a limited scale.

Sao Tomé and Principe are to some extent dependent on Angola, the main supplier of petroleum, which maintains a considerable military presence on the islands.

2. The manufacturing sector

The manufacturing sector's share in industry has fluctuated between 4-5 per cent since 1970; its present contribution to GDP is 4.8 per cent. MVA per capita has decreased from US$ 29 in 1970 to US$ 25 in 1984. No details are available on manufacturing production or exports; the manufacturing that does take place is mainly related to basic-level food processing (bakeries, beverages, meat processing). Cocoa fermenting, drying and grading could be the most important manufacturing activity.

Future industries might include fish processing, as the country has large fish resources which are only beginning to be explored. UNIDO is assisting the country in the establishment of small-scale building materials industries. The country does not appear to export manufactures, apart from cocoa which undergoes rudimentary processing. Manufactured imports include energy products, road vehicles, machinery and consumer goods.

3. Obstacles to production

The low overall development levels, small population, and shortage of skilled workers represent major obstacles to the development of the sector.

The deterioration of the road network prevents any significant manufacturing activity from being located outside the capital. Foreign exchange shortages have caused shortages of inputs and spare parts.

4. Policies directed towards the manufacturing sector

The Ministry of Commerce, Industry and Tourism is responsible for the sector. No information on manufacturing policies is available. Any existing significant industries appear to be Government property. A recent general policy reform stresses decentralization, participation of private individuals in Government-owned enterprises, and a stronger role for artisanal activities. This policy reform will presumably also touch industrial activities.

5. The scope for rehabilitation

Given the general state of the economy and the very modest size of the manufacturing sector, only limited possibilities for direct improvements in manufacturing operations seem to exist. The World Bank, the United States Agency for International Development (USAID), and the Portuguese Instituto de Cooperaóao Economica (ICE) recently announced an increase in their support for the cocoa rehabilitation programme. USAID is providing a further $300,000 to bring its total up to $900,000, while the ICE is doubling its contribution to a total of $180,000. The programme is to last for three years. It is unknown to what extent this programme includes manufacturing activities. UNIDO will execute a US$ 5,650 project in Sao Tomí to assist the Government in formulating and executing an industrial rehabilitation policy; a more immediate concern of the project, however, is to provide training courses for a number of technicians and managers.

SENEGAL

1. General introduction

Although the services sector dominates Senegal's economy, with 52.3 per cent of GDP in 1985, the great majority of the population is engaged in subsistence agriculture. The share of the agricultural sector in GDP has decreased from 23.8 per cent in 1975 to 17.1 per cent in 1984, partly as the result of droughts since Senegal lies within the Sahel zone. The agricultural sector is a major foreign exchange earner, but exports consist of a very limited range of products. Senegal's economic performance is therefore strongly dependent on changes both in annual precipitation and in world market prices of a few raw materials. The country's per capita income has been decreasing slowly but continuously over the past decade, population growth outstripping the growth of the economy. The 1985 per capita GNP of US$ 370 increased to US$ 400 in 1986 after a good harvest; another good harvest seemed likely in 1987.

Senegal's external payments position has seriously deteriorated since the 1970s as a result of five principal factors:

- decreasing trade performance;
- poor performance of public sector projects (for which large amounts of debt were incurred);
- the appreciation of the dollar vis-à-vis the CFA franc;
- the rise in international interest rates;
- increases in petroleum prices.

Total external debt stood at US$ 3 billion in 1987; the debt service ratio was 20 per cent of export earnings. Short-term relief has been provided by a number of debt reschedulings, but eventually a fundamental economic reform became inevitable.

In 1985, an Adjustment Programme was initiated, the major elements of which are: more incentives to the agricultural sector, reduction of the public sector's role, improved management of parastatals, and encouragement of private enterprises, including foreign investment. Rehabilitation and modernization of existing enterprises are preferred to new investment.

Apart from IMF and World Bank support for the Adjustment Programme (which is to last to 1992 and has so far been fairly successful), Senegal has received multi- and bilateral assistance from a range of other donors. Some creditor countries (Canada, the United Kingdom) have cancelled part of the outstanding debt. In other cases, debt is to be converted into equity in Senegalese firms.

2. The manufacturing sector

The manufacturing sector's contribution to GDP was 8.4 per cent in 1986, down from 8.7 per cent in 1980. Per capita MVA expanded in 1984, but the increase is negligible when compared with the 1970 figure of US$ 88. Modern manufacturing employed 6,000 persons in 1985.

The most important branch in the sector is food products, which accounted for 42.1 per cent of gross output in 1986, 44 per cent of MVA, and 52.6 per cent of employment. Major industries within the branch are sugar and preserves, cereal products, fish, and groundnut processing. If beverages and tobacco are added, the 1986 gross output, MVA and employment shares of the sector are 47.9, 54.0 and 60.4, respectively.

The food products branch is followed by textiles and wearing apparel with a 1985 share in gross output, MVA and employment of 12.4, 17.0 and 12.0 per cent, respectively. It is the only industry in the country in which all manufacturing stages (from cotton ginning to the production of garments) are represented. The most important remaining industries are metal products, petroleum refining and phosphate products. The latter two are single-firm industries; elsewhere in the sector, medium- and small-sized enterprises are more common. The eight enterprises located in the Dakar EPZ, for example, totalled 420 employees. Little information is available about the importance and characteristics of small-scale/artisanal production.

Industrial exports predominate in total exports: the 1986 share was 76 per cent, up from 74 per cent in 1980.

The major manufactured exports are:

- groundnut products (oil, cakes), accounting for 22 per cent of all Senegalese exports in 1984;
- processed fish;
- phosphate products.

Together, these accounted for 75 per cent of manufactured exports. The EPZ contributes only a fraction of total manufactured exports. With the exception of a number of agricultural and non-metallic mineral products, virtually all manufactured products have to be imported. Imports are dominated by petroleum products and equipment.

Structural change in the sector has been limited. The share of the food products branch in output and MVA has decreased somewhat since 1975; its share in employment, however, increased from 42.2 to 52.6 per cent. The output share of textiles and wearing apparel also decreased slightly, but the MVA share went up. Light growth was recorded for the output shares of petroleum refining and industrial chemicals (phosphate products), but their MVA shares stagnated and declined, respectively. The only industry to register more or less consistent growth is metal products, but its contribution to the sector is still very modest.

In the food industries, an attempt has been made to expand groundnut oil production. In fish processing, decreasing tuna resources and stricter licensing on fish catches in Mauritanian waters (much of which was processed in Senegal) have been detrimental to supplies for exporters of canned fish. Switching to other types of fish and other fish products may, however, help to increase exports. The prospects for expanded phosphate-based production do not seem too bright.

Of the food industries mainly producing for the domestic market, cigarettes and milk products (based on imported milk powder) hold some growth potential. The same is true for some metal products and engineering industries (e.g. ship repairing) and - in the case of an overall domestic and regional economic upswing - for the building materials industry.

3. Obstacles to production

The stagnation in manufacturing production is due to a combination of factors:

- decreased agricultural production (partly a result of climatological factors) affecting the raw material base of agro-based industries;
- stagnant or contracting markets for the present domestic resource-based export industries and for import-substituting industries such as textiles;
- a system of protection which, on the one hand, favours inefficient industries and, on the other, weakens the market position of domestic resource-based industries;
- shortcomings (technical, institutional) of the industrial environment;
- an inadequate physical infrastructure.

4. Policies directed towards the manufacturing sector

Industrial policy-making and implementation comes under the Ministère du Développement Industriel et de l'Artisanat (MDIA). In the past, policies have mainly stressed import substitution and manufactured exports to the region. To stimulate industrial development, the Government also invested in large-scale projects in textiles, phosphate products, ship building and oil refining. With the assistance of UNIDO and other multinational agencies, five EPZs were set up during the 1970s. The only major one among these is the Dakar EPZ.

An extensive system of import restrictions and tariffs has protected domestic industry in the past. Misapplication of this system has led to a highly unfavourable market position vis-à-vis imports for precisely those industries which rely on domestic resources. Export subsidies have often served to promote the production of goods that are not internationally competitive.

Under the Adjustment Programme, a New Industrial Policy (NIP) was launched in 1986 with the following objectives:

- reduced Government intervention;
- improved competitiveness;
- stimulation of export industries;
- stimulation of medium- and small-scale industries;

- better resource allocation;
- restructuring of production, with special attention to higher value-added products;
- strengthening industrial linkages and promoting industrial development in the more marginal areas.

In a first phase, import restrictions are gradually being reduced and a harmonization of remaining tariffs is being carried out. This would force the sector to become more competitive; on the other hand, access to a number of imported inputs is facilitated. A more selective system of export subsidies has been introduced, price fixing is to be abolished for a number of products, the Investment Code is to be simplified, and the institutional infrastructure are to be strengthened. In 1989, the adjustment programme is expected to be completed, and a number of programmes reorienting the manufacturing sector are to be implemented during the 1989-1992 period.

5. The scope for rehabilitation

As part of the NIP, MDIA and the Ministry of Planning and Co-operation have made a short branch- and plant-level survey of the performance of Senegal's manufacturing industry. The most commonly used measure which would be of interest in the present context is capacity utilization. A sampling of 60 industries shows that the average level of utilization of installed capacity over the 1981-1985 period was 69 per cent; if the six largest companies are excluded, the percentage decreases to 59.

Labour productivity (variously calculated on the basis of MVA or output) was also on the decline in most industries; only the chemicals industry showed fairly consistent growth during the 1980s. Other issues, described in a general way, are:

- plant obsolescence (textiles, chemicals);
- marketing problems (all branches);
- energy costs (textiles, leather, building materials);
- mediocre input quality (leather);
- poorly developed skills and techniques (building materials, leather);
- high prices of imported inputs (metal goods);
- high-priced products (metal goods).

Obviously, these are often interlocking problems. The more general problems of the industrial environment (weaknesses of the institutional infrastructure, foreign competition, stagnating markets, stagnating agricultural input production) must also be taken into account when a more detailed assessment of the actual rehabilitation needs and possibilities is made. In 1987, the World Bank was planning a US$ 33 million industrial sector restructuring project for the 1988-98 period. This involved technical assistance, investment, training, and a special small industry component. Apart from manufacturing, this project would also include agricultural and transport-trade components. A key element in the project would be the reorganization of the incentives system. A French sugar industry rehabilitation project (size unknown) is now being undertaken. UNIDO and the Senegalese Government are discussing a number of rehabilitation feasibility studies to be carried out within the framework of the World Bank programme. The UNDP/UNIDO contribution has been provisionally estimated at US$ 392,500.

SEYCHELLES

1. General introduction

The Seychelles archipelago has one of Africa's highest per capita incomes. In 1986, per capita GDP was US$ 2,543, or almost three times the African average. This is mainly due to the well developed tourism sector. The services sector accounted for 72.6 per cent of GDP in 1984, a figure that has remained almost stable since 1980. Agriculture and related activities accounted for approximately 15 per cent of GDP in the mid-1980s. In spite of the limited land surface, there is some scope for agricultural development. Unfavourable Government policies, however, have resulted in stagnating output. A partial abolishment of marketing and price controls in 1987 has begun to result in increased agricultural production. The major foreign exchange earner in the sector is probably fisheries, through licensing of foreign vessels. Signs of overfishing have recently become apparent.

In the wake of the tourism boom, the country has borrowed funds for a number of projects that seem essentially unproductive. In its attempts at creating a socialist economy, the Government has established a large number of parastatals which seem equally unproductive. The strongly overvalued Seychelles rupee has contributed to the decline of exports (although these are insignificant when compared to tourism earnings). Therefore, although the debt burden is not high, and although tourism earnings keep rising, the servicing of the debt is becoming a problem. Depending on economic growth assumptions, the debt service ratio has been calculated to rise to 34-75 per cent of GDP by the early 1990s.

Meanwhile, austerity policies have been introduced, and an IMF study of the economy has formulated several policy adjustments such as devaluation of the rupee.

2. The manufacturing sector

Manufacturing accounted for 7.4 per cent of GDP in 1986; the sector has grown slowly but steadily since the early 1970s. Per capita MVA, however, has decreased during recent years, from US$ 167 in 1980 to US$ 141 in 1984. The decrease may be due to the appreciation of the dollar vis-à-vis the domestic currency. Output growth was reportedly "strong" in 1987. Total manufacturing employment was 836 in 1986.

The food products branch dominates the sector, accounting for 71.6 per cent of total production, 79.3 per cent of total MVA and over 50 per cent of employment in 1986. These figures are similar to those of the mid-1970s. Copra and canned fish are the major products of the branch, and also the country's most important exports, apart from petroleum re-exports. Other industries include textiles, paints and varnish production, television assembly, and printing and publishing. The latter industry accounted for 7.7 per cent of production and 6 per cent of MVA in 1985.

No information was available on enterprise size and ownership, with one exception: the country's recently established tuna canning and fish meal factory. This factory is probably the largest in the country, employing some 250 persons. It is largely owned by the Government, with 30 per cent French participation.

Apart from petroleum products re-exports, the country has so far not exported manufactures in significant quantities. Manufactured imports consist largely of energy products, road vehicles and machinery, and a range of consumer goods.

Recent projects include biscuit and packaging materials manufacturing. The Seychelles manufacturing sector could grow considerably in the future if fish processing is successful and if petroleum exploration (now in progress) would lead to the establishment of domestic processing capacity. There might also be some scope for processing agricultural products for hotels and restaurants catering for the tourist industry.

3. Obstacles to production

Both the small size of the population and the limited land resources restrict industrial growth in general and the range of possible industries.

4. Policies directed towards the manufacturing sector

No policies appear to have been formulated for the manufacturing sector.

5. The scope for rehabilitation

The available documentation does not suggest a need for rehabilitation.

SIERRA LEONE

1. General introduction

Although Sierra Leone's economy experienced an annual GDP growth average of 1.9 per cent from 1973-1983, its GDP has been decreasing in the mid-1980s at an average rate of -2.9 per cent. Rapid depreciation of the national currency during recent years makes it difficult to assess the real value of even the most basic economic data. Per capita GDP has been estimated variously as being US$ 340 and US$ 260 in 1984; one estimate puts the 1986 figure at US$ 372. Sierra Leone has been reclassified by the United Nations as a least developed country.

Although the services sector is the largest contributor to the economy, with 56.5 per cent of GDP in 1984, the great majority of the population is engaged in agriculture which accounted for 28.5 per cent of GDP in 1984. Most agriculture is subsistence-oriented. Unfavourable pricing policies are considered to be the major reason for low or decreasing production of rice (a major staple), coffee, palm kernels and cocoa (major agricultural exports). A "green revolution" programme launched in 1986 has thus far had limited impact because investors have shown little interest. Rice production, however, has improved somewhat. Although the mining sector accounts for only 7-8 per cent of GDP, its products (diamonds, bauxite, rutile) are among the country's major foreign exchange earners.

Sierra Leone has been plagued by political instability since the country became independent in 1961. Moreover, the Government has on the whole been unsuccessful in bringing the extensive "parallel economy" under control, and mismanagement of public enterprises is common. The conditions for stable economic growth are thus unfavourable.

The Government has long been unwilling to implement IMF and World Bank suggestions for economic restructuring. The rapid deterioration of the economy in recent years has resulted in the acceptance of measures such as the flotation of the leone (Le), the national currency, and liberalization of domestic marketing (which had been Government-controlled). On this basis, an IMF assistance package of SDR 50 million was made available. A US$ 30 million structural adjustment loan was being discussed with the World Bank in 1987.

Decreasing export earnings have resulted in increasing deficits which were covered by borrowing. Total external debt was around US$ 459 million in 1986, approximately 60 per cent of GDP. Sierra Leone has repeatedly been unable to service its debt. Agreements on debt rescheduling have been concluded on several occasions since 1984. The IMF and the World Bank have recently suspended their support because of Sierra Leone's continued inability to meet its obligations.

2. The manufacturing sector

The share of the manufacturing sector in GDP was 3.5 per cent in 1986, down from 8.1 per cent in 1975. Employment in the sector was estimated at 7,000 - 12,000 in the early 1980s; a probable explanation for the difference is the inclusion of small-scale industry (though probably not artisanal

employment) in the latter figure. There are very few large-scale plants; for example, the brewery industry consists of only one plant, while the whole food sector is dominated by three or four plants. A rough estimate of small-scale industry puts its employment at 45,000 and its contribution to MVA at 55 per cent of the total. Per capita MVA has decreased from US$ 27 in 1980 to US$ 23 in 1984.

Although branch-level data are incomplete, the food products industry is known to be the most important manufacturing branch. In 1986 it accounted for 48.6 per cent of gross output, 65.3 per cent of MVA and 35.8 per cent of employment, followed by wood products and industrial chemicals. In 1986, wood products accounted for 6.4 per cent of gross output, 17.1 per cent of MVA and 17.6 per cent of employment; industrial chemicals accounted for 34.0 per cent of gross output, 4.3 per cent of MVA and 13.3 per cent of employment. In the latter industry, the low percentage of MVA in relation to its other shares may be due in part to the very high import content of production. Textiles and garments is only a minor industry according to UNIDO data. The country does, however, dispose of several large textile enterprises; textiles are also included among the country's major industries in a World Bank report, although no specific data on the sub-sector are given.

Public ownership plays a minor role in the sector as a whole. Large public sector enterprises, however, exist in petroleum refining, metal working, non-metallic minerals, wood products and palm oil production.

Establishing structural change trends is difficult because of the poor data base. UNIDO figures show a strong increase in the shares of gross output and value added for food products in the period 1981-1986 (the 1981 shares were 36.3 per cent and 50.6 per cent, respectively), and a strong decrease in industrial chemicals (which in 1981 still accounted for 52.' per cent of gross output and 31.8 per cent of MVA). Growth in food products seems mainly due to good performance in the brewery industry. Wood products (except furniture) also did well, roughly doubling its gross output and MVA shares in 1981-1986. In the absence of reliable data for preceding and intervening years, it is hard to say whether those figures actually indicate structural change.

Manufactured exports do not assume large dimensions. About 90 per cent of manufactured exports consist of iron ore concentrates. Manufactured imports dominate total imports and far exceed exports. Petroleum products accounted for approximately one-third of manufactured imports. The sector is almost completely import-dependent for spare parts and equipment and for much of its intermediate inputs.

The available material does not allow the identification of development trends. In many industries, growth is critically dependent upon the performance of one or two plants and therefore great fluctuations may occur. The development of international markets for the country's major industrial export, iron ore concentrate, remains uncertain, and therefore the further development of the industry is also uncertain. Generally speaking, the low performance of the large-scale units in the various industries (see below) indicates that, at least as far as the domestic market is concerned, medium-

and small-scale industries may have the strongest development potential, irrespective of branches. Products that can be produced efficiently by relatively small units are therefore likely to play a more important role in the sector's future output.

3. Obstacles to production

The manufacturing sector is confronted with a wide range of obstacles to further development. Demand for the present product range is generally stagnant or decreasing in both the domestic and export markets. Low rural producer prices and transport problems have reduced the availability of agricultural inputs. Foreign exchange shortages result in shortages of imported inputs, new equipment and spare parts. Power breakdowns are frequent. There is a shortage of higher-grade technical personnel and managers. The institutional infrastructure (policy-making, finance and industrial services) is insufficiently developed. Public sector enterprises, finally, not only have to cope with these problems, but also with interference in management and inflexible price control systems.

4. Policies directed towards the manufacturing sector

Policy-making and implementation are the responsibility of the Ministry of Trade and Industry. The 1983 Development of Industries Act provides the basic framework for present programmes for the sector. The Government's objectives for the sector are:

- initiation of accelerated growth;
- mobilization of domestic and foreign resources and technology;
- strengthening linkages;
- development of technical, entrepreneurial and management skills.

During the 1983/84-1985/86 investment plan, development expenditures for the manufacturing sector were projected to be Le 21.6 million, of which 27 per cent (Le 5.8 million) was expected to come from domestic sources. The public sector projects to be implemented during the plan period can be divided into two categories:

- Ongoing projects, which include strengthening the Industrial Development Department and the National Bureau of Standards and Metrification.

- New projects, which include: (i) rehabilitation of the palm oil industries, (ii) rehabilitation of the National Workshop, (iii) industrial feasibility studies, (iv) a small-scale industrial development programme, (v) rural industrial estates, and (vi) establishment of an investment/export promotion mechanism.

UNIDO has co-operated with the Government of Sierra Leone to strengthen the industrial development promotion and planning capacity; recently, a similar programme was initiated for small-scale industries. As part of the above-mentioned Plan for the manufacturing sector, the range of incentives for private enterprise has been expanded, especially for enterprises located outside the capital Freetown, where most industry is concentrated.

In the absence of sufficient interest on the part of private enterprise and in order to increase Government revenue, Government has in the past established public sector factories (see above). In spite of their size and the considerable investments made, however, they have not succeeded in playing a catalytic role in the sector.

5. The scope for rehabilitation

Establishing the scope for rehabilitation is difficult except in the case of public sector industries and some larger-scale private industries. UNIDO is at present assessing the possibilities of rehabilitating the country's jute bag factory. In the past, UNIDO has assessed the rehabilitation potential of the palm oil milling industry, but the Government has not followed up the recommendations.

In 1985 the World Bank conducted a study of the problems and regeneration potential of the larger (public and private) industries. A combination of the various above-mentioned obstacles seem to have caused the low performance of the industries. While the average capacity utilization rate in public sector enterprises was 63 per cent in 1979, it decreased to 35 per cent in 1984. In the private sector, no clear pattern emerges with regard to utilization - it fluctuates among individual plants (e.g. in the chemical sector), and often very large fluctuations take place from year to year. The future viability of petrol refining is questioned. In other public industries drastic reduction of Government participation and intervention is suggested.

It is not clear from the available material whether this World Bank study has resulted in a follow-up. Nor is to clear how, given the prevailing overall environment, a wider scope for private enterprise will result in strong improvements in the manufacturing sector. At present, there appears to be little interest in investing in the manufacturing sector since higher and quicker profits can be made in trading.

SOMALIA

1. General introduction

The main economic activity in Somalia is nomadic stock raising. Approximately one-half of the population is involved in this activity which accounted for an estimated 39 per cent of GDP in 1985. Due to climatic conditions, other forms of agriculture play a relatively minor role. The country has a considerable fishery potential, and a strong increase in fish production has taken place in recent years. Altogether, the agricultural sector accounted for 57.6 per cent of GDP in 1985. Services accounted for 33.5 per cent. A large variety of minerals has been identified in the country, but little is known about quantities, and apart from non-metallic mineral mining, no commercial-scale exploration has taken place so far. The country's per capita GDP was US$ 470 in 1986.

Somalia's economy has suffered seriously as a result of war, droughts and decreasing export earnings. The 1977-1978 Ogaden war with Ethiopia, followed by guerilla warfare in the Ethiopian/Somali border region, has been a major drain on the country's limited resources. Droughts have occurred every 4-5 years during the last two decades, and have decimated livestock. Livestock exports dropped sharply in 1984, when Saudi Arabia - the major buyer of Somali cattle - closed its borders after rumors of rinderpest in East Africa. Although cattle exports now take place to such countries as Egypt, earnings have remained below former levels. Costs of essential imports, moreover, have increased.

With decreasing economic performance and increasing Government expenditure, foreign debt has accumulated. Total debt was approximately US$ 1.5 billion in 1986, and the debt service ratio was 44.4 per cent. Rescheduling took place in 1985 and 1987. Several adjustment programmes have been adopted under IMF stand-by agreements. Under the most recent June 1987 agreement, further liberalization and increased infrastructural investment are to help the economy recover.

2. The manufacturing sector

The share of manufacturing in Somalia's GDP has fluctuated around 2.5 to 3 per cent since the mid-1970s. According to one source, the share actually fell from 8.3 per cent in 1980 to 5.2 per cent in 1986. The sector's share is expected to increase to 6.5 per cent of GDP in 1989. Per capita MVA has been stable at around US$ 29 since 1980. Total manufacturing employment was 18,995 in 1986. Most enterprises are privately owned. Data on manufacturing are scarce.

By far the most important branch is food processing, accounting for 30.7 per cent of manufacturing output in 1986, 26.3 per cent of MVA, and 35.7 per cent of employment. The most important products of the branch are sugar and flour products; the output of both industries has risen considerably since 1980. The sector's overall share, however is decreasing: the 1975 output share was 42.2 per cent, and the MVA share 44.3 per cent.

A strong grower during the past decade was beverages, increasing its output share from 6.0 to 12.5 per cent, and its MVA share from 10.4 to 20.0 per cent. The remaining important branch is textiles, but its growth has been modest, from 9.5 per cent of output in 1975 to 11.9 per cent in 1985. Printing and publishing, which represented 19.3 per cent of manufacturing output in 1975, has seen its share decrease to 7.4 per cent. Oil refining is no longer a significant industry.

Compared to agricultural exports, manufactured exports are insignificant. There is some export of hides and skins, meat products, and forest products (incense). Imports are dominated by oil products. Virtually all other manufactures are imported as well.

There would appear to be a reasonable potential for greater livestock-based manufactured exports (canned meat, semi-processed hides); also, developments in the fisheries sector seem encouraging. Part of the catch is processed by licensed overseas fishing vessels, but on-shore processing is on the increase. The domestic building materials branch has a good raw materials base for cement and gypsum, but growth of these industries has been sluggish and would depend on accelerated overall growth, including improvements in the infrastructure.

3. Obstacles to production

Somali manufacturing suffers from many constraints, exacerbated by war and droughts. These include a very small domestic market, a poor or insufficiently explored raw material base, shortages of managerial and technical skills, lack of foreign exchange to purchase inputs and spare parts, and infrastructural problems. Although few details are available, capacity utilization in most industries seems to have decreased steadily during the past ten years, a trend that is only now being reversed. The Mogadishu refinery's performance has been affected by its obsolescence and high operating costs; the plant is no longer competitive. Moreover, it relies completely on imported inputs. In the leather industry, where a UNIDO assistance project has been initiated, the main obstacles seem to be connected with skill shortages and machinery breakdowns. The same problems have been encountered in the meat products industry.

4. Policies directed towards the manufacturing sector

Little information is available with regard to specific policies for the sector. The present public investment programme includes investment in sugar manufacturing, milk processing, cement, pharmaceuticals and fertilizers. Under an adjustment programme agreed upon with the IMF in 1987, a total of SOR 53.9 million was made available for the economy. As part of this programme, the manufacturing sector's share in GDP is to be increased to 5.7 per cent in 1989. This expansion, however, is to result completely from private initiative. In fact, such public ownership as exists is to be reduced, and the remaining enterprises are to be managed on a more commercial basis. The programme is backed by an extensive infrastructural improvements programme; the extent to which local industries are involved in producing supplies is not known.

5. The scope for rehabilitation

Under the public investment programme, the SNAI sugar mill is to be rehabilitated by 1991; no details were available on the type of problems encountered by the plant. A 1987 UNIDO leather industry project (US$ 63,000) concentrates on plant servicing, introducing better production and maintenance techniques, and training personnel in the tanneries of the publicly-owned Somali Leather Agency. With regard to the Mogadishu refinery, available evidence indicates that rehabilitation would not be worthwhile since the capital cost is likely to be prohibitive. Moreover, the "comparative advantage" that appears to have been a reason for the refinery's construction in the past (the political stability of the region) no longer exists.

The low performance of many industries, as pointed out above, is due to a combination of factors. The overall environment would have to improve in order to formulate rehabilitation programmes for industrial establishments that would be viable in the long run.

SUDAN

1. General introduction

The economy of Sudan grew modestly until the early 1980s, though population growth outstripped economic growth. In 1982/83 GDP started to decrease, with a consequent accelerated drop in per capita GDP from US$ 460 in 1975 to US$ 357 in 1986. The economy experienced a modest recovery from the mid-1980s onwards. In 1986/87 real GDP increased by 7.5 per cent, mainly as a result of increased agricultural production. Although services are the largest sector (48.4 per cent GDP share in 1984), the agricultural sector, with a 1984 GDP share of 35.6 per cent, is still the country's major employer and foreign exchange earner. Cotton is the main export crop, accounting for almost half of the country's export revenue. Other important crops are cereals and sugar cane. The country contains large metallic mineral deposits, but these are only marginally exploited. Petroleum has been found in the southwest, but civil war has thus far prevented exploitation.

Civil war has been a major reason for the country's economic problems. Some 30 per cent of the Government budget is earmarked for military spending, and as the war rages over much of Sudan's fertile southern part, the country's potential earnings from agricuture are seriously affected. The oil shocks, which led to rapid increases in the country's trade deficit, are also significant.

The lack of realism and coherence in economic planning, and the confusion and delays characterizing plan execution have also seriously affected the economy. Most economic plans have been abandoned long before their target dates. Enormous, highly capital-intensive projects have been initiated: however, most were never completed, and the remaining ones have tended to run at a deficit.

Most of the expansion under the plan took the form of public sector investment. Apart from often being misconceived, the projects were subsequently mismanaged as well; such potential for earnings as existed has thus been wasted.

The grandiose plans and mismanagement of the economy have resulted in a large foreign debt. Total external debt had reached US$ 9.5 billion in 1987, a figure well in excess of the country's GDP. Debt service obligations are expected to account for 95 per cent of total exports in 1987/88. As full payment is unlikely, a further accumulation of arrears must be expected. The IMF stopped lending to Sudan in 1986. Although the country has accepted World Bank/IMF proposals for reform, it was only after the return to civilian Government in 1986 that some progress towards economic stabilization and public sector adjustment was made.

2. The manufacturing sector

The UNIDO Industrial Development Review states that "the highly bewildering nature of statistics pertaining to the Sudanese manufacturing sector prevents a consistent analysis." At a very general level, data are consistent enough to estimate the sector's 1985 GDP contribution and employment which were approximately 9 per cent and 200,000, respectively. Per capita MVA was estimated at US$ 40 in 1980 and at US$ 32 in 1984.

The major branches in the sector are food products and beverages, chemicals, textiles, and oil refining. Food and beverages accounted for 31.4 per cent of gross output and 20.3 per cent of MVA in 1985. Chemicals accounted for 21.5 per cent of gross output and 20.6 per cent of MVA; textiles and wearing apparel for 11.6 per cent of gross output and 21.1 per cent of MVA; and oil refining for 11.5 per cent of gross output and 11.1 per cent of MVA. No figures on employment per branch are known. The available figures give no indication of structural change since the mid-1970s.

Within the food industry, sugar refining, cereal milling, and vegetable oil milling are the major activities. Most of the sugar refining takes place in large-scale, Government-owned mills. Large-scale public enterprises also predominate in textile manufacturing. Government ownership is also strong in the tanning, cement and fertilizer industries. On the whole, public enterprises seem to dominate modern manufacturing. The presumably largest enterprise in the country, a sugar mill, is a joint venture.

Details on small-scale manufacturing are scarce, but in the northern part of the country, cottage industries are thought to be 15 times as numerous as modern industries. Food and beverages account for some 80 per cent of the cottage sector's production. According to a 1981/82 survey, the productivity of small-scale manufacturing per unit of investment is ten times higher than in large-scale manufacturing; productivity per worker is estimated to be three times as high. Much of the small-scale food processing (especially flour milling) has been organized on a co-operative basis. Total membership in these co-operatives is estimated at 100,000.

The country exports few manufactured goods. The only significant manufactures export mentioned is the UNIDO database is presumably ginned cotton; in other statistics this is included under agricultural products. Machinery, transport equipment, troleum products, chemicals, and a wide range of consumer goods constitute the major imports.

The absence of reliable data makes it difficult to distinguish development trends and prospects. Under the present circumstances, there are few signs that the decline of large-scale modern manufacturing (in all branches) will soon be halted. The share of small-scale manufacturing, especially in the agro-based industries, seems likely to expand in the future. Co-operative food processers are planning to enter into more sophisticated product lines, such as bakery products and yeast manufacture. However, much will depend on improving the domestic resource base through efficient agricultural policies and a more intensive exploration/exploitation of mineral and forestry resources. The country also claims considerable in-land fishing resources.

3. Obstacles to production

The major constraints to Sudan's industrial development are: inadequate power and transport infrastructure; shortages of spare parts and inputs, both foreign and domestic; limited size of the domestic market coupled with competition from imports; lack of managerial personnel and skilled labour; overstaffing in public enterprises; cost and price distortions; ill-conceived and badly executed industrialization projects; and a cumbersome bureaucracy.

Production technology and product choice during the 1970s did not always reflect demand and resource characteristics of the national economy. Much of the manufacturing sector has become import intensive and is geared to the production of goods which could neither be absorbed by domestic demand nor exported because of the uncompetitive cost structure. The drain that these industries constituted on financial resources again had negative repercussions on the ability of the country to purchase essential imports for the sector in later years.

4. Policies directed towards the manufacturing sector

Within an overall framework provided by the Ministry of Finance and Economic Planning, the Ministry of Commerce, Industry and Co-operation formulates and executes policies and measures for the manufacturing sector. Although Development Plans have provided strategies for industrial development, it appears that actual implementation of projects for the sector took place in a rather haphazard manner.

In 1970, a sweeping nationalization of the sector took place and Government investment came to dominate the direction and pace of industrial development. Since the late 1970s, for example, some 30,000 jobs were created in food and textile industries owned by the Sudan Development Corporation. Under the Three-Year Public Investment Programme from 1983/84 - 1985/86 manufacturing was to receive 8 per cent of the total investment of Sé 1.462 billion. No further details are known.

The 1980 Encouragement of Investment Act allows tax, customs and other concessions to investors but has attracted very few foreign enterprises. The main obstacle to foreign investment is foreign exchange restrictions, which severely limit possibilities to retain or repatriate profits and capital and which have also resulted in highly complicated procedures for obtaining essential imported inputs. An amendment to the Act, which would give more scope to private enterprise (including foreign), is now being discussed.

As an outcome of a 1986 national conference (in which UNIDO participated) on the economic crisis a four-year Salvation Programme for Manufacturing is being drawn up. It will, inter alia, indicate a need for better co-ordination of industrial planning and plan implementation. A review of present import-export regulations and licensing would also be needed. It singles out small-scale industry as a major source of industrial development in the future because of its low capital requirements, relatively low dependence on imports, and high employment creation. Agro- and other industries relying on domestic resources as well as industries producing a range of simple capital goods should also be stimulated. Expanded training facilities would be needed to provide skilled labour for the designated growth industries. Finally, ways must be sought to expand manufactured exports. Even in the best of cases, however, a number of plants will have to be closed down as they are beyond rehabilitation.

5. The scope for rehabilitation

The Salvation Programme has not yet resulted in a detailed, coherent set of measures for the rehabilitation and reorientation of industry. More in-depth study is needed to devise effective programmes, but manpower for the purpose is in short supply.

Without a clear indication of future developments, the overall scope for plant rehabilitation is as yet hard to establish. The need is obvious: 21 per cent of the medium- and large-scale units in an extensive 1981/82 survey had been closed down; another source mentions the recent closure of 100 modern sector plants. Capacity utilization rates in the food products sector are low: the average is 38 per cent and 18.5 per cent for public sector enterprises. A 1987 UNIDO study has estimated that the cereal milling industry alone would need US$ 56 million to achieve full capacity utilization.

At the branch level, a Crash Programme has formulated a number of priorities to improve production in the textiles, food production, leather products, and building materials branches. (Engineering is mentioned, but apart from reference to the need of a "master plan" no priorities are given.) The priorities can be summarized as follows:

- review of the policy environment;
- review of the domestic resource base;
- establishing the need for manpower training;
- capacity rationalization studies;
- research to improve product quality;
- identification of potential export markets;
- strengthening the role of small-scale enterprises.

The amount needed to carry out the preparatory work for the Salvation Programme has been estimated at US$ 1.57 million for external costs and Sé 234-347 million for local costs. Project proposals for elements of the programme such as human resource development, branch-level master plans, and public sector rationalization and revitalization have been prepared by UNIDO. UNIDO will also prepare an analysis of the food processing industry which, inter alia, is to be used to formulate rehabilitation projects. The country's public sector sugar factories are now being rehabilitated with financial assistance (amount and technical details unknown) from the World Bank and several Arab countries. UNIDO will provide approximately US$ 3 million for training under this rehabilitation programme.

Moreover, a preliminary assessment of the rehabilitation potential of some 20 public sector enterprises - mostly food industries - has been made under the Crash Programme. The preliminary assessments of rehabilitation needs/scope were based on financial estimates of new equipment needs, etc., and in most cases, further studies are recommended. These studies would in general focus on techno-economic issues; in some cases, a management study would be necessary.

SWAZILAND

1. General introduction

After a period of rapid growth since Independence in 1968, the economy of Swaziland entered a prolonged period of stagnation from the late 1970s onwards. Droughts have added to the problems of the agricultural sector (which employs over 60 per cent of the population and provided 25.3 per cent of GDP in 1983). But the persistently low prices of sugar and wood pulp - the country's major exports - are considered to be the main reason for the economic problems. (Earnings stabilized on a low level in 1987.) Per capita income, which almost doubled between 1968 and 1980, has decreased from US$ 1080 in 1980 to US$ 1034 in 1983; however, estimates published in the Economist Intelligence Unit would indicate a slight increase in real terms in 1986 and 1987. In spite of this, Swaziland is among the region's highest income countries. Apart from agriculture, various service sub-sectors are the most important contributors to GDP, with a total share of close to 40 per cent in 1983. Swaziland contains large coal reserves and modest quantities of asbestos are mined as well.

Swaziland is unusual in that the country's finances and resources come under a dual administration: the Tibyo Takangwane or Swazi Nation for the country's land resources (agriculture, minerals), representing ethnic Swazis living in rural areas, and the Swazi Government for the remaining economic activities. The Tibyo, however, has expanded its involvement to include a number of other economic activities, such as transport and construction, and has used Government funds to finance its projects. As the Tibyo is accountable to the King rather than to Parliament, co-ordinated planning of economic activities is difficult.

Swaziland retains close ties with the Republic of South Africa and has concluded a security pact with that country. A considerable part of the Swaziland labour force works in South African mines, since the domestic economy is not sufficiently developed to absorb the available labour. South Africa is the country's main trading partner and Swaziland is a member of the South African Customs Union (SACU) and the Common Monetary Area (CMA), the former Rand Monetary Area. There is considerable South African investment in the country.

Swaziland's external debt amounted to US$ 207 million in 1986, or 49 per cent of GDP, up from 36.1 per cent in 1984. The strong increase was mainly due to currency depreciation. In the mid-1980s the debt service ratio was a low 5 per cent. The figure is likely to have risen since then, but servicing should still be manageable.

2. The manufacturing sector

Growth in the manufacturing sector was faster than overall growth during the 1970s. The first half of the 1980s, however, showed mainly negative growth rates for the sector. Total industrial activity (including construction and energy, presumably) accounted for 29.8 per cent of GDP in 1984; the actual share of manufacturing was probably closer to 20 per cent. Per capita MVA in that year was US$ 169, down from US$ 180 in 1980.

The manufacturing sector is dominated by agro-based industries. In 1983, food and beverages accounted for 50 per cent of MVA; sugar milling was by far the dominant industry in the branch. Paper and paper products (mainly pulp-milling) accounted for 15.4 per cent. When wood products are included, the forestry-based sub-sector accounts for 21.5 per cent. The remaining important manufacturing branch was chemical products, with 11.3 per cent of MVA, which primarily produced fertilizer. However, the Swaziland Chemicals Industry was closed in 1984 as a result of domestic agricultural stagnation, depressed world markets (the factory was a major exporter), inefficiency, and South African competition.

During the past ten years, there has been a clear shift in favour of food processing and away from forest-based products; in 1978, the latter still accounted for one-half of MVA. There has also been some diversification: metal products (agricultural implements, simple consumer goods), though still small, has gained in importance since the late 1970s.

In 1982, the sector employed 11,800 workers, some 15 per cent of the labour force. (It is assumed that the labour force has decreased since then.) Most employment and production is concentrated in a few large enterprises: two sugar mills, two saw mills, a pulp mill and a fruit canning factory accounted for 68 per cent of MVA and 45 per cent of employment in 1980. Foreign investment (mainly from the United Kingdom and South Africa) plays an important role in the sector; the Tibyo has also acquired substantial holdings in industry. Government investment focuses mainly on the smaller industries, although most enterprises are private property. No information was available on small-scale industry.

The larger part of Swaziland's exports consists of manufactures. Sugar and wood pulp predominate among these, accounting for two-thirds of all exports, and for over 90 per cent of manufactured exports. Machinery and transport equipment constitute the main manufactured import; however, a wide range of consumer and producer goods is also imported.

Most of the sector's future development potential is likely to be found in the agro- and forest-based industries. Fruit products have considerable export potential, but this would require a shift in agricultural production. Higher value added wood products (e.g. furniture) also seem to have a good export potential, and investments would be modest. It is unlikely that relatively large-scale chemicals enterprises, such as the closed down fertilizer plant, would be viable in the future, but medium-scale manufacturing of batteries, for example, might well prove to be a future grower. For all these industries, exports to other member countries of SADCC seem feasible. The prospects for EPZ-type production, oriented towards European/United States markets, should also be studied. In the latter case, Swaziland's preferential access to the markets mentioned above would be an advantage. The textiles branch, until recently rather insignificant, is in the process of becoming a major industry. Asian investors have opened four textile plants providing close to 1,000 new jobs. Future developments with regards to foreign investment will, however, depend to a large extent on political developments in the region.

3. Obstacles to production

Fundamental problems underlying the stagnation in the sector are: shortages of skilled manpower and managers, the very small size of the domestic market, a depressed world market for such commodities as sugar and wood pulp, the country's landlocked position (with transport routes threatened by political instability), the strength of and dependency on the manufacturing sector of neighbouring South Africa, and the low productivity of the traditional sector which, as indicated, has considerable political power. Potential foreign investors often opt for the Republic of South Africa, which is able to offer more favourable investment terms.

4. Policies directed towards the manufacturing sector

Planning is constrained by several factors. These include the highly centralized nature of political power, and frequent shifts in the power balance in the 1980s; the strong presence of the Tibyo; and the country's close relationship with South Africa. Since the country is a member of SACU and the CMA, the Swaziland Government cannot restrict movements of goods and capital within SACU.

The National Development Plans have stressed the key role of industry in national development. Industrial policy objectives include:

- accelerated manufacturing growth, especially in labour-intensive industries;
- increasing the participation of Swazi nationals in the sector, while stimulating foreign investment;
- dispersion of industrial development;
- better linkages with and exploitation of the natural resource base;
- promotion of manufactured exports.

The Ministry of Commerce, Industry, Mines and Tourism is responsible for overall strategies and policies. The Swaziland Industrial Development Corporation (SIDC) promotes industry through studies, the provision of industrial infrastructure, loans, and equity participation. SIDC replaced the National Industrial Development Corporation of Swaziland (NIDC) and was to become fully operational in 1987. NIDC, which by the mid-1980s was insolvent as a result of poor management and project appraisal/supervision, is to continue to support "essential non-viable projects". A World Bank report advocates restructuring an insolvent NIDC subsidiary, the Small Enterprise Development Company (SEDCO), to serve as a channel for technical and management assistance to small-scale enterprise. Financial assistance, handled by SEDCO in the past, will be provided by the banking sector.

5. The scope for rehabilitation

The available material does not clearly indicate a need for factory rehabilitation. The disappointing performance of the sector seems largely a result of external factors: the low productivity and special politico-economic status of the rural sector, the political situation in the region, the country's strong economic dependence on South Africa, the small size of the domestic market, the difficult access to non-regional markets, and, finally, the shortage of skilled manpower. Expanded co-operation within the framework of SADCC, reducing the country's dependence on South Africa, seems to be one precondition for rehabilitation of the sector as a whole. The performance of industries under the Tibyo (including artisanal production) is unknown.

TOGO

1. General introduction

Togo's economy is highly dependent upon phosphate exports which accounted for almost 50 per cent of foreign exchange earnings in 1984; another 25 per cent is provided by cocoa. In the late 1970s, phosphate prices started decreasing, as did cocoa prices a few years later. The result has been a sizeable economic decline, worsened by the fact that agriculture was seriously neglected during the phosphate boom. Per capita GDP increased from US$ 410 in 1975 to US$ 492 in 1986. The services sector is the largest contributor to GDP, with a 1984 share of 42.8 per cent. Mining (mainly phosphates, although the country also has limestone resources) accounted for 10.0 per cent. The larger part of the population, however, is employed in agriculture, which accounted for 28.5 per cent of GDP in 1984.

The optimism generated by the high phosphate prices of the 1970s was expressed in very ambitious programmes to modernize the economy, with a heavy emphasis on manufacturing. As foreign exchange earnings soon proved insufficient to finance these, the country started borrowing on a large scale. In 1986, total foreign debt stood at US$ 882 million, or 88.6 per cent of GDP; the debt service percentage was 40 per cent in 1987.

Obviously, the country could not and cannot service such huge debts on time. A series of rescheduling arrangements has been made since 1979. IMF adjustment packages did not immediately have an effect, but by the mid-1980s the economy's decline had been halted. Agriculture is once again the main focus of development policies. It will also be the main beneficiary of the most recent Structural Adjustment Programme (1988-1990), financed mainly by the World Bank. Another major element of the adjustment programme is the gradual withdrawal of the Government from direct involvement in the economy and the relaxation of economic legislation. In spite of the progress made, there still exists an enormous gap between the economic ambitions of the Government, as expressed in development planning and in its handling of the debt crisis, and the actual performance of the economy.

2. The manufacturing sector

The share of manufacturing in GDP decreased from 10.7 per cent in 1975 to 6.6 per cent in 1984; a light recovery took place in the mid-1980s, with industry accounting for 7.0 per cent of GDP in 1985. Per capita MVA decreased from US$ 46 to US$ 23 over the 1975-1984 period. The sector employed 3,800 persons in 1982. Data on the sector are scarce, especially for recent years. A total of 106 enterprises were registered in 1982; of these, only 13 had an investment of over CFA 300 million. Industry is heavily concentrated around the capital of Lomé.

The major industry is beverages which accounted for 34.9 per cent of gross output, 53.7 per cent of MVA and 16.5 per cent of employment in 1982. It is followed by food products, with 19.5 per cent of gross output, 12.4 per cent of MVA and 11.7 per cent of employment in 1982. Industrial chemicals accounted for 12.6 per cent of gross output, 13.4 per cent of MVA and 13.8 per cent of employment. Textiles and non-metallic minerals have also

been important industries. No post-1980 data were available for the former, while the latter's performance was severely reduced by the closure in 1984 of CIMAO, the largest clinker plant in the region.

In the absence of data, little can be said about structural change or development trends. The large-scale projects set up during the 1970s - the clinker plant, an oil refinery, a steel mill and two integrated textile complexes - have all been failures. The oil refinery now operates as a depot only. The clinker plant was to be re-opened this year, but there are few signs that a resumption of activities is being prepared. The plant's viability arises serious doubts even on the part of the European Investment Bank, one of the initial providers of funds. The steel plant was closed down in the early 1980s; its present status is not known. The textile mills have recently been reopened.

All the major enterprises mentioned above were Government-owned. The clinker plant was jointly owned by Togo, Côte d'Ivoire and Ghana. Apart from this enterprise, all others have been sold to foreign investors. The only large-scale project being considered at present is a phosphoric acid plant, for which World Bank support would be available.

Togo has a reasonably good raw material base for building materials and agro-industries; however, little but the most rudimentary processing takes place. Should the present economic recovery continue, there would be a growing market for agro-based products, including cotton textiles. Small-scale processing could thus become a growth industry. The building materials industry could also expand, especially if regional trade barriers would be reduced further. Simple equipment for the growth sectors/industries could also be produced locally on a larger scale.

Togo does not export manufactures on a significant scale now. Until the plant's closure, cement was the country's major manufactured export. Ginned cotton (if considered an industrial product) accounted for 9 per cent of total exports in 1984, up from 1 per cent in 1980. Imports consist largely of petroleum products; other significant categories are machinery, vehicles, cotton textiles and food products.

3. Obstacles to production

Although the industrial environment has improved somewhat since 1985 as a result of economic stabilization and more liberal policies, the effects of past mistakes and of the long economic downturn are still felt.

Foreign exchange shortages severely limit imports of inputs and spare parts. In the past, industries have been established with no regard to the domestic raw material base or to inter-industrial linkages. Political interference in the management of public enterprises was common. The available material also indicates that the administration is inefficient and that administrative procedures are both complicated and incoherent. Pricing of industrial products has been distorted by unrealistic price fixing measures. The country is short of qualified personnel, both in industry and in industry-related Government agencies; some agencies have even stopped functioning. The relative neglect, until recently, of the country's

infrastructure has resulted in supply and marketing problems. The sector faces heavy competition from imports (in part illegal) in the small domestic market.

4. Policies directed towards the manufacturing sector

Few details were available on policies and measures. The Fourth Development Plan (1981-85) allocated CFAF 73.4 billion to industry and commerce. Under the Fifth Plan, the amount had been reduced to 16.9 billion, less than 5 per cent of total spending. No other details are known. In general, however, the following trends are clear:

- reduced Government influence;
- reliance on domestic resources;
- stronger export orientation;
- stimulation of SMI;
- better regional co-operation.

As indicated above, the Government has made most of the public enterprises private. In 1985, a new investment code was published which allows free repatriation of capital and profits; tax and import duty reductions are also available. Investments of less than CFAF 300 million require a local majority participation and a majority of local employees. The establishment of a Togo Investors Centre (CTI) is now being debated. Although its establishment is supported by the Government, it will be a private organization providing (industrial) services to entrepreneurs, including (financing of) feasibility studies, assistance in administrative procedures, and identification of projects and entrepreneurs.

5. The scope for rehabilitation

The lack of information and the sluggish recovery of the economy make it impossible to indicate what type of reorganization in the manufacturing sector could lead to renewed growth. It would appear that the majority of the large-scale projects of the 1970s have been written off. The textile plants, now under foreign management, seem to be an exception. A UNIDO team evaluated the CIMAO plant in 1985, and named weak management, insufficient market surveys, and uncompetitive products as the main reasons for the plant's failure. Only a concerted effort by the owner-states would solve these problems. No UNIDO rehabilitation project was formulated. It is not clear what action the owner-states took; however, as indicated above, the clinker plant is due to be reopened.

The obstacles to rehabilitation notwithstanding, UNIDO has executed a $960,609 UNDP project to improve the performance of an agricultural implements plant. Assistance included:

- improving management;
- providing training;
- improving marketing.

The programme also includes plant expansion, although available material indicates that the expansion was not completed on schedule due to delays in building and equipment delivery. Additionally, personnel could not be trained to use new equipment. The project, however, is to be completed by mid-1988. Sales appear to have increased. No information was given on management improvements.

TUNISIA

1. General introduction

Tunisia's GDP per capita was recorded at $1470 in 1984, more than twice that for all of Africa. The real annual average growth in GDP per capita for the 1970s was 5.4 per cent, partly reflecting the development of the energy sector. (Energy exports reached a peak of over half of merchandise exports by the early 1980s.) The period thereafter has seen sharp fluctuations. In 1982 real growth was marginally negative; for the period 1981-84 real annual average growth was 1.5 per cent. Compared to Africa as a whole, this was still favourable since the continent registered -2 per cent growth for that period. In 1985 growth was positive, but in 1986 real GDP declined by 1.2 per cent. A number of factors contributed to the setback: a severe drought constrained agricultural production; Government spending on construction and public works was substantially reduced; and oil production and tourism, which account for some 20 per cent of Tunisia's earnings of foreign exchange, declined slightly. These industries were depressed due to political tensions and signs of growing social unrest. Developments in 1987 were expected to be more positive as external conditions improved during that year and the economy responded to policy changes introduced in conjunction with the IMF and the World Bank to reduce the role of the public sector and cut down on subsidies, including politically sensitive food subsidies.

Tunisia has a relatively diversified economy, with important agricultural, mining, energy and manufacturing production. It is a producer of agricultural crops for export (notably olive oil and citrus), even though the country is dependent on large food imports. It is one of the largest phosphate producers in the world and processes some of its output into phosphoric acid and fertilizers. Tunisia is also an oil and gas producer with a large commercial primary energy surplus and hydrocarbons. Until prices collapsed in 1986, petroleum was typically contributing over 40 per cent of export revenues and 25 per cent of total foreign exchange earnings.

Tunisia has been able to curb inflationary tendencies relatively well in recent years. Consumer prices have decelerated since 1983, partly reflecting the moderation of world inflation compounded by the appreciation of the Tunisian dinar until 1986. However, it also reflects the high level of consumer price subsidies and thus foreshadows increasing inflationary pressures as the subsidies are reduced. The terms of trade moved against Tunisia between 1983 and 1986 - the latter year by 11.7 per cent - but for 1987 they were expected to improve by 1.4 per cent.

Tunisia's balance of payments typically shows deficits both in the trade balance and on the current account, which was 7.2 per cent in 1985. The relatively quick policy response to the adverse developments of 1986, in combination with forthcoming donors and creditors, prevented a balance of payments crisis. The current account deficit was expected to decline to below 6 per cent in 1987. The pressure on the balance of payments remains, however, as efforts to restructure the economy will need a few years to take full effect. The total external debt as percentage of GNP has climbed from 40 per cent in 1982 to 52 per cent in 1986, and the debt-service ratio from 16.6 per cent in 1983 to 27.9 per cent in 1986.

2. The manufacturing sector

Manufacturing is an important sector in Tunisia's economy, contributing some 15 per cent of GDP in 1986 and with a total employment of 198,000 in 1985.

Although petroleum is the country's major export, petroleum refining has not become a major manufacturing activity. Instead, the manufacturing sector's structure has evolved around traditional artisan activities such as textiles and leather, and the creation of "downstream" industries based on large phosphate reserves. The two largest manufacturing activities are food processing and the production of textiles, wearing apparel and leather goods. Other important industries are construction materials, mechanical and electro-mechanical, chemicals, paper and wood. Tunisia also manufactures glass, furniture, batteries, paint and varnish, and rubber goods.

Most industries are based on domestic resources; the textile industry is an exception, depending substantially on imported cotton and cotton yarn. For other major sub-sectors the sources are local: the food processing industry's product range is dominated by cereal derivatives, meat, and olive oil; the chemical industry's principal activity is processing phosphate rock into phosphatic fertilizers and phosphoric acid; a paper pulp plant at Kasserine uses locally grown esparto grass; and the steel industry at Menzel Bourguiba, near Bizerta, is based on iron ore from domestic mines.

In 1985 the major industries accounted for the largest shares of output, MVA and/or value added, as follows: the textiles sub-sector -14.1 per cent of gross output, 16.3 per cent of MVA and 28.2 per cent of value added; food processing -20.2 per cent of gross output, 18 per cent of value added and 14.8 per cent of employment; chemicals -17.3 per cent of output, and 13.7 per cent of MVA; non-metallic minerals (predominantly cement) -10 per cent of output and 17.6 per cent of MVA.

Growth in the manufacturing sector as a whole was on the average 11.6 per cent per year in the 1970s. In the early 1980s, the growth rate declined to 6.9 per cent per year for the period 1981-84. In 1986 manufacturings growth reached 5.9 per cent, compared with an overall GDP decline of 1.2 per cent. For 1987 the real growth in manufacturing was expected to be around 6 per cent, reflecting in part an expected rebound in the mechanical, electrical, construction material, and glass industries, but also the continued relative weakness of domestic demand.

During the period 1975-85 the fastest expanding activities were construction materials and glass, mechanical and electrical products, transport equipment, and wood and paper industries. For example, between 1975 and 1985, the transport equipment sub-sector grew in real value added terms by an annual average of 17.39 per cent.

As a result of the general slump in 1986, however, many industries experienced difficulties. Among the hardest hit was the transport industry, which includes auto assembly plants for leading automobile industries from France, FRG and the USA. The toll was two plant closures and the suspension

of production at others. For other industries the result was mixed. Despite the drought, food processing industries benefited from rising external demand, and showed an increase of 5.5 per cent in real value added in 1986. (The entire period 1975-85 had an annual average of 7.98 per cent.) Reflecting a further strengthening of export demand, the textiles industries more or less maintained earlier growth rates of around 5 per cent; clothing industries recorded a growth rate of some 6 per cent (21 per cent for the period 1975-83); and leather products industries, with a growth rate of over 6 per cent in 1986, improved substantially on past performance (-4.5 per cent for the period 1975-83). Wood and paper industries recorded a growth of 6.1 per cent for 1986, thereby continuing to increase their share of of value added in manufacturing (a modest 5.1 per cent in 1980).

In terms of ownership, public sector enterprises account for nearly two-thirds of MVA, while private small and medium-scale enterprises account for 80 per cent of the total number of enterprises and for 65 per cent of manufacturing employment. Public sector ownership plays an important role in large-scale, capital-intensive industries such as the phosphate processing industry. In recent years also most investment has taken place in the public sector; in the period 1982-86 public sector industries accounted for 57.5 per cent of total investment in manufacturing.

The trend is to decentralize, sell publicly-owned enterprises to the private sector, give tax and other forms of incentives to private and foreign investors, try to improve the manufacturing sector's weak linkages to agriculture, and contribute to efforts to increase regional trade and economic co-operation.

Tunisia's major manufactured export is textiles and clothing. Textiles overtook oil as the country's leading source of export earnings in 1986, accounting for 26 per cent of merchandise exports versus 24.2 per cent for oil. Other significant manufactured exports include leather goods and phosphatic fertilizers. Manufactured imports are dominated by road vehicles, machinery and other capital goods. The major export markets are France and Federal Republic of Germany and Italy. France and Federal Republic of Germany are joined by the USA as major suppliers. EEC countries together account for 60 per cent of both exports and imports. There has been some progress in regional trade with Algeria and Libya, but thus far it has been mainly in the hydrocarbon sector.

3. Obstacles to production

Tunisia belongs to the minority of African countries which has avoided debt reschedulings. Yet the major obstacle to manufacturing production is the foreign exchange shortage. Declining export revenues and increasing debt service payments have seriously curtailed the sector's possibilities to expand production. In many cases, especially in the phosphate industry, equipment upgrading and modernization of production technology has been delayed. The result of the weak balance of payments situation also has been lower investment levels and reduced domestic as well as foreign demand. A contributing factor to the recessionary business climate in recent years has been the uncertainty surrounding the political leadership of the country. Although no longer prevailing, it has negatively affected investment and contributed to social unrest including labour conflicts.

4. Policies directed towards the manufacturing sector

In 1970 the manufacturing sector accounted for a modest 7.7 per cent of GDP. During the years of buoyant petroleum revenues in the later 1970s, investment in the sector was high. In the 1982-86 Development Plan manufacturing and all industry was allocated 20 per cent of total investment spending. During that period, the emphasis was on large-scale projects. The slump in 1986 forced a change of course. Investment in manufacturing as a share of total investment still reached 14.8 per cent in 1986. The Development Plan 1987-91, however, reflects a change of emphasis from large-scale investment projects to small-scale investment, as well as greater emphasis on private investments and on exports of manufactured products. The new investment code enacted in August 1987 has liberalized investment and provides various tax incentives as well as guarantees on the repatriation of capital and investment income by non-resident investors.

It has been estimated that over 60 per cent of value added in the manufacturing sector stems from public enterprises, which also account for the largest share of investment. The on-going reform of the public enterprise sector aims at reducing Government involvement in the activities that are deemed viable without Government aid. This will lead to further privatization of the manufacturing sector. The programme aims to cut in half the number of public enterprises (in manufacturing as well as in other sectors such as public works and utilities); to facilitate the privatization of sectors where private firms are competitive or could operate profitably; and to draw action plans for the rationalization of enterprises which are destined to remain in the public sector due to their strategic nature, the size of the investment involved, or their position as natural monopolies.

5. The scope for rehabilitation

From a macro-economic perspective it seems clear that opportunities exist for rehabilitation of manufacturing industries in Tunisia. The political stability, pragmatic policies, increased regional economic co-operation, and relative proximity to the major markets in Europe are all factors in Tunisia's favour. The decline in investments and stagnating output in later years, although negative trends per se, imply that conditions are ripe for rehabilitation in a great variety of branches, ranging from food processing to transport equipment and including mechanical and electrical industries. Particular needs will exist in those enterprises that will remain public yet are viable economically. In some respects the Government policies do not seem to be particularly conducive to a rehabilitation programme of the type in question. They seem to aim primarily towards private investors, domestic or foreign, for assistance regarding the needed upgrading of the industrial performance.

UNIDO operates seven projects (see Appendix), but none falls under the heading of rehabilitation.

UGANDA

1. General introduction

The Ugandan economy is dominated by subsistence agriculture. The agricultural sector as a whole accounted for 78.6 per cent of GDP in 1984, a 10 per cent increase over the early 1970s. Apart from a wide range of food crops, the sector produces coffee, cotton, tea and tobacco for export. These crops were important foreign exchange earners, but insecurity and low producer prices have caused a return to food production for local consumption. Coffee exports have recovered somewhat, but Uganda's repeated failure to fill its quota under the International Coffee Agreement has recently led to a reduction of Uganda's quota.

Uganda's per capita GDP was estimated at US$ 904 in 1987, much less than the figure for the early 1970s. The figure is in part a reflection of a large-scale return to subsistence agriculture, which again was caused by economic mismanagement during the 1970s, followed by war with Tanzania in 1979 and continued insecurity throughout the 1980s. Trade with, and transport through, Kenya was suspended in recent years, adding to the economic problems. During a period of relative security in the early 1980s, the Government implemented a package of IMF-supported reforms, which allowed some economic growth during the 1981-1984 period. Since 1985, however, a continuous deterioration of economic conditions can be observed. A new reform package, introduced in 1987, appears to make no impact whatsoever. In 1987, some US$ 310 million was made available for economic recovery by bilateral and multilateral donors, but the Government apparently even lacks the manpower to fully utilize the available aid funds.

Most of the funds that Uganda borrowed over the past two decades were used for unproductive purposes, and repayment is made more problematic by the economic collapse. Total external debt stood at US$ 928 million in 1986. The debt service would have been US$ 118 million in 1987, but it was considered unlikely that Uganda would be able to pay this amount. Some of the debt was rescheduled in 1987.

The 1987-1991 Rehabilitation and Development Plan emphasizes reconstruction of the country's infrastructure and agricultural development. Few details are available on the Plan, but industry and tourism are to receive 21 per cent of total investment.

2. The manufacturing sector

The manufacturing sector's share in GDP has decreased by some 50 per cent since the mid-1970s; its 1986 share was 4.0 per cent. A similar decrease took place with regard to per capita MVA, which stabilized, however, at around US$ 40 in the early 1980s. Employment in medium- and large-scale enterprises was 54,500 in 1983, as compared to 47,300 in 1971. Labour retention was achieved through drastic wage cuts.

Detailed information about manufacturing in the post-1980 period is very limited. The food products and beverages branch accounted for 51 per cent of MVA in 1982. Textiles and wearing apparel followed with 26.6 per cent. The

only other significant industry was tobacco products, with 8.4 per cent. In 1983 the most important industries, in MVA terms, were coffee curing and textiles and garments, accounting for approximately 50 per cent and 12 per cent, respectively. Textiles (12,700 employees) and coffee curing (10,000 employees) were also the major employers in 1983. Enterprises controlled or partly owned by the Government accounted for approximately 40 per cent of employment in 1983. The status of enterprises, however, is in many cases not clear, a.o. as a result of the uncertainty over ownership of former Asian property. Government control or participation appears to be common in most of the key industries.

At present, Uganda does not export manufactures on any significant scale. Petroleum products, all machinery and equipment, road vehicles and a wide range of consumer goods are imported. International trade now mainly takes place in barter form.

The absence of data and continued unrest and disorganization preclude an assessment of development trends in the sector. Under the 1982-1984 Recovery Programme, food processing initially showed strong growth, but the trend was not sustained. In 1986, the output of food industries decreased by 24 per cent, and other industries by 13 per cent.

The 1987-1991 Rehabilitation and Development Plan gives priority to steel, textiles, beverages, sugar, cement, salt, phosphates and edible oils. It remains to be seen, given the general situation and previous experience, whether sustained growth can be initiated in those industries now. Average capacity utilization was below 20 per cent in 1986. Utilization rates of 30 per cent or more are very uncommon.

3. Obstacles to production

As a consequence of the overall economic decline and chaos, the sector is virtually unable to import essential inputs and spare parts. Working capital is in short supply. Production is also handicapped by irregular power and water supply. The extremely low per capita income and the deterioration of the road infrastructure severely constrain the domestic market. The shift back to subsistence agriculture has resulted in a decrease of raw materials for industry. Both public and private enterprises and Government agencies involved in industry suffer from a shortage of qualified manpower. Management problems appear to be especially serious in public enterprises.

4. Policies directed towards the manufacturing sector

The available material contains no reference to coherent policies for industry. A 1986 World Bank study suggests the setting-up of an Industrial Policy Unit to elaborate and co-ordinate strategies and policies.

Under the 1982-1984 Recovery Programme, industrial rehabilitation was a key issue. Its success, however, was limited: only 6 out of the 22 analyzed sub-sectors showed "relatively strong" recovery. (More details may be found in [illegible] 5.)

As indicated in Section 1, industry is to receive a considerable share of the Rehabilitation and Development Plan investment. Most of it is to be used to rehabilitate industries producing "essential commodities" (see section 5).

5. The scope for rehabilitation

It is not clear from the available documentation how the scope for rehabilitation was defined under the 1982-1984 Plan. A number of large industries were selected: sugar, textiles, tobacco, beverages, cement and phosphate. Funds were also made available for a wide range of smaller projects, mostly involving manufactured food products and textiles. The total planned investment programme was US$ 437.6 million, of which 45 per cent was to be committed during 1982-1984.

The main investment sources were the African Development Bank, the EEC and the World Bank (IDA). Judging from the details available on the analysis of a number of large public enterprises, the main issues addressed in the rehabilitation studies were:

- ownership (the unsolved problems with regard to former Asian property were a major reason for including this issue);
- long-term viability;
- organization and management;
- physical and technological restructuring.

By mid-1984, only US$ 92 million had been committed to rehabilitation projects. The underlying problems that have delayed progress in the rehabilitation programme include: (a) lack of creditworthiness of the enterprises involved (due to poor management and unpaid past loans); (b) the continuing uncertainties regarding present and future ownership status of firms; (c) the continuing security problems in the country; (d) the weakness in project preparation and implementation, particularly in publicly-owned industrial enterprises; and (e) the weak data base on areas such as market size and growth which makes it difficult to appraise projects.

An additional problem is the lack of Government resources to finance recurrent expenditure to complement the planned investment. Uganda's institutional problems and policy shortcomings are seen as a fundamental constraint in their own right. While these problems have been plaguing the large-scale Government-owned section of the industrial sector, there is, according to the study, a relatively high level of successful rehabilitation activity in the small-scale industries sector.

The 1987-1991 Rehabilitation and Development Plan appears to take up the large-scale industry priorities of the 1982-84 Plan again, with the addition of salt and phosphate. The total estimate of the investments needed under the Plan is US$ 1.3 billion, of which industry and tourism are to receive US$ 272 million. The goals are thus relatively modest compared with the former Plan. Whereas roughly 50 per cent of the agricultural and infrastructural projects have now been funded, only 30 per cent of industry and tourism projects have received funds. This could indicate hesitation on the part of the donor community to commit itself once again to industrial rehabilitation before fundamental reconstruction of the economy has taken place.

The difficult environment in which industry operates is also noticeable in a US$ 395,000 UNDP/UNIDO project, started in 1981, to rehabilitate a biscuit plant. The purpose of the project was:

i) to improve and update the existing manufacturing facilities in the factory;

ii) to assist in the installation of the new equipment;

iii) to increase production in order to meet the local demand and subsequently to export products to neighbouring countries;

iv) to train nationals in food technology management, marketing techniques and the operation and maintenance of plant machinery.

The first two objectives were achieved, but there has been little progress with regard to the last two. According to an evaluation report:

> "This was mainly due to external factors such as: lack of raw materials due to the country's difficulties with foreign exchange, lack of working capital especially due to an ownership problem and an unfavourable infrastructure because of the unreliable power and water supplies. These external factors, however, could have been foreseen during the formulation of the project. The effect of the high level of dependency on imported raw materials to the project not being foreseen is a failure of the project itself. Given such hostile external factors, it is not unreasonable to say that the fourth objective was not realistic and clearly formulated since also the training component was not achieved because of the low output of the factory."

UNITED REPUBLIC OF CAMEROON

1. General introduction

Cameroon is one of Africa's most diverse countries, with a wide variety of climatic and ecological zones, ethnic groups, languages and traditional cultures. It has a population of about 10 million, a GDP of some $13 billion and a recorded per capita income of $1,318 (1985). The agricultural sector has long been the backbone of the economy and was responsible for Cameroon's healthy growth rates long before the advent of oil resources in 1978. Known oil reserves will be exhausted in the early 1990s and the prospects for new discoveries are not good.

Until 1986 Cameroon registered a remarkable overall economic and financial performance. Real GDP growth averaged 10 per cent per year from 1978 to 1985. Non-oil GDP is estimated to have grown by some 8 per cent per year. When oil prices suddenly slumped in 1985/86, compounded by weak prices for agricultural exports, the shock was severe: exports fell and the trade balance swung into deficit for the first time in almost a decade. Cameroon initially managed to weather the storm by drawing on oil earnings deposited in extra-budgetary accounts. However, by the end of 1986, signs of serious economic problems emerged and the growth rate began to slow. Depressed commodity prices have affected government receipts, and the Government has been slow in curtailing both current and capital expenditure and preparing the economy for the inevitable decline in the oil sector. When the first economic adjustment measures were introduced in June 1987, they were accompanied by severe criticism of the World Bank and the IMF in the local media. The Government made firm declarations that it would not call on the organisations for assistance. More recently, there seems to have been a turnaround in this policy.

An analysis of Cameroon's foreign trade performance is hampered by the lack of accurate data. It became Government practice under President Ahidjo to place a substantial part of oil export revenue into separate bank accounts under the heading Compte Hors Budget, which was not included in the national accounts. After oil export started, there were subsequently large and growing trade surpluses: by 1985 exports were almost twice as high as imports. But, with crude oil accounting for 67 per cent of total exports, Cameroon is heavily exposed to shifts in the world oil market. Export revenues are mostly in depressed US dollars, while imports, originating mainly from France and the EEC, have to be paid in appreciating EMS currencies.

Until the recent slide in export earnings the country's foreign debt burden was relatively light by African standards. In 1985 total disbursed debt stood at $2.87 billion, equivalent to 26 per cent of GDP, and the DSR was only 8.3 per cent. As the Government has been a very popular borrower with multilateral agencies, a large proportion of its debt is on concessional terms. In the coming years Cameroon will have to depend more on external funds for development, but it has received cold responses from France and FRG when it applied for extended credits without accepting reform proposals.

2. The manufacturing sector

Cameroon has a relatively varied manufacturing sector, based mainly on agro-processing and geared mostly to supplying the domestic market. According to UNIDO data, its share of GDP has increased markedly from 10 per cent in 1975 to 17 per cent in 1985. MVA per capita rose from $77 in 1975 to $224 by 1985, i.e. almost four times as much as for Africa as a whole. The number of manufacturing employees has risen slightly from 28,900 in 1975 to 31,000 in 1985.

Most manufacturing is centred around Doula and uses domestic inputs to produce goods such as chocolate, cocoa, paste, flour, beer and cigarettes. Food processing, particularly brewing, is the major industry. Current production also includes textiles, non-ferrous metals, industrial chemicals and wood products.

The single largest industrial unit in the country is the petroleum refinery, which started in 1981 and has a capacity of 2 million tons a year. Among other major industries is the aluminium manufacturer Alucam, which was started in 1958 and is the oldest industry in the country. It imports bauxite from Guinea but has had difficulties breaking even in recent years. Alucam produces mainly for Socatral, which produces aluminium sheets for export, corrugated sheets for the domestic and Udeac markets, and discs for the local utensils manufacturer, Alubassa.

The only other major industrial producer at present is the cement manufacturer Cimencam, which has produced quite impressively, particularly in construction and public works. However, plans by the UK-based Blue Circle Group to set up another cement factory at Limbe with a 500,000 ton capacity have apparantly been scrapped. The biggest disappointment in recent years has been the paper and pulp mill Cellucam. It came into operation in 1981, but was fitted with equipment ill-suited to the quality of the wood found in Cameroon and subsequently suffered from explosions and other accidents. The mill was closed down in 1982 and the project was finally wound up in 1986.

Beverages is presently the largest manufacturing sub-sector, accounting for some 20 per cent of gross output and almost 18 per cent of total manufacturing employment in 1985. (Corresponding figures in 1975 were about 15 and 14 per cent, respectively.) The industry's share of manufacturing value added also increased, from 30.1 per cent in 1979 to 38.6 per cent in 1985.

In terms of value added, the textile industry is the second largest sub-sector, with a 15.2 per cent share of manufacturing value added in 1985 and a 9 per cent share of gross output. Total employment in this sector declined from 4,430 persons in 1975 to 2,630 in 1985. During the same period value added grew by 9.12 per cent, resulting in a growth rate of value added per employee in the textile sector of 5.46 per cent.

The food processing sub-sector in 1985 accounted for 7.3 per cent of value added, 13.2 per cent of gross output, and 7.7 per cent of manufacturing employment.

Tobacco accounted for 10.4 per cent of value added in 1985, down from 12.9 per cent in 1975. The sub-sector's share of gross output and employment was 5.7 per cent and 10.8 per cent, respectively. Employment growth outstripped growth of value added for the period 1975-86, resulting in a slight decline of value added per employee of 0.42 per cent.

The machinery sub-sector, including electrical machinery, accounted for 6.4 per cent of value added, 6.2 per cent of gross output, and 9.5 per cent of employment in 1985.

Additionally, a tyre factory produces tyres using local rubber. The present status of a fertilizer plant, which opened in 1976 but had to shut down for technical reasons, is unknown.

The fastest recorded growth in value added per employee for the 1975-85 period was in the fabricated metal sub-sector, which showed a gain of 26.4 per cent per year on the average. Considerable gains were also made in the chemicals sub-sectors, pottery, china and earthenware, glass, and non-metallic mineral products sub-sectors. Negative growth was recorded only for tobacco and wood, including wood furniture.

The ownership pattern is dominated by joint ventures between French companies and the State, which has pursued a fairly active industrial policy and taken up substantial shareholdings in major ventures. The State has large holdings in many major industries such as Socatral, Alubassa and Sonara, and there are about 60 parastatals.

The trend has been to pursue an industrial policy in line with an overall development strategy based on import substitution. Despite pressure from the World Bank and the IMF, there has been no concrete change in this policy. Another unchanged trend is to develop domestic supplies of raw materials. For example, a 1985 programme would expand the production of rubber to 30,000 tons from 18,600 tons. With respect to the wood industry, only one third of Cameroon's forests are exploited. As of yet, however, progress has not been sufficient to revive the Cellucam paper and pulp mill project.

A small part of Cameroon's exports consists of manufactured products, mainly some petroleum products, rubber, aluminium, cotton and yarn, some wood products, and some vegetable oils and fats. These manufactured exports totalled a little more than 11 per cent of total exports in 1982. Another 47 per cent consisted of crude oil. In contrast, manufactures typically make up between one-half and two-thirds of imports, with an emphasis on machinery, transport equipment, household goods and semi-processed goods. Cameroon trades primarily with the western industrialized countries in Europe and Japan. France is the main trading partner in both directions, providing over 40 per cent of imports and purchasing over 20 per cent of Cameroon's exports.

3. Obstacles to production

The manufacturing sector on the whole is not deeply integrated into the economic structure of the country and has limited linkage effects. Some industries, in particular the large import-substitution industries, face serious structural problems, the most important of which are

undercapitalization, overstaffing and managerial deficiencies. In addition, some enterprises such as Alucam have been adversely affected by rigidities in the pricing system.g. Alucam. Since the fall in international oil prices, there is a general shortage of foreign exchange, which adversely affects production as well as the scope for new investments. The fishing industry is obstructed by boundary disputes.

4. Policies directed towards the manufacturing sector

The Government has given priority to industrial development aimed at national and regional markets as a means of accelerating growth. To this end extensive tax and financing incentives have been made available, while the State has taken shareholdings in new ventures. However, it has been under pressure in the past year from the IMF and the World Bank to reconsider its policy of import substitution. These organizations have suggested that the industrial sector should be progressively opened up to more competition.

The State keeps its shareholdings in the major industrial and manufacturing ventures through the Société Nationale d'Investissement (SNI). However, the SNI has received considerable criticism regarding the management of its operations; in a move to restore profitability it announced in 1986 that it would sell off shareholdings in companies over a five year period. In July 1987, President Biya established a special commission to draw up a restructuring programme for the 60 or so parastatals. The authorities have requested World Bank assistance in formulating these rehabilitation plans. Meanwhile, greater emphasis is being given to the promotion of small- and medium-sized enterprises, especially those oriented towards the export market and the use of local raw materials.

Under the 1981-86 Development Plan, industry and energy together were allocated 17 per cent of planned investment, which was a lower proportion than under previous plans, but significantly more in absolute terms This share of total investment is to be maintained during the present Sixth Plan (1986-91). Administrative procedures are being simplified. While all investment approvals and industrial licensing formerly had to go through the cumbersome national administration in the capital of Yaoundé, a growing number of decisions in these matters is now being made at the provincial level. This is expected to stimulate both SME and the diffusion of manufacturing. Under the Plan the system of price fixing for manufactured goods also is to be relaxed, reflecting a general shift towards less government control. Public enterprises are to be given greater independence in their operations; "planning contracts" will be drawn up by which management is expected to enjoy a larger measure of autonomy, and therefore hopefully raise fallen productivity levels.

5. The scope for rehabilitation

Cameroon's Government has recognised the need for industrial rehabilitation, particularly among the parastatals, and has requested the World Bank to assist in formulating a reconstruction programme. Since no specific mentioning of it is made in the material covered for this report, it is difficult to assess which particular branches would show the best scope for

rehabilitation. The fertilizer industry may be a candidate. Although tiny, the wood industry may be another candidate; judging from its performance record in recent years, there seems to be a growing need for rehabiiitation.

UNIDO currently operates eleven projects of which only one seems to deal directly with rehabilitation - a $49,600 maintenance training project (see also Appendix).

UNITED REPUBLIC OF TANZANIA

1. General introduction

Tanzania's economy is dominated by subsistence agriculture. The sector accounted for the great majority of the economically active population and for 44.3 per cent of GDP in 1984. The country's major exports are agricultural crops (cotton, coffee). Diamonds constitute the most important non-agricultural export. The country contains considerable mineral deposits, but under the present circumstances large mining investments cannot be made. The services sector accounted for 43.4 per cent of GDP in 1984.

Since the mid-1970s, Tanzania's per capita GDP has decreased from US$ 288 to US$ 241 in 1986. There are several combined reasons for the decline of Tanzania's economy. The purchasing power of exports fell by 60 per cent between 1970 and 1983. The country has been, and still is, involved in several armed conflicts with Uganda and Mozambique which have considerably increased defense outlays. The development strategies pursued since the late 1960s, with their heavy reliance on Government intervention at all levels of the economy, have on the whole failed.

Policies for the agricultural sector have proved particularly unsuccessful. Price fixing, introduced for the majority of crops including all export crops, resulted in producer prices lagging increasingly behind inflation; this again led to reduced production. The incentives to produce (and sell) were further reduced by difficulties in obtaining consumer goods. Productivity and sales were further reduced as a consequence of the non-availabiity of transport, inputs and equipment. The villagization programme, intended to create the basis for a collective agriculture and rural service centres, resulted instead in a widespread disruption of rural society and agricultural production. Rural problems were also compounded by drought in the early 1980s.

As a result of the economy's dismal performance, Tanzania has become a heavy borrower. Total external debt stood at almost US$ 4 billion at the end of 1986, or 92.5 per cent of GNP. In 1980, the IMF made further loans conditional upon economic reforms, but it was not until 1984 that the Government began to implement reforms that led to renewed IMF and World Bank support. Measures included devaluation and reduction of public expenditure and stimuli (inter alia higher producer prices) to the agricultural sector. Restructuring of parastatals, which includes major industries, is now being discussed.

Since the mid-1980s, positive effects of reforms have become noticeable in agricultural output. Export crops especially have responded well to stimuli. Apart from generating extra foreign exchange, their increased availability has also had a positive impact on the performance of processing industries.

2. The manufacturing sector

The manufacturing sector's decrease has been stronger than that of the economy as a whole. In 1975, industry accounted for 12.6 per cent of GDP; in 1984, the share was only 5.2 per cent. The downward trend continued in 1985, when output decreased by about 6.4 per cent.

Manufacturing employment has stabilized around 100,000 since the late 1970s. Approximately one-fourth of the manufacturing labour force worked in small-scale enterprises, and another 150,000 persons are believed to be engaged in artisanal production. Small-scale industry is considered to be more efficient than large-scale: calculations based on data for the early 1980s show that their domestic resource cost (per unit of value added) was, on average, only 35 per cent of the domestic resource cost of industry as a whole. By 1981, value-added per worker was 15 per cent higher in small-scale than in large-scale industries.

The sector is dominated by two branches: food and beverages and textiles and wearing apparel. Food and beverages accounted for 27.4 per cent of gross output, 23 per cent of MVA and 25.6 per cent of employment in 1985. Textiles and wearing apparel accounted for 20.9 per cent of gross output, 22.5 per cent of MVA and 33.4 per cent of employment. The only other significant group of industries is the metal products and machinery sub-sector, accounting for 15.3 per cent of output, and a similar MVA share in 1985.

Structural change has been very limited. The output and MVA shares of food and beverages decreased by some 2 per cent since 1978; this may be due solely to temporary raw material shortages. The output share of textiles has gone up by 4.7 per cent since 1978, and the MVA share by 3.2 per cent. The metal products and machinery sub-sector shows very little change; the MVA share of transport vehicles is an exception since it increased from 3.9 to 5.8 per cent in the 1975-1985 period. Although the total number of vehicles produced is as yet very limited, there would appear to be scope for expansion to serve regional markets.

Future growth in the sector will to a large extent depend on economic recovery, especially in the growth of the rural economy. Judging by their performance in recent years, small-scale industries would seem the most likely growers, especially in the food products, beverages and textile industries. The metal products and machinery industries could grow in a "supporting role", i.e. as providers of simple equipment, especially for the rural sector and the major growth industries indicated.

In 1981, public sector manufacturing accounted for some 55 per cent of output and value added in enterprises with more than 10 workers. The tobacco, cement, and iron and steel industries are wholly Government-owned. Large-scale paper and textile production is also largely controlled by the Government. There is little public ownership in small-scale industry.

Tanzania's export manufactures are relatively small. The major items are petroleum products, textiles and sisal products. Imports are dominated by petroleum products, machinery and road vehicles. Tanzania's industry imported some 70 per cent of its inputs in 1984, a figure that has doubled since 1973.

3. Obstacles to production

The continuing economic problems of the country have created a number of special problems for industry. Raw materials and spare parts, which have to be imported and paid for in scarce foreign currency, are insufficient. In the past investment has often been made on the basis of an inadequate assessment of the country's potential and needs. This has resulted in plants that are too large and capital-intensive. Power, water and road infrastructure are inadequate. In many industries, management and technological skills are in short supply. An overall result of the stagnation of the economy is low demand in what is potentially one of Africa's larger markets. The policy environment, finally, is responsible for some of the problems. A 1986 World Bank study, for example, shows that in most cases a clear relationship exists between high protection rates and low efficiency in industrial production.

4. Policies directed towards the manufacturing sector

The economic strategy outlined in the Structural Adjustment Programme (SAP) provides the most detailed statement of the Government's intentions to deal with the current economic crisis. Despite the fact that the three-year period (1982-85) for which SAP was originally devised has elapsed, the major features of the policy outlined by this programme continued to determine the priorities and attitudes of the Tanzanian Government. SAP incorporates detailed proposals for revitalizing the industrial sector. The key Government body involved in industrial sector programming is the Ministry of Industry.

The objectives of the industrial sector component of the Structural Adjustment Programme were to:

- increase the domestic supply of basic consumer goods for the urban and rural sector and inputs for agriculture;
- reduce the import content of industrial production;
- generate a higher level of industrial exports;
- minimize demands on the balance of payments for the expansion of industrial capacity; and
- maximize revenue generating potential from new production units.

Priority in the allocation of foreign exchange to industry will be accorded to:

- the supply of certain basic amenity goods;
- ensuring a reasonable flow of incentive goods (such as bicycles, radios, etc.) to stimulate, inter alia, production;
- inputs and equipment for agriculture;

- the production of goods generating high sales and excise tax revenues (e.g. beer and cigarettes);

- the production of export goods.

Foreign exchange allocations will be made to ensure capacity utilization of the most efficient plants producing priority goods for the domestic market and/or goods for export. The overriding criteria for measuring efficiency will be:

- for the domestic market: the foreign exchange cost per unit of output compared to the cost of imports;

- for the export market : net foreign earnings.

Industries with surplus capacity or plants producing low priority goods will be closed down. Although a few large-scale projects are still to be completed, the focus of the Programme will be rehabilitation. Procedures, controls and incentives are to be reviewed, simplified and made more coherent. The industrial support infrastructure in Government agencies is to be strengthened.

5. The scope for rehabilitation

The SAP clearly recognizes the priority of rehabilitation over setting up new factories. The Government has estimated the financial requirements at US$ 37.4 million. The industries to be rehabilitated are in the sub-sectors of food, beverages and tobacco; textile, clothing and leather; paper and printing; chemicals, rubber and plastics; cement and glass; metal products; and machinery. The textiles (US$ 15.8 million) and metal products (US$ 10.1 million) sub-sectors account for most of the planned expenditure. The rehabilitation programme, however, does not appear to be adequate.

First, no attempt was made to assess the longer-term economic viability of the industries to be rehabilitated. The figures for rehabilitation needs were based on estimates of each plant's management with regard to physical plant and equipment repair/replacement. The criterion of direct foreign-exchange saving was not consistently applied. Many of the selected enterprises are very inefficient and are not likely to become competitive in the foreseeable future.

Second, the intended allocations for rehabilitation were heavily biased towards large enterprises and parastatals. Many large parastatals are non-viable even under better general conditions, while there are many private small and medium enterprises which are quite efficient. The bias of the rehabilitation proposals is likely to accentuate the large inefficiencies in the allocation of resources.

Third, the actual figures for rehabilitation needs are questionable. The reliance on the firm's management for the estimates inflates the need for physical inputs. More importantly, the concentration of rehabilitation proposals on improving physical equipment implies a very narrow definition of what needs to be done to restore existing plants to reasonable standards of operational efficiency.

Enterprises should have been provided not only with physical rehabilitation requirements, but also with the technical, organizational, managerial and training inputs needed for efficient operation. Overall rehabilitation needs should have been carefully assessed against the competing needs for recurrent inputs within industry, and against the overall resource requirements in other sectors. Furthermore, the nature and phasing of the rehabilitation programme should have been more closely integrated with the macro-economic, trade and industrial policy reforms; this would have provided potentially viable firms with incentives to rehabilitate, while discouraging others.

Although bilateral assistance under SAP helped to remove a number of bottlenecks (e.g., improving the performance of factories through provision of spare parts), the overall programme does not appear to have been successful. An evaluation, however, was not available at the time this summary was written.

Some of the above remarks apply to a UNIDO project to rehabilitate a sisal bag plant (UNIDO input: US$ 1,109,500). The plant was rehabilitated in 1979, but poor maintenance and shortage of spare parts soon resulted in equipment deterioration. The new project provides both technical rehabilitation plus improvements in maintenance and management procedures. Even so, a recent mission report, while underlining production growth, mentions power cuts and raw material shortages resulting from inconsistent sisal price policies as seriously inhibiting the plant's normal functioning.

Possibly as a result of the improving performance of the agricultural sector, international donors have recently backed rehabilitation programmes for cotton ginneries and the Tanzanian Fertilizer Company (TFC). The OPEC and the United Kingdom have pledged US$ 6-7 million and £6.9 million for the cotton ginneries (including pest control); TFC is to receive US$ 20 million from a group of donors.

ZAIRE

1. General information

Although services constitute the largest sector in Zaire's economy, with a 1984 GDP share of 34.9 per cent, mining is the key sector, accounting for 24.8 per cent of GDP in 1984. The share of the agricultural sector, which provides employment for the great majority of the population, was only 13.6 per cent in 1984. This figure reflects the low monetary degree of the rural economy. Zaire's natural resource base is one of the richest of the continent. The principal minerals now being exploited are copper, cobalt, diamonds and zinc. The country, however, claims many other mineral resources and large forest resources. Much of the country's natural resource base remains unexploited (and unexplored) as a consequence of economic stagnation. Real economic growth has probably been close to zero over the past decade, but there were signs of recovery in the 1985-87 period, with average real growth around 2 per cent. Per capita GDP decreased from US$ 305 in 1975 to US$ 217 in 1986.

External factors have no doubt contributed to the decline of the economy. Approximately 40-50 per cent of the country's foreign exchange earnings are supplied by copper exports, and copper prices have been low for a long time. Virtually all of the remaining exports were affected by low world market prices for raw materials as well.

Major internal problems are connected to Belgian colonial policy. Upon independence, the country had only a rudimentary infrastructure, very little skilled labour, and no manpower with a higher education and/or experience in filling key governmental and economic positions. The latter became very obvious during the Zaireanization campaign of the 1970s which was coupled with a policy of economic expansion through large-scale projects. Mismanagement occurred on a massive scale. Most of the large-scale projects were failures: the Sosider steel plant, for example, founded in 1972, never operated at more than 10 per cent capacity. Since agriculture was neglected, Zaire became a food importer. Zaireanization was eventually abandoned, and former foreign managers and owners were allowed to return. Confidence in the Zaire economy, however, could not be restored, as there were few signs that the overall economic environment was improving. In addition, the Government has been reluctant to provide compensation for losses.

Decreasing foreign exchange earnings and borrowing for modernization projects that never provided a return have saddled Zaire with a large external debt. Disbursed debt stood at US$ 5.9 billion in 1987, or 170 per cent of GDP. Reschedulings have thus far kept debt service low, but by the end of the 1980s the payments due will reach a level of 30-40 per cent of the country's present export earnings.

It seems doubtful whether the country will be able, in the short run, to increase exports sufficiently and to improve generally the performance of the economy to surmount the debt problem. Zaire has, however, complied with most of the measures demanded under the IMF restructuring assistance programme which have resulted in a liberalization of the economy and a return to modest GDP growth in the second half of the 1980s.

2. The manufacturing sector

The manufacturing sector's contribution to GDP is small. It accounted for 1 per cent in 1986, down from 3.7 per cent in 1975. Per capita MVA decreased from US$ 11 in 1975 to US$ 6 in 1984. Overall capacity utilization is thought to be below 30 per cent. Analysis of the sector is difficult as data are scarce and often unreliable. Available data on the output of individual industries, however, suggest slow growth since 1984. Another indicator in this direction is the growth of gross fixed capital formation, which increased from 16 per cent in 1983 to 20.9 per cent in 1984. Employment in large-scale modern factories was approximately 62,000 in 1983. Data on employment in artisanal and small-scale units were not available, but the contribution of these to total output in the sector is thought to be very small. Most enterprises are privately owned, with foreign investment again predominant in the larger companies after the reversal of the nationalization policies of the 1970s.

In terms of MVA, beverages was the most important industry in 1986, with a share of 21.4 per cent of total MVA. Food products followed with 12.4 per cent, footwear, tobacco and industrial chemicals each accounted for some 8 per cent. All agro-based industries combined accounted for some 60 per cent of MVA. The most important manufactured products (by volume) are beer, flour, sawn wood, sulphuric acid and cotton textiles.

Minerals accounted for some 60 per cent of all exports in 1984. This would involve a volume of ore concentrate which is categorized as a manufactured export. No details on the share of concentrates were known, however. Timber, cement, crude rubber and palm oil are the remaining significant manufactured exports. No post-1980 data were available on the value or volume of these exports. Manufactured imports consist predominantly of petroleum products. Other imports are road vehicles and machinery and consumer goods. No recent import figures are available. In order to acquire foreign exchange, which is very scarce, many manufacturing companies also trade in non-manufactured products.

Likely future trends in manufacturing can be described in only the most general terms. It appears that many enterprises in the sector have undergone programmes of rationalization, fixed asset renewal and modernization in the past three years, which will put them in a good position for responding to the recovery of demand. The Plan for 1986-90 sets an average annual growth rate of 8 per cent for the industrial sector. Although there are opportunities in the important subregional markets, export industries in the sector are to remain marginal during the next few years.

3. Obstacles to production

The generally unfavourable economic and policy environment that existed up to the early 1980s has seriously affected industrial development. Ill-conceived, large-scale projects and the Zaireanization of management, for which the country had neither sufficient financial nor human resources, caused widespread plant closures. Foreign capital was withdrawn from the sector on a large scale, and there are so far few signs that foreign investors have regained confidence in the investment climate. Foreign management partners,

however, have returned to many of the major industries. Shortages of capable personnel at all levels, of imported inputs and of spare parts have resulted in dramatic production decreases in enterprises that still function. Regular supplies of foreign exchange to purchase essentials are available only to the larger, foreign-owned enterprises with good banking connections. Administrative inefficiency is also a serious problem.

As a result of the austerity measures in recent years, and with a large part of the population living outside the monetized sector, the internal market is small. Moreover, the rudimentary transport infrastructure has deteriorated markedly during the past two decades, which, apart from being an obstacle to marketing, also causes bottlenecks in the supply of factories. Finally, neglect of the agricultural sector has severely affected the raw material base of agro-industries.

4. Policies directed towards the manufacturing sector

The central agency for the formulation of plans for industry is the Department of Planning. Since 1985, planning has been considerably strengthened, inter alia, through the establishment of planning cells in public enterprises. UNIDO is preparing a project to improve industrial planning and promotion.

It is not clear from the material available whether the 1983 recovery programme implemented in consultation with the IMF had a specific industrial component. Privatization and reduction of Government influence in the remaining public sector enterprises are known to be one result.

The recovery programme has served as a basis for the 1986-1990 Plan for Socio-Economic Development, but again, few details are known. The Plan focuses on improvements in physical infrastructure and increases the scope for private enterprise and decentralized development. Strategic industries excepted (e.g. those connected with mining), manufacturing investment in the future will be supplied entirely by the private sector.

A new Investment Code is presently being drafted which will allow foreign companies to be eligible for incentives if they contribute to job creation or use of local natural resources. Eligible firms will be exempt from the employer's contribution to tax paid by general-category employees, and from part of the income tax levied on expatriate staff, if such staff are responsible for training Zaire personnel.

Eligible firms will be exempt from tax on foreign raw materials and semi-finished products, and under certain circumstances from all import duties and taxes. Local factories supplying eligible foreign firms with equipment will be exempt from indirect taxes.

In addition to the changes in the investment code, substantial changes have been made in import and export duties and taxes.

To attract foreign investment, UNIDO has assisted in the establishment of an export processing zone, the Zone Franche d'Ingra.

5. The scope for rehabilitation

Defining the scope for rehabilitation is difficult in view of the absence of key data, especially for the more recent years, and in view of the uncertainty with regard to future development. Although the overall economic situation and the performance of industry have improved somewhat, much remains to be done to create stable growth. In the absence of that, the long-term success of rehabilitation projects is uncertain.

The World Bank is to undertake a major in-depth study of the sector to investigate these issues. On the basis of this study, the scope for rehabilitation is to be assessed.

Although the available literature contains passing references to on-going rehabilitation projects, the only detailed information on locating projects was found in UNIDO project files.

The above-mentioned industrial planning and promotion project is to contain a rehabilitation component. The overall estimation cost will be US$ 36,341; no details on the project were available yet.

UNIDO has since 1985 been involved in a US$ 775,862 UNDP project to strengthen the financial performance and productivity of public enterprises. The project builds on earlier studies of the management of ten public enterprises, of which only three were obviously involved in manufacturing.

Seven of these enterprises were provided with a management manual and given unspecified technical assistance under the earlier projects. Although it was intended that the new management concepts would be "diffused" throughout industry, this project component was not successful.

The 1985 project has three components:

- systematic analysis of public enterprises, preparation of enterprise-level policies and strategies;
- reorganization of work methods and introduction of data processing;
- establishment of a database for public enterprises.

The project was to analyse the performance of 29 public enterprises, most of which do not appear to have been manufacturing-related. The main problems identified were lack of qualified manpower, ignorance of organizational techniques, and salaries that were too low to motivate employees. The project resulted in 25 enterprise-level analyses and policy/strategy suggestions. On-the-job training was given to high and middle-level staff of the Dipartement du Portefeuille, which co-ordinates public enterprise. At the enterprise level, training in data-processing was given. Obstacles to the completion of the project were:

- unqualified personnel in key positions;
- unco-operative attitudes among managers and Zairean officials;
- unwillingness to adopt the proposed organization models;
- UNDP/UNIDO organizational problems.

As a follow-up, rehabilitation projects are to be formulated, and a joint World Bank/UNIDO mission is to prepare assistance to management in selected enterprises.

ZAMBIA

1. General introduction

Although (combined) services accounted for some 45 per cent of GDP in 1985, the Zambian economy is to a large extent dependent upon the earnings generated by the mining sector. Copper provided over 80 per cent of the country's export earnings; all minerals combined (copper, cobalt, lead, zinc) accounted for 95 per cent. As a result of decreasing copper prices in the world market, export earnings have dropped considerably, and per capita GDP decreased from US$ 804 in 1975 to US$ 564 in 1987 (some sources mention figures below US$ 500 for the mid-1980s). With the exhaustion of higher-grade ore reserves and the continued low world market prices, a reversal of the trend seems unlikely. During recent years, copper exploitation has operated with a deficit. Zambia contains a variety of other minerals, e.g. uranium and iron ore, but these are either unexploited or minor contributors to GDP. A strong increase in their contribution seems unlikely. The mining sector contributed 17.6 per cent to GDP in 1979 and 14.2 per cent in 1985.

Agriculture accounted for 14.5 per cent of GDP in 1985. Its role is being strengthened through, inter alia, pricing and tax reforms. The sector has responded well to these stimuli. The cultivated area has expanded by 20 per cent since 1980, and both the climate and the low population densities favour further expansion. Agriculture and industry are to replace the mining sector as the key sectors in the economy.

Zambia's economy has in recent years also been affected by the unstable situation in South Africa. The effects of this have been strengthened by the fact that Zambia, a landlocked country, is dependent upon transport routes through South Africa and Mozambique.

On the basis of its expected metallic minerals export earnings, Zambia has borrowed heavily to finance development programmes. Zambia's foreign debt now amounts to around US$ 4 billion, and the long-term debt/GDP ratio is one of the highest in the world. By 1987, the debt servicing ratio had risen to some 95 per cent. Repayment of foreign debt has become a very serious problem in view of the continuing decline of raw material earnings and the absence of other major sources of export earnings. Many of the industrialization projects initiated in the past were based on overly optimistic market assumptions; moreover, little account was taken of various project needs (infrastructural, manpower, etc.), which as a consequence proved a drain on financial resources rather than contributors to the Zambian economy.

The country's inability to service its foreign debts has resulted in frequent negotiations with major creditors in recent years. Rescheduling and financial support were tied to demands for economic reforms, as otherwise the country's ability to repay its debt would not be strengthened. It was not until 1985, however, that the Government agreed to radical reforms which included liberalization of the economy, reduction of Government expenditure, stimulation of agriculture and the introduction of a foreign exchange auction system for a more efficient distribution of this scarce commodity. The massive devaluation of the Kwacha which resulted further eroded the declining living standards, and the ensuing social unrest led to a reversal of many of

the reforms and a break with the IMF and the World Bank in 1987. In August 1987, an Interim National Development Plan was published which aimed at restoring economic growth through "self reliance" and austerity.

2. The manufacturing sector

Manufacturing accounted for 20.4 per cent of GDP in 1986, a figure that has remained virtually unchanged since the mid-1970s. Per capita MVA, however, decreased from US$ 152 in 1975 to US$ 110 in 1984. The sector employed 60,000 workers in 1986. The number of small enterprises in rural areas is estimated to be about 350,000, providing employment to about 500,000 persons. These are very small individual or family enterprises of one or two persons each on an average. Two-thirds of them provide only a supplementary income to subsistence farming. About one-half of the enterprises are forest-based.

The following description of branch shares excludes copper processing (only export data was available for this industry). The sector is dominated by food products and beverages. The former accounted for 20.1 per cent of gross output in 1986, 11.8 per cent of MVA and 28.1 per cent of employment. The latter contributed 14.1 per cent of gross output, 24.7 per cent of MVA and 14.1 per cent of employment in 1986. Textiles and wearing apparel, tobacco, other chemicals and fabricated metal products are the remaining branches with a significant contribution to GDP. Textiles and wearing apparel is the most important among them, with the following 1985 shares: 12.1 per cent of gross output, 10.9 per cent of MVA and 17.3 per cent of employment.

Structural change in the sector has been minimal during the past years. Apart from slow growth of MVA shares in the textiles and food and metal products industries, and a slow decrease for other chemicals, no perceptible change in these shares is visible over the 1977-1986 period.

The share of public sector enterprises in total output rose from some 10 per cent in 1968 to 60 per cent in 1982; their 1983 share in value added was 56 per cent. Although Government-owned enterprises are found in a wide range of industrial activities, investment is concentrated in food, beverages, textiles and chemicals. The public sector enterprises are on the whole considerably larger than private sector enterprises; this can be deduced from the fact that, in spite of their dominant position in manufacturing, they accounted for only 7 per cent of the total number of industrial enterprises. The key public enterprise is the Zambia and Industrial Mining Corporation (ZIMCO) which engages in a wide variety of economic activities, including the mobilization of investment for new industrial ventures. Private enterprise (much of it foreign) dominates in metal products and engineering industries.

Ninety per cent of manufactured exports are copper products (refined, bars, wire); the only remaining export of any significance is zinc. Small quantities of building materials are exported to neighbouring countries. Among the manufactured imports, machinery and transport equipment stand out, as they account for some 40 per cent of the total. Other manufactures, petroleum products and chemicals are the remaining important manufactured imports.

On the basis of the limited material available on the development of the manufacturing sector since 1985, it would seem that the largest development potential is found in the food, beverages and tobacco, textiles and wearing apparel, and non-metallic minerals industries. Food products industries, such as dairying and meat processing, could expand their share of domestic markets. Individual products of the metalworking industries (e.g. bicycles) have in recent years been exported in growing numbers to neighbouring countries. The Government's current emphasis on foreign exchange saving has stimulated industrialists to use more intensively domestic raw materials. The longer-term results of this shift towards domestic resources cannot yet be estimated.

Since the development of agriculture is now regarded as first priority and the production of agricultural output has begun to be redistributed geographically in favour of the rural provinces, there is undoubtedly potential for both forward and backward linkages of small industry with agriculture and forestry. Food processing (such as maize milling) and the production of agricultural implements and tools are the obvious examples. Government price policies, however, in certain cases constitute disincentives for development of the small industry sector.

Given the exhaustion of resources and world market conditions, prospects for the copper industry do not appear bright. A reorientation of production towards higher value added products might provide a solution, although the capital costs could be prohibitive under the present circumstances.

3. Obstacles to production

Although diversification away from copper production is urgently needed, the lack of financial resources resulting from the industry's decline makes such a restructuring process very difficult. Other problems include shortages of qualified manpower, difficult access to overseas markets, high import dependency (spare parts, inputs) of many industries (which is a serious handicap during foreign exchange shortages), and in a number of cases a lack of understanding of specific Zambian production and market conditions. This has resulted in the establishment of a considerable number of plants (e.g. in the food products sub-sector) that were not viable.

A 1988 UNIDO field mission identified tariff and price structures and shortages of competent managers and supervisors as major problems, apart from the more general economic and policy issues referred to above. At the plant level, planning, design and maintenance were also often found to be unsatisfactory.

4. Policies directed towards the manufacturing sector

The Ministry of Industry, Commerce and Foreign Trade is involved in the formulation of national industrial plans, policies and strategies, and ensures that they are executed effectively to achieve the overall national objectives. To this end, it submits policy proposals and specific industrial projects to the National Commission for Development Planning for inclusion in the overall National Development Plan. UNIDO has provided assistance to planning operations and to several Government agencies for industrial development.

Industry has been given a major role in helping the economy to diversify away from copper mining. In the past, capital- and import-intensive industries played a key role in development planning, and industry choices were in part determined by political and social rather than economic criteria. Under the last National Development Plan (1979-1983), the sector was to grow at 8 per cent annually, as opposed to 5.5 per cent for agriculture and 1 per cent for mining. The objectives were not reached as shortages of foreign exchange emerged during the period, resulting from the declining copper prices. The situation was worsened by a series of crop failures.

An interim spending programme presented to aid donors (including the IMF) at a 1984 consultative group meeting focused on upgrading agricultural facilities and on speedy injection of capital into mining, especially manufacturing, with the aim of rendering existing capacity fully operational. It envisaged a total expenditure of $1,699 milion over the 1984-86 period. On a sectoral basis, industry was the major receiver of funds, with some 30 per cent of the total.

Most of the programme's key projects were under way by 1986. However, the failure of copper prices to meet projections, once again combined with the Government's increasing problems with mobilizing donor funding after mid-1986, meant that an increasing number began to fall behind schedule.

The Interim National Development Programme for 1987-1988 projected 4.2 per cent growth rate for manufacturing, the highest growth figure for any sector in the economy. Priority was given to industries producing basic needs goods and exportables. Improving the performance of existing plants was given priority over new investment.

Institutional reforms in recent years include the severance of direct links between industries and parastatals such as ZIMCO. In general, emphasis on economic performance criteria has been strengthened. Price controls have been reduced, export stimuli have been introduced, and tariffs on imports for manufacturing have been raised to stimulate the use of domestic resources. The 1987 policy reorientation, however, appears to have reversed many of the measures; for example, price controls were again tightened.

5. The scope for rehabilitation

The need for a drastic overhaul of public sector enterprises is stressed repeatedly in the available literature. A major ZIMCO subsidiary, the Industrial Development Corporation (INDECO) group of companies, has been unprofitable since the early 1980s. Capacity utilization in its enterprises has been around 50 per cent, with some enterprises (coffee processing, fertilizers) operating at 20 per cent or less capacity.

Major efforts to improve the performance of industrial enterprises were announced in 1984; however, no details on actual programmes were available. It is not even clear that a preliminary study on the subject has been carried out.

A recent UNIDO study on small-scale industry (SSI) points to weaknesses in the support infrastructure as the main problem to be solved. Suggested remedies include better co-operation among SSI development agencies (representing both the Government and international donors) and better project design. The main shortcomings identified in the SSIs themselves are lack of management and technical skills, which can be improved through training programmes. The study does not contain detailed assistance proposals.

The mission report of the 1988 UNIDO field mission suggests improvements in the fields of tariffs, management and plant design, and maintenance. The report specifically analyzed the rehabilitation needs (including management support, training and technical assistance) in selected plants in the meat products, cereal milling, stockfeeds, and packaging materials industries.

ZIMBABWE

1. General information

Zimbabwe's per capita GDP increased from US$ 761 in 1975 to US$ 817 in 1986. Drought, foreign exchange shortages and falling domestic demand have subsequently resulted in a levelling off of per capita income. The largest contributor to GDP is services, with 53.4 per cent in 1984. The agricultural sector's 13.8 per cent share (1984) is unusually low by African standards. This figure is not indicative of the sector's importance as an employer: over 60 per cent of the population is still engaged in agricultural production. The country's major foreign exchange earner is mining, but the sector contributed only some 5.8 per cent to GDP in 1985. A wide range of minerals, from gold and asbestos to strategic metals such as nickel and chrome, is exported. The great diversity of products has helped the industry to limit the negative effects of the depression in world raw material markets.

During the 1965-78 Unilateral Declaration of Independence period the white minority Government, faced with an international economic boycott, started an import substitution drive that, inter alia, resulted in strong expansion of the industrial sector. Two measures were of key importance in this respect: very tight foreign exchange control and a ban on profit repatriations by foreign companies. Both measures survived after Zimbabwe became independent, although they have been relaxed. In spite of the highly protected environment in which expansion took place, World Bank studies indicate that production is fairly efficient.

Economic growth was strong in the first years after independence, with good climatological conditions complementing the positive effects of peace and normalization of international economic relations. In 1982, however, drought and decreasing prices for minerals in the world market badly affected the contribution of mining and agriculture to the national economy. The modest recovery in 1984-86 was again followed by stagnation. Zimbabwe's involvement in the regional conflict with South Africa has placed an extra burden on the economy: a sizeable part of the army was stationed in Mozambique in 1985, mainly to protect the Beira railway line, Zimbabwe's shortest link to the sea.

On becoming independent, Zimbabwe had a small foreign debt, and external debt service was 2.6 per cent of export earnings. Falling export earnings and the simultaneously growing needs of the country resulted in increased foreign borrowing. By late 1986, the country's external debt was US$ 2 billion, or 31 per cent of GDP. Debt service will peak in 1987/88; from 1989 onwards, the debt servicing burden will become rapidly lighter. (It was unclear, at the time of writing, whether Zimbabwe is actually managing the debt service peak, which is likely to account for 35 per cent of expected export earnings). The foreign exchange supply will therefore be very tight in the short run; in order to ease the flow of available foreign exchange to enterprises, the old foreign exchange control system is to be simplified.

2. The manufacturing sector

Zimbabwe's industrial sector is unusually large and diversified by African standards. With a 27.8 per cent GDP share in 1984, it ranked second after the services sector. On the basis of a different methodology, a 1986 estimate gives a GDP share of 28 per cent. Per capita MVA was US$ 194 in 1984, up from US$ 185 in 1983. Total formal sector employment was 166,800 in 1986. The sector was the largest contributor to net employment creation in recent years. The country is known to have a large informal manufacturing sector, but no details are available.

Zimbabwe was a wide range of industries; intra-sectoral and inter-industry linkages are unusually well developed for sub-Saharan Africa. According to UNIDO data, the most important industrial branches in 1986 were food products and beverages, textiles and wearing apparel, iron and steel and fabricated metal products, the latter including a growing spare parts and components industry. Food products and beverages dominated with 29.6 per cent of gross output, 23.3 per cent of MVA and 19.4 per cent of employment. Textiles and wearing apparel followed with 14.1 per cent of gross output, 13.5 per cent of MVA, and 21.1 per cent of employment. Finally, iron and steel accounted for 7.8, 7.6 and 8.7 per cent.

Production tends to be dominated by large firms. In 1982, 7.8 per cent of all manufacturing firms produced 41 per cent of output. Public ownership is not very important, with the exception of the textiles, foodstuffs, and to a certain extent the metal products industries. Foreign ownership accounts for approximately 48 per cent of total investment and dominates in metal products, chemicals and petroleum products, paper and printing, and drinks and tobacco. South African ownership is gradually being reduced.

Structural changes, as measured by output, have not been very pronounced during the 1975-1985 period, according to UNIDO data. The most conspicuous grower was the food products branch, increasing its share from 19.7 to 23.9 per cent. The strongest decline was registered in iron and steel, which decreased from 10.4 to 7.8 per cent. In terms of value added, the changes were stronger: an increase from 10.3 per cent to 14.8 per cent for food products, and a decrease from 12.8 per cent to 7.6 per cent for iron and steel.

Some of the future development trends can be identified with reasonable certainty. The decline in iron and steel is likely to continue as a consequence of the shift towards higher value added metal products. The food products sector could, in principle, continue growing as it has a good raw material base, the result of successful agricultural policies. However, three successive years of drought in the mid-1980s have weakened agricultural production.

Other trends in the development of the sector are less easily identified, partly as a result of the irregular year-by-year growth patterns. Individual industries that have been doing well in the last few years are cotton textiles, footwear, rubber products and transport equipment.

Metals and metal products, with ferro-alloys as the most important single product, dominate Zimbabwe's manufactured exports. Textiles follow, with a clear shift towards higher value added textile exports. Processed food is the remaining major category. Manufactured imports consist mainly of energy products, machinery and parts (for assembly) and basic chemicals for further processing. Zimbabwe's industrial sector is the largest of all member countries of the Southern African Development Co-ordination Conference (SADCC) and the country has become an important exporter to the region. It is likely that a further strengthening of SADCC will enhance Zimbabwe's role as a supplier of manufactured goods; this in turn would influence the future growth trends of the various industries.

3. Obstacles to production

The unstable political situation in the region, combined with Zimbabwe's landlocked position, are the main obstacles to further industrial growth. Defence spending is high, and therefore less finance is available for development. Private investment is low due to the instability in the region and difficulties in obtaining foreign exchange for the purchase of equipment and inputs. These foreign exchange restrictions are also the cause of the growing obsolescence of capital equipment, which has a growing tendency to break down because spare parts cannot be imported in sufficient quantities. An increase in foreign exchange earnings to match the growing need is unlikely as world markets for most mining products remain depressed.

4. Policies directed towards the manufacturing sector

While the Ministry of Finance, Economic Planning and Development formulates the overall policies that determine the industrial environment, the Ministry of Industry and Technology is directly responsible for industrial planning. The first post-independence formulation of industrial policy is to be found in the Transitional National Development Plan 1982/83-1984/85. The objectives for manufacturing included the expansion of the sector and the intensification of linkages; the enhancement of competitiveness; the promotion of labour-intensive technologies; further import substitution; training and upgrading of staff; decentralization; increased local participation, ownership and control; and energy efficiency. As a result of world recession and the obstacles to overseas trade, and to some extent of insufficient capability in the Ministry of Industry to handle the complex tasks, these objectives were only partly realized.

The experience gathered during the Transitional Plan period (which was extensively analysed in a 1985 UNIDO study, resulting in policy recommendations to the Government) formed the basis for the First Five-Year National Development Plan (1986-1990). In the Plan, the manufacturing sector is characterized as "... the key sector for changing the structure of the Zimbabwean economy and for achieving rapid and sustained overall economic growth and development." In the long run, the sector will have to replace mining as the major foreign exchange earner. The projected annual average growth rate of the sector is 6.5 per cent, which is to lead to a GDP share of almost 30 per cent by 1990. Investment over the period is to be $1,390 million, of which 30 per cent will be in the public sector. The projected annual average growth rate of exports (8.2 per cent) is well above that for the sector as a whole.

Many of the structural weaknesses of Zimbabwe's manufacturing sector (inter alia, the high dependence on imported inputs and oligopoly and monopoly tendencies) will be addressed through institutional action, particularly through the Industrial Development Corporation (IDC), the Small Enterprise Development Corporation (SEDCO), and local authorities, in order to encourage decentralization, small-scale industries and wider ownership.

Scientific and technological progress will stress the examination of technological processes, changes in the structure of the economy, and the mastery and adaptation of imported technology.

An outline of Government policy in the field of foreign investment was published in 1982. The criteria for examination of proposals include contribution to managerial or technological expertise, training, employment promotion, improvement in quality or range of goods or services, promotion of rural development, export promotion or import substitution, and research and development. Preference is given to joint ventures.

The new National Plan gives more explicit commitment to foreign investment and recognizes the need for a "clear statement of policy on foreign investment, joint-ventures and transfer of technology, including re-examination of legal issues involved." A total of $200 million of direct foreign investment in joint ventures with the Government and local companies is projected for the Plan period, especially in natural resource exploitation, fuels and chemicals (including fertilizers).

Zimbabwe is a prominent member of SADCC. Although apparently no specific SADCC-oriented industrial investment has taken place yet, a number of industrial projects in the textile, chemicals and plastics, steel, and paper industry have been identified.

5. The scope for rehabilitation

The overall performance of Zimbabwe's industry has been good, considering the constraints that the sector faces. Peace and improvements in external transport connections would make an essential contribution to stable growth in the sector. Stabilization in the region would make funds available for development that are now needed for defence and would also help to attract more foreign investment.

If the present external constraints on industrial development are not removed, rehabilitation of a large number of plants is likely to become necessary in the short- to medium-term. Worn-out machinery and shortage of spare parts were mentioned as operational problems by 78.7 per cent of the industries in a Confederation of Zimbabwean Industry survey held in the mid-1980s. Rather than seeking a technical solution to plant deterioration, a 1987 World Bank study suggests the following policy changes:

- devaluation of the Zimbabwean dollar to make exports more competitive;
- liberalization of the foreign exchange allocation system;
- investment deregulation;
- trade and pricing liberalization;
- reduced Government spending.

One actual plant rehabilitation, coupled with measures to cut operation costs, has been suggested for the Zimbabwean Iron and Steel Company (ZISCO), the major steel and iron producer. There was no information on a possible follow-up of suggestions contained in the World Bank report. Partial rehabilitation, specifically the modernization of electrical equipment for ZISCO's Bar Rod Rolling Mill, is to be undertaken, however, under a US$ 2,000,000 UNDP/UNIDO programme. This is connected to a Bar Rod Rolling Mill Automation project completed by UNIDO in 1987.

CONCLUDING REMARKS: A SUMMARY OF KEY ISSUES AND FINDINGS

1. African industry: an overview

1.1 General trends

Until the early 1980s, growth rates in African manufacturing generally resembled those of other developing countries. Since then, however, industrial performance in Africa as a whole has sharply deteriorated relative to other developing regions. If capacity utilization is taken as an indicator, only a few countries had a utilization rate of 70 per cent or more (registered enterprises) in the mid-1980s. Utilization rates well below 50 per cent are not uncommon. In the mid-1980s, for example, the rate was 33 per cent in Sudan (private sector), 36 per cent in Liberia, 25 per cent in Tanzania, and between 30 and 50 per cent in Zambia (selected major industries).

An upturn can be witnessed from 1985 onwards. Growth in Sub-Saharan Africa, measured in MVA terms, jumped from -0.8 per cent in 1984 to 4.1 per cent in 1985, and has remained at that level. Forecasts for 1988 indicate a 4.5 per cent growth rate. However, as growth in individual North African countries was even stronger, it must be assumed that the growth rate for all of Africa would be even higher.

It is doubtful that this upward trend will continue, for two reasons. Most African industries are heavily dependent on domestic markets and will remain so in the short and medium term. Overall economic growth has been sluggish, and therefore domestic markets have expanded very little. The sluggish overall growth is related to the fact that the majority of countries is heavily dependent on raw material exports, and these have stagnated during most of the 1980s. These export earnings are crucial for industrial development, however, as industries tend to be dependent on overseas imports.

Structural change in African industry has been slow. Although a shift away from the dominant sub-sector - food products - is discernible in many countries, industries that are strong growers in other developing economies - electronics, garments, transport equipment - have on the whole remained very modest.

This being said, clear differences exist between groups of countries in the continent, and these should be taken into account when possible future developments are examined. The next section presents a broad categorization of African countries according to industrial development levels and potential.

1.2 Country groups

The most conspicuous differences are found between the North African and Sub-Saharan countries. While the great majority of Sub-Saharan countries are classified as low income, the North African countries are all in the middle/high income groups. North African countries (with the exception of Egypt) have a per capita MVA several times higher than the 1984 African average of US$ 58 (constant 1980 values). Even Egypt's per capita MVA is well above the African average.

Like other countries in the continent, North African countries are in part dependent on raw material (oil/gas) exports, but they have in the course of time built up a relatively strong and diversified manufacturing sector. Apart from the food products sub-sector, chemicals, textiles and metals play an important role. The North African countries have benefited from their proximity to European markets, which are likely to remain crucially important for the further development of industry.

Sub-Saharan countries have not penetrated overseas markets with manufactured products on a significant scale. The level of industrial development in most of these countries, moreover, makes it unlikely that such exports will increase rapidly in the near future. As domestic markets are often very limited, regional markets will have to receive greater attention.

Agro-related industries are likely to remain or become manufacturing's major force in most Sub-Saharan countries. Growth of these industries would to a large extent depend on closer links with, and a simultaneous strengthening of, the agricultural sector. An expanding rural economy creates both a market for industrial products and a more stable raw material base for the sub-sector.

While the difference between North and Sub-Saharan Africa is immediately obvious, a closer look at the continent reveals a number of other essential differences between groups of countries. Although statistical data are incomplete, and not always comparable, these differences emerge clearly.

Manufacturing is dominated by less than a dozen countries. In terms of total value added, the leading countries are Morocco, Algeria, Egypt and Nigeria, which had a 1984 MVA of over US$ 3,000 million (constant 1980 prices). A second category of countries follows, with a 1984 MVA (in constant 1980 prices) of around US$ 1,000 million: Kenya, Côte d'Ivoire, the United Republic of Cameroon, Zimbabwe, Tunisia and Libya. All of these economies, with the exception of Kenya's, are middle/high income.

With the exception of Nigeria and Libya, the manufacturing sector's GDP share in these countries was over 10 per cent. (Nigeria and Libya - whose GDP is among Africa's largest - are in the first place "oil economies".)

A third category of countries includes Ethiopia, the United Republic of Tanzania, Sudan, Senegal and Zambia. They have a sizeable manufacturing sector, typically in the US$ 400 million to US$ 700 million MVA range. But there are wide differences in the manufacturing sector's share in GDP, which varies from 5 to 20 per cent. These economies are in the low income category. Although the countries have a good manufacturing potential, they have had to deal with serious economic and/or political problems. For example, Sudan was recently hit by disastrous floods.

A fourth category consists of small economies with a relatively large manufacturing sector. Two countries, Mauritius and Swaziland, have cheap labour, low taxes, and good transport connections, and serve mainly as a convenient location for export-oriented foreign enterprises. The manufacturing share of GDP is around 20 per cent.

The fifth category resembles the third, in that the countries have considerable potential but have suffered from severe economic and/or political problems. This includes Zaire, Angola, Mozambique, Madagascar and Ghana. The role of manufacturing in these countries, however, is either very modest, or has declined strongly as a consequence of ill-conceived policies and/or warfare.

In the remaining countries that make up the sixth category the manufacturing sector is usually small, with a GDP share of generally below 8 per cent. In part, these are countries with both a poor (or very one-sided) natural resource base and a very small domestic market. Problems are often exacerbated by the landlocked position of some of these countries, including Burkina Faso and Niger. Equatorial Guinea and Mauritania are the examples of countries that had to build a modern economy virtually "from scratch" upon becoming independent.

When assessing the future role of industry and the support these countries may require, it is important to keep these broad groupings in mind. In North Africa and the six Sub-Saharan countries that comprise the first two categories, industry is well-established and reasonably diversified, or is in the process of becoming so. Some of these countries, especially in Sub-Saharan Africa, will have to surmount serious economic difficulties in the near future and will have to initiate major development policy reorientations. Yet the sector can be expected to become increasingly important in both the domestic and regional economy.

The third category countries along with countries like Ghana, Madagascar and Mozambique, could in the medium term develop a strong manufacturing sector as well. In this case much depends on the emergence of a favourable political/policy environment and on the identification of the proper types of industry that will constitute a basis for (renewed) growth in the sector. Establishing stronger inter-industry linkages and linkages with other sectors of the economy - a major issue everywhere in Africa - will be of crucial importance in these countries.

Barring major unforeseen changes for the good in the domestic, regional and global economic environment, manufacturing is unlikely to become a key sector in the sixth category of countries in the foreseeable future. Agro-processing will probably be the principal industry. Otherwise, the sector's contribution to domestic development is likely to be greatest if it concentrates on providing simple agricultural equipment and certain agricultural inputs. In some countries, mineral processing could play an increasing role; the more capital-intensive of these industries (e.g. cement plants, aluminium smelting) would, however, generally be beyond the scope of these economies.

1.3 Major sub-sectors

There are few countries in Africa where the food, beverages and tobacco sub-sector does not dominate manufacturing. This again demonstrates the necessity of strong linkages between a propsering agricultural sector and manufacturing. In the majority of cases food processing is the most important

branch (typically accounting for at least one-fourth of gross output and MVA in the sector), but in some cases beverages or tobacco are more important. Since food processing is usually at a fairly rudimentary level, the value added shares of the industry tend to be much lower than the output shares. In value added terms only, the food processing industry often ranks behind beverages, textiles and mineral-based industries; in the United Republic of Cameroon, the 1985 value added of the beverages sector was three times higher than that of food products.

In a handful of countries, textiles and petroleum refinery have replaced food processing as the major industry. Textile production is the principal industry in Egypt, Madagascar, Angola, Niger and Mali; petroleum refinery dominates in Libya and Gabon.

In most countries, the second most important sub-sector is textiles. Generally speaking, made-up textiles play a very modest role in the sub-sector, although this may be a matter of under-reporting (artisanal tailoring is generally not recorded). In this respect, the only striking exceptions are Tunisia and Mauritius, both of which export wearing apparel. In Mauritius, the wearing apparel industry produced one-fourth of total MVA in 1985. The country's textiles branch, however, is relatively insignificant, since it imports most of the cloth needed to produce made-up textiles.

The textile and garment industries, like food-processing, are labour-intensive. The beverages industry tends to be capital-intensive rather than labour-intensive. Together, these industries generally account for well over 50 per cent of manufacturing employment. The exceptions to this rule are mainly found among Africa's major manufacturers, such as Algeria, Nigeria and Zimbabwe. These have a sufficiently diversified industrial sector, with industrial employment more widely dispersed among branches.

The remaining sub-sectors are strongly represented in only a small number of countries. Petroleum refining, industrial chemicals and basic metals, all capital-intensive industries, tend to be restricted to countries which have a fairly high general level of development. In the non-metallic minerals category, much of the activity consists of cement production; this is also a large-scale, capital-intensive industry, but one for which raw materials are more generally available. Some of the smaller economies, such as Benin and Congo, have established cement plants to utilize locally available raw materials.

The metal products and machinery sub-sector is well-represented in the more developed economies. Of course, this is partly due to the skill and capital needs of many of the individual industries in the sub-sector. There is considerable scope for medium- and small-scale production, and the present size of the sub-sector may be underestimated because small enterprises are not often registered. Unregistered production may also be a reason why the wood products industry is seemingly unimportant in some countries with large forest reserves. Registered wood products enterprises generally produce low value-added items for further processing overseas, such as boards and plywood. Final products (such as furniture) are often only manufactured by artisanal enterprises.

A look at the growth figures for various branches shows that since the mid-1970s growth in most of the industrial branches in Sub-Saharan Africa has stagnated, or at best, been slow (as in the case of the major industry, food products). The only clear exceptions are petroleum refining, beverages, plastics, rubber, cement and transport equipment. The production of these goods (beverages excepted) is concentrated primarily in the region's more developed countries.

In North Africa a different development has taken place, although an exact comparison is difficult because of differences in the available data. Here, vigorous growth has been recorded in most branches. Slow growth occurred only in tobacco, rubber products, wood products, non-metallic minerals and metal products. In the case of the latter three, it should be noted that individual industries (furniture, cement, machinery) within the branches generally performed better.

In the North African countries and a few Sub-Saharan countries (Nigeria, Zimbabwe) an "industrial tissue" is beginning to emerge, with a reasonably integrated network of industrial enterprises in which all major sub-sectors are represented. The picture is very different elsewhere. It seems unlikely that the few fast-growth industries scattered over the rest of Africa will set a trend towards further strong expansion. These industries are on the whole capital-intensive, and new large investment outside the countries where they are now located is unlikely under the present circumstances. It will, if anything, prove difficult enough to utilize existing capacity fully, given the stagnating markets and the shortage of foreign exchange needed to supply these industries with imports.

For smaller countries with a less developed manufacturing sector it would seem most appropriate to concentrate energy and resources on food processing and (cotton) textiles, industries requiring relatively low investments and having strong employment effects. A prerequisite, however, would be the strengthening of the agricultural sector. The manufacture of simple agricultural equipment could become an essential supporting industry; in the long run, the accumulated expertise in this industry could help to lead the way to more sophisticated engineering. Finally, the potential for expanding the wood products industry could be explored in these countries. The emphasis should then be on high value added products that make relatively small demands on the natural resource base, rather than on exports of logs and pulp.

2. External obstacles to manufacturing production

Exploring the scope for restored growth and full use of industrial development potential will require analysis of the major constraining factors to industrial development in Africa. Some of those constraints are part of the global environment in which African manufacturing operates and are clearly beyond the control of the countries themselves. At the domestic level, the factors controlled by governments include fiscal, monetary and trade policies. Other national-level factors are the state of the infrastructure and the degree to which the industrial sector is linked to other economic sectors, especially (in the case of Africa) to agriculture. The debt issue, being a part of both the global and the domestic environment, is therefore the single most important constraint facing development.

2.1 The global environment

Macroeconomic developments in the industrialized countries influence manufacturing in developing countries in several ways. First, exchange rate fluctuations affect trade volumes and the size of debt burdens. The sharp fluctuation of the US dollar in recent years has been a major issue in international financial developments. A rising US dollar may increase export revenues of primary commodities priced in dollars. On the other hand, a rising US dollar also means that foreign debt denoted in dollars grows in size and the burden in domestic currency terms increases. It hampers exchange rate reforms aimed at realigning the often overvalued local currencies. A falling dollar likewise has mixed effects. A sharply fluctuating dollar is the probably the worst alternative, creating uncertainty and making planning difficult.

Second, high international interest rates, especially in the early 1980s, have added to the problems of high dollar exchange rates and have played havoc with developing countries' efforts to service their debts. This has indirectly affected manufacturing. More direct effects are the high cost of new foreign credits and the discouraging effect which high international interest rates have on industrial investments.

Third, economic growth in the industrialized countries is a prerequisite for economic growth in the developing countries. Only through growth in the industrialized countries can the developing countries secure demand and access to markets for their exports as well as adequate financial flows. This is relevant to the manufacturing sector despite the fact that manufactured products still play a minor role in Africa's exports. Countries must be able to export their primary commodities in order to generate foreign exchange, domestic income, and demand for manufactured products. During 1981-86 the world economy grew at an average rate of 2.2 per cent per annum, well below the more than 3 per cent per year recorded in the 1970s. This decline in growth has contributed to the poor performance of African exports. With few exceptions, expanded export volumes have not been sufficient to compensate for the negative price trends of primary commodities.

International commodity prices have in some cases fallen drastically. Oil is in monetary terms the dominant African export commodity. Algeria, Angola, Cameroon, Congo, Gabon, Libya and Nigeria all depend crucially on their exports of crude oil and related products. Oil also plays an important role in the exports of Egypt, Kenya, Mozambique, Tunisia and Zaire. Oil prices in 1986 were in real terms 44.4 per cent of the 1980 level. A United Nations price index for all sub-Saharan Africa exports shows real export prices in 1987 at around 55 per cent of the 1980 level. A corresponding index for all of Africa would show an even lower figure, since oil would then have an even greater impact on the aggregate.

For no major export commodity was the price in 1986 in real terms higher than in 1980. Coffee came nearest with a 1986 price level of 96.2 per cent of the 1980 price. Lowest on the scale was sugar, with a price of 20.2 per cent of the 1980 price.

Exports of manufactures are constrained not so much by prices as by lack of markets. World markets do not play a major role in the development of Africa's manufacturing yet, but non-tariff trade barriers will be a major concern in efforts to regenerate Africa's manufacturing industry and develop export industries. Of more immediate concern to most manufacturing in Africa is the lack of regional markets. Although progress has been noted for some branches, the cement industry for example, regional trade remains largely an untapped source of export earnings.

Another external, and for African manufacturing not yet binding, constraint is the technology gap between industrialized and developing countries. Industrial technology has changed at such an extremely rapid pace that industrialization nowadays can start with industries which earlier were reserved for the most developed countries. A further widening technology gap has been identified by UNIDO as the perhaps most serious threat to North-South relations in general. It will therefore be of utmost importance to bear this issue in mind in connection with efforts to regenerate African manufacturing.

2.2 The debt issue

In the case of Africa, foreign debt typically has been accumulated as a means of maintaining economic growth in the face of adverse external events or, in the case of many oil exporting countries, as a way of increasing the growth rate when oil prices, and therefore the wealth of those countries, jumped sharply in the 1970s. However, the loans have not contributed much to stable growth, and debt has turned into a major obstacle to economic growth in general and to manufacturing production in particular.

2.2.1 The size of the debt and the debt burden

The total outstanding and disbursed debt in 1986/87 for all African countries is estimated to exceed $190 billion.[1/] The largest debtor country in absolute terms is Egypt with some $40 billion in total foreign debt, accounting for over 20 per cent of total African debt. Other Northern African countries are also major debtor countries; Algeria's debt is approximately $25 billion. The only sub-Saharan country with a total debt of that magnitude is Nigeria, which in 1987 had a foreign debt of $26.65 billion. Egypt, Algeria and Nigeria together account for almost half of the continent's total debt.

The debt to GNP ratio as a whole is approximately 50 per cent. The variation across countries, however, is considerable even among the most severely affected countries. At the top is Zambia with a debt to GNP ratio of 357 per cent in 1986. This ratio is not a good indicator for the actual burden of debt on the economy, but it is sometimes the only indicator available.

1/ The estimates on foreign debt in this chapter are based on various sources, notably the IMF and the World Bank, and may refer to different years for various countries. The figures should, therefore, be taken as rough approximations of the true magnitudes.

The magnitude of Africa's debt problem becomes clearer when looking at the debt to export ratio. As debts must be repaid in foreign exchange, the ratio is a rough indication of the burden on the economy's export earnings. For the whole continent the ratio is approximately 300 per cent in 1987. For all developing countries the debt to export ratio was approximately 180 per cent in 1986. For the countries south of the Sahara the ratio in 1987 was about 355 per cent, while North Africa's ratio was around 190 per cent. Again, the variation is considerable across countries. Mozambique, Somalia, Sudan and Guinea Bissau have the highest ratios of over 1,400 per cent. Zambia, Tanzania, Madagascar, Comoros and Burundi have debt to export ratios ranging from 500 per cent to almost 1,000 per cent. Among the major debtor countries Egypt has the highest debt to export ratio with over 900 per cent, while Nigeria for 1987 had an estimated debt to export ratio of around 350 per cent, i.e. the debt corresponded to three and a half years of export revenues at existing oil prices.

Absent in debt statistics is Libya, another leading oil exporting country. Although Libya has accumulated substantial trade debts over the past few years, it has no officially recorded foreign debt.

The debt service ratio shows interest and amortization payments as a percentage of yearly export earnings. The higher these payments are, the lower the amount of foreign exchange available in any given year for, among others, essential imports for the manufacturing sector. Before debt relief, the ratio was some 33 per cent for the whole continent in 1986 - about 30 per cent for the sub-Saharan countries and some 46 per cent for North Africa. However, the debt service ratio will have fallen after 1986. The oil exporting countries dominate Africa's export statistics and their export revenues in 1986 were 30 to 50 per cent below 1985 levels. In 1987 oil prices and export revenues recovered substantially.

Taking into account the absolute and relative size of the debt and the debt service burden, African debt-distressed countries fall into three distinct groups. One group, represented by countries with large debts and debt burdens but with sizeable manufacturing sectors, is not as poor as the majority of African countries. These countries are: Algeria, Côte d'Ivoire, Egypt, Morocco, Nigeria and Tunisia.

The second debt-distressed group consists of countries that have smaller debts and smaller manufacturing sectors than the major debtor countries. Many of these countries in relative terms are worse off than the major debtor countries. These countries are: Congo, Gabon, Ghana, Guinea, Zambia and Zimbabwe.

The third group of debt-distressed countries are the poorest and include the countries identified by the World Bank group for special IDA assistance. They are listed in the following table.

Table 2.1: Low-income and debt-distressed countries in Africa

$200 GDP per capita		$200-$300 GDP per capita		$300-$400 GDP per capita	
Country	Total debt (billion US$)	Country	Total debt (billion US$)	Country	Total debt (billion US$)
Equatorial Guinea	159	Benin	890	Cape Verde	113
Guinea-Bissau	367	Gambia, The	273	Kenya	4,590
Malawi	1,250	Madagascar	3,140	Liberia	1,303
Mali	1,690	Niger	1,459		
Mozambique	3,590	Somalia	1,580		
Zaire	7,970	Sudan	12,100		
		Uganda	1,820		
		United Republic of Tanzania	3,670		

Source: World Bank

It can be noted that some of the poorest countries in Africa and the world are not included in the table. For example, Burkina Faso, Chad and Ethiopia all have a GDP per capita below $200. Their manufacturing sectors suffer from shortages of foreign exchange. However, in terms of debt to GDP or debt service ratios, they are in a slightly better position than the countries listed in Table 3.1.

Three-quarters of Africa's debt is owed to Governments, the World Bank and the IMF. For comparison, it can be noted that Latin America owes three-quarters of its debt to commercial banks.

2.2.2 Debt reschedulings

Worldwide debt reschedulings peaked in 1984, when a total of $104.4 billion worth of debts was rescheduled, $100.5 billion by private banks via the so-called London Club and $3.9 billion by the Paris Club of official creditors. In connection with these arrangements, $10.4 billion in new money and $36.7 billion in short-term facilities were disbursed. Africa's share of those amounts totalled only a few percentage points; a total of between one and two billion US dollars was rescheduled in 1984. Nevertheless, 27 African countries have rescheduled foreign debt multilaterally, and Angola has rescheduled bilaterally with major creditors. In 1987 ten sub-Saharan countries rescheduled approximately $2.5 billion, most of it with the Paris Club.

Some new finance is forthcoming in connection with the debt reschedulings. However, part of the recorded growth of the debt will consist of arrears and interest on arrears that are capitalized in connection with rescheduling agreements and added to the figures for total debt. Therefore,

not all of the increase is new money. For example, such capitalization of interest has added as much to Zaire's total debt in the past ten years as net new borrowing.

2.2.3 Financial flows

Africa's total foreign debt grew at an average annual rate of close to 25 per cent during the period 1973-80. By 1986 the growth rate had slowed down to less than 9 per cent.

The sharp decline in growth of the debt reflects the credit squeeze facing developing countries in general. Private banks have virtually ceased their sovereign lending. They also have become reluctant to provide new money when participating in so called concerted lending. Commercial banks do not dominate African debt as they dominate worldwide - they hold less than one-third of African debt against two thirds worldwide. However, the effect of the banks' withdrawal of funds is also felt in Africa.

For most African countries, particularly for those of the sub-Saharan region, there has been a sharp fall in financial flows. A calculation by the United Nations Secreteriat for the Advisory Group on Financial Flows for Africa shows that net credit flows in 1985-87 were $2.4 billion lower than in 1979-81 for sub-Sahara, excluding Nigeria. The increase in official grants was $1.1 billion. The total net effect was a reduction in financial flows of $6.5 billion, including terms of trade losses of $2.9 billion, reduced foreign investments of $0.2 billion, and increased interest payments of $2.1 billion.

Reflecting the fact that financial flows generally have decreased, the composition of the debt burden has become less favourable for most developing countries. For example, sub-Saharan Africa had 49.5 per cent of its public foreign debt in 1975 on concessional terms. In 1986 the percentage of concessional debt had fallen to 36.9 per cent of public debt. Nigeria is an extreme case with the share having fallen from 43 per cent to 3 per cent during the same period. Countries which have seen the share of concessional loans increase are Burundi, Central African Republic, Chad, Guinea Bissau, Rwanda, Sierra Leone, Zaire and Zambia.

Government-supported export credits are still a possibility but show depressing similarities with the development of private finance. In terms of access to medium- and long-term government-supported export credits, African countries are much worse off than in the 1970s. The huge losses in the wake of the international debt crisis have made export credit and export credit guarantee agencies more cautious in general. Instead of actively trying to spread risk-taking to many countries, there has been a tendency to concentrate on markets perceived as relatively safe. For most export credit agencies African countries are small and marginal markets. As a result many of them were early victims of the change to more conservative policies.

So-called mixed - i.e. part grant, part commercial - export credits are often reserved for countries receiving bilateral aid, in which instances they may become tied to specific donor financed projects. In such cases the recipient's manufacturing industry will be little helped. For the average

African country, medium- and long-term export credits are rarely available from countries other than those providing bilateral aid and political support. It follows that a purely objective listing of African countries in terms of access to export credits does not exist.

With that important caveat in mind, it may be of interest to illustrate how the African countries can be ranked in this respect. They can roughly be categorized into three groups:

(a) Countries with limited access even to short-term credit. Because short term credit is so vital to the economic activity of countries, official as well as private creditors generally maintain these flows; cutting them off is a very unusual and harsh measure. When it occurs it is often temporary, for example taken in connection with on-going rescheduling negotiations. Among the African countries which have experienced such an action are Congo, Equatorial Guinea, The Gambia, Guinea-Bissau, Guinea, Liberia, Mozambique, Nigeria, Sierra Leone, Somalia, Sudan, Tanzania, Uganda and Zambia.

(b) Countries with access to short-term export credits and on a limited scale to medium- and long-term credits. The limits can be in the form of amounts per transaction, a total country limit, or a surcharge on the regular premium. This group would include all countries not belonging to group (a) or (c), i.e. the majority of African countries.

(c) Countries with access to both short- and long-term export credits. Few African countries qualify for this group at present. Those included would be Algeria and Tunisia (and possibly Morocco because of its generally acclaimed good future prospects) in North Africa. South of Sahara, Botswana, Lesotho, Mauritius and Zimbabwe would be major candidates for this group. Until recently Cameroon and Kenya belonged to this category. Special political relations have an impact in this context. For example, some countries have access to French export credits only, reflecting France's special relations with its former colonies. Egypt has special political relations with United States and its allies. As a result, despite Egypt's severe debt problems, many Western countries maintain relatively generous flows of export credits.

A 1984 study by the International Monetary Fund (IMF) found that export credit agencies typically had remained open too long when countries were approaching acute payment problems and remained "off cover" too long when countries were making headway in adjusting to the changing environment. A later study by the IMF in 1986 found agencies had improved in this respect. This improvement has benefitted a few African countries such as Côte d'Ivoire, Ghana and Morocco.

2.2.4 The effects on manufacturing and its rehabilitation

The effects of the heavy debt servicing burden on manufacturing are manifold. Some of the more direct and important effects are:

- net outflow of financial resources (i.e. foreign exchange), resulting in:
  - reduced capability to import inputs and spare parts,
  - reduced availability of investment funds,
  - reduced economic policy-making options.

The import-dependence of African manufacturing for energy products, raw materials, spare parts and capital goods means that the lack of foreign exchange resulting from a heavy debt service simply prevents production, regardless of whether production would be economically viable. Continuation of this trend would lead to staggering physical and social costs. Unemployment, often already high, will increase and may contribute to social unrest with disruption in other sectors of the economy as a result. Equipment and management skills, often procured with the help of scarce foreign exchange resources, will be idle or at best severely under-utilized and the maintenance of basic infrastructure will be jeopardized.

The lack of foreign exchange and the resulting import squeeze could in principle result in the emergence of new domestic resource-based import substitution industries. However, there is no indication of this taking place in any of the African countries. The fact that the process of switching from import dependence to domestic resource-based production does not seem to have come very far is less a technical issue than a result of contracting markets. Although there are some exceptions, the general finding is that the fall in aggregate demand has led to lower production for manufacturing in general, including branches that are less import-dependent.

The magnitude of the debt problem also has important implications for future access to investment and other finance. As mentioned earlier, the flow of both private investment and lending as well as government-supported credits have decreased. Increased aid and other concessional flows can help alleviate the situation, but to regenerate African industry new confidence among investors is also needed.

Finally, the heavy debt service burden also seriously restricts the policy options of governments in planning. Moreover, one result of the present preoccupation with the debt issue may be that crucial long-term development aspects are neglected. An added problem for many African governments is the increased influence of international agencies and donors in the policy-making process. The disruptive influence in some African countries of harsh austerity policies imposed largely by international agencies and donors underscores both these last points. Unsuccessful efforts to achieve growth through such austerity programmes also point to the need for a longer-term approach to resolving the debt problem.

2.2.5 Some positive developments

It may seem that the current trend with regard to the debt issue is mostly negative. However, there are several positive developments to be noted. First, the Paris Club has changed its stance towards official creditors; grace as well as amortization periods in rescheduling agreements have been extended, typically from 5 to 10 years for both. As the first African country to benefit from this arrangement, Côte d'Ivoire has been granted a Multi Year Rescheduling Agreement (MYRA). The definition of conditionality applied by the Paris Club is being reviewed and a case is being made to change lending and rescheduling criteria. One suggestion is to introduce some measure of "structural change" as a criterion. Finally, the problem of high interest rates which has been a major obstacle to progress is now resolved in the context of the so-called menu-approach to debt relief (see below).

Second, there is closer co-operation between the IMF and the World Bank (IBRD) with respect to economic recovery programmes. Policy Framework Papers (PFPs) are prepared jointly with the country in question, whereby greater emphasis is given to long-term growth and short-term social and income distributional aspects.

Third, some additional financing is coming forward. The IMF's Structural Adjustment Facility (SAF) has been increased by 6 billion SDR. A Compensatory Financing Facility has been added to the IMF arsenal of remedies. This will be used when countries suffer unexpected losses of export revenues which jeopardize adjustment programmes in operation. Within the framework of IDA-8, the World Bank group has decided to allocate $6.2 billion to sub-Saharan countries. There is also a proposal to set up a special Trust Fund within the IBRD which will receive part of bilateral aid funds to use for parallell and co-financing of development projects.

Fourth, the growing international consensus that special arrangements have to be made for the poorest countries - especially the sub-Saharan African - has resulted in the menu-approach being endorsed by major creditors. The seven leading industrialized countries have agreed on three options to lighten Africa's debt burden: writing off a third of the debt, cutting interest rates by 3.5 per cent or by half, or extending repayments over 25 years. It has been estimated this debt relief would be worth $500 million per year for African countries.

A number of other schemes exist to reduce the debt burden. Most of these take advantage of the fact that third world debt is traded internationally at substantial discounts. The most widely used scheme is debt-equity swaps, whereby the debt is acquired at the depreciated value and converted to risk bearing equity capital in the debtor country. In other schemes the debt is swapped for investment in particular activities such as environmental conservation, education, export promotion, etc. So far these types of debt relief have been tried only in Latin America. A careful assessment of the Latin American experience would be needed in order to establish whether some of the schemes could possibly be applied in Africa.

For African countries debt-aid swaps or aid financed debt-buy-back schemes would be the most appropriate methods to ease the debt burden and take advantage of the discount on the secondary market. To date the most common method to alleviate the debt burden has been to simply cancel some of the debts without taking advantage of the market depreciation of the debt.

2.3 The policy and administrative environment

On the whole, the industrial policies formulated and implemented during the 1960s and early 1970s may be considered properly attuned to the economic environment of the time, and to foreseeable developments. When the external environment changed as drastically as it did in the 1970s, however, policies were not adjusted accordingly. As a result, the cost of adjustment has continued to increase.

International evidence suggests that growth in manufacturing may be best fostered in an open and competitive environment with few restrictions on trade, labour markets, credit markets, ownership pattern, etc. In cases where restrictions benefit manufacturing, such as protecting infant industries, African countries have generally overprotected industries. The result is inefficiency and stalemated growth. African manufacturing also has been kept under strict political control. Although the issue is lack of competition and efficiency rather than the form of ownership as such, this seems to have delayed a shift of policies away from import substitution, price controls and strict governmental monitoring in all fields of industrial activity. When developing countries in many parts of the world switched to strategies of export led growth, Africa was slow to follow suit. One result is that the pain and costs of adjustment have been exacerbated. Another result is that for political reasons some African countries will not, and seemingly cannot, change existing economic policies, even in the absence of outside pressure.

It should be noted that in recent years a growing number of African countries have instituted economic recovery programmes. Altogether some 30 of the 52 African countries have tried some form of policy reform programme. Most have done so with the support of the IMF and/or the World Bank, while a few have initiated reforms on a national basis only, for example, Algeria, Angola, Guinea-Bissau, Ghana and Zimbabwe.

Most reforms aim at liberalizing the environment in which manufacturing operates: to reduce government ownership and control over manufacturing, to promote private domestic and foreign investments in manufacturing and small-scale industries based on local raw material, and to introduce measures designed to restore internal and external balance in the economies - not least via reduced budgetary spending and tighter monetary policies. Foreign exchange reforms aimed at more competitive exchange rates as well as more efficient systems for allocating scarce foreign exchange also are foremost among instituted reforms.

Due to a number of reasons, some of the attempted reform programmes have met with difficulties. One reason is that the programmes are often too ambitious, trying to achieve too drastic changes in too short time periods.

Another reason for slow or no progress in the reform programmes is the generally weak institutional structure of African countries. Reforms have been stalled or diffused because the administration has been too weak and prone to influence from vested interests opposed to changes. The institutional infrastructure has not been sufficiently strong to allow politically determined reforms to be implemented properly. Nor has the institutional infrastructure been sufficiently strong to ensure that all the necessary and often small administrative routines are changed as required.

In countries that have experienced some success, Côte d'Ivoire and Ghana for example, sustained manufacturing growth seems to have quickly run into constraints due to factors external to the Government's control. It seems clear, therefore, that policy reforms alone can be no panacea for restored manufactured growth. However, they will be a necessary aspect of programmes for regenerating manufacturing in African countries, along with securing external financial assistance.

The existence of political conflicts in many African countries must also be mentioned within the context of external obstacles to manufacturing. The agressive and subversive actions against the SADCC states is the prime example. Conflicts have also disrupted economic activities in many other parts of Africa, e.g. Western Sahara, Ethiopia, and Uganda as well as the frontal states in the south. The existence of such political conflicts minimizes the chances of success for efforts to regenerate manufacturing.

2.4 Infrastructural shortcomings

Modern industry is highly dependent on a well-developed infrastructure. This includes telecommunications, transport networks, power and water supply, and institutions. North African countries are far less affected by infrastructural shortcomings than Sub-Saharan Africa.

The trade problems of African countries are closely related to their transport problems: in the absence of a good transport infrastructure, the movement of goods is seriously impeded and becomes very costly.

The landlocked countries suffer most from deficiencies in external connections. The costs of their imports and exports are raised by: the distance that has to be covered (over an often inferior road/rail network); customs delays; and potential transport disruptions as a result of conflicts between nations. Africa has a higher share (one-fourth) of landlocked countries than any other continent. These countries are as dependent on imports for the manufacturing sector as African countries with direct access to sea. Although regional markets may, in the long run, prove more important than overseas markets, overseas markets for industrial products would certainly have a growing importance for countries like Zambia and Zimbabwe.

In Southern Africa, industrial development has suffered much from the destruction of transport lines and port facilities by South Africa. The Beira railway, for example, an essential connection for both Zambia and Zimbabwe, has been disrupted on several occasions.

A deficient internal transport network is an impediment to industrial development as well. Markets cannot be properly supplied, and the cost of domestically produced inputs (or equipment) is raised. The latter again is an obstacle to the growth of inter-sectoral and inter-industrial linkages, which are weak enough as it is (sections 3.5 and 4.1). A bad domestic transport network can have a disastrous influence on the performance of large-scale plants; the United Republic of Cameroon's Cellucam pulp mill and Togo's CIMAO cement plant provide illustrations of this point.

As pointed out, regional markets are likely to become more important in the future. Their development has, inter alia, been hampered by the fact that the basic transport arteries are often relics of colonial days; the interior is connected to a major port, but the development of nationwide road networks and connections with neighbouring countries has been neglected. This is, changing however. Examples are the TanZam railway and the Panafrican highway project.

Telecommunications is another field where much progress is yet to be made in most African countries. Supplying a factory and marketing its products are both crucially dependent on good long-distance communications. With regard to the functioning of the plant itself, a regular supply of power and water are essential. In many African countries there is no guarantee that electric power is continuously available.

The expansion of physical infrastructure is time-consuming and highly capital-intensive. The Transgabonais railway cost US$ 3 billion for a length of 657 km. A complicating factor in Africa is the low density and wide dispersal of the population, which increases the per capita cost of infrastructural works. Given the present constraints on the budgets of countries, infrastructural improvement is likely to suffer. The bias against expenditure on public goods (which may be found in some of the adjustment programmes) militates against infrastructural improvements as well. Here, a better weighing of short-term balance-of-payments considerations against long-term development needs would be called for.

The educational system is another essential element of the institutional infrastructure. As the 1987 World Development Report states:

> "Returns to investment have generally been higher in education than in physical assets. Economic rates of return to primary education in developing countries have averaged 26 per cent, compared with estimated returns on physical capital of 13 per cent. This suggests that lack of education is a greater obstacle to industrialization and development than lack of physical assets."[1/]

In terms of educational infrastucture, Sub-Saharan Africa is further behind than any other region in the world. In 1985, 54 per cent of the population had had no formal education, and only 6 per cent had completed secondary or higher education.

1/ World Bank - World Development Report 1987, New York, etc., 1987, p.63.

Private institutional support for industry is not all developed in the great majority of African countries. In the absence of qualified manpower, there tends to be a heavy reliance on foreign consultancy and other industrial services. Experience has shown that foreign consultancy firms may not always have a sufficient understanding of the potential and problems of industry in African countries. Lack of human resources is also a reason why domestic repair services (which would help to reduce the need for imports of spare parts) are often insufficient. Private credit institutions for industry appear to be almost non-existent; banks tend to be reluctant to provide the long-term credit that is required for industrial operations. UNCTAD is now involved in assistance programmes for the development of private industrial services. UNIDO is involved in several projects of a similar nature as well.

2.5 Inter-sectoral linkages

The range of industries having close relations with other sectors of the economy is rather narrow in most African countries, although inter-sectoral linkages have been developed to a higher degree than inter-industry linkages.

Inter-sectoral linkages are most common in the agro-processing, (cotton-) textiles, petroleum products and non-metallic minerals industries. In some francophone countries in West/Central Africa, cotton cultivation and textile manufacturing are closely linked, being supervised by the same enterprise.

Most of Africa's mining and agricultural products are, however, exported after only rudimentary processing. Liberia, Zambia and Côte d'Ivoire are good examples of this phenomenon. Although Liberia is a major producer of natural rubber, the rubber products industry is insignificant. Zambia's economy is dominated by copper exports, but the non-ferrous metals industry is not particularly important. Only a small part of Côte d'Ivoire's cocoa and coffee crop undergoes any form of processing (beyond drying and dehusking) before shipping.

The fact that relatively few basic metals industries are found is related, inter alia, to the highly capital-intensive nature of these industries. A cost-benefit analysis would often show that further processing would not be economically viable. Downstream manufacturing is on the whole not highly developed in the other industries either; much wood is exported in the form of logs, or at best sawn timber. This being said, essential differences can be noted between countries and product groups. Algeria is an example of a country where the full range of metallurgical industries is well represented.

In some cases, industries rely on overseas imports of raw materials which would be locally available. The United Republic of Cameroon provides an example: its aluminium industry has continued to import bauxite for the past thirty years in spite of large domestic deposits.

The crucial issue in the case of inter-sectoral linkages of the food products and cotton textiles industries is improving the performance of Sub-Saharan Africa's agriculture. As noted elsewhere in this study, this would increase the availability of raw materials for the manufacturing sector

and expand the domestic market for industrial products. One way of strengthening linkages is to bring together agricultural production and industry within a single enterprise, as in the cotton textile industry in several West African countries. (Palm oil production, cigarette manufacturing and fruit canning also provide examples.) Not all crops, however, are suited for the strictly controlled cultivation that is required, and the often undesirable social side-effects in rural areas (as have occured in Latin America) must also be taken into account.

3. Major internal obstacles

3.1 Weak inter-industry linkages

Inter-industry linkages do not appear to be strongly developed in any African country. There is very little direct information on this issue - input-output statistics are hardly ever detailed or recent enough to allow any conclusions in this respect. However, the continuing heavy dependence of the manufacturing sector on overseas imports of intermediates, spare parts and machinery is significant. Now that foreign exchange has become scarce, it is proving increasingly difficult to keep plants functioning. Even countries with an industrial sector that has made great progress, such as Algeria, Nigeria and Zimbabwe, often must procure essential manufactured products from overseas, and are now experiencing the consequences of the foreign exchange squeeze.

Obviously the emergence of a "tissue" of interlinked manufacturing enterprises is a long-term process. The domestic resources (including qualified manpower) and markets of many countries would moreover be too limited to warrant the establishment of, for example, a large engineering industry which could equip other industries. The removal of obstacles to the development of regional markets could, however, help to establish such capacity in a number of countries, or to utilize it better.

3.2 Branch-specific problems

Some of the major constraints on industrial development, such as the shortage of foreign exchange and qualified personnel, are felt by virtually all industries. On the other hand, certain problems are branch-specific.

A recurring problem of Africa's major industries, food products and (cotton-) textiles, face is the shortage of domestically-produced raw materials. The weakness of the agricultural sector is Africa's single largest problem. Drought is often mentioned as the main reason for its low and fluctuating productivity, but drought is closely related to the removal of Africa's forest cover (in which sawmilling and pulp/papermilling play a role). Crop failure is less often a consequence of purely natural factors than of introducing agricultural methods and crops which are not suitable, and in the long run damage the natural environment.

Another obstacle to stable agricultural development that might be just as serious is price fixing. Most African governments fix prices for a wide range of agricultural crops. Price fixing is generally combined with a government marketing monopoly. There are various reasons for doing this. In the case of

cereals, the rationale is to provide food to urban populations at a low and stable price. In the case of cotton, it is the domestic textile industries' need for a regular supply of cheap raw cotton. In the case of export crops such as coffee and cocoa, the margin between world market and local producer prices has provided governments with a substantial part of their revenue, especially in the pre-oil days.

These fixed prices have generally been well below those that would exist in the free market, and the difference has tended to grow over the years. This has given rise to extensive smuggling; for example, Zambian maize is sold in Zaire for more than three times the official Zambian price. Additionally, fixed prices have led to a lack of interest in cultivating controlled crops. A number of African countries are now overhauling the pricing system and are providing more incentives to farmers. The short-term effect may be, inter alia, unrest among urban populations, who see the prices of their basic foodstuffs rise. In the long run, however, better incentives to farmers should result in a better urban food supply and greater overall prosperity, for the great majority in the continent's population is still rural. For the agro-processing industries, the positive effect should be a larger and more secure supply of raw materials.

The pulp and paper industry is only of marginal importance at the continental level, but pulp and paper mills have been established in some countries with large forest reserves. On the whole, the industry's record is not encouraging; some of Africa's major "white elephants" are pulp mills. Cameroon's Cellucam plant is an example. There are several reasons for their failure. First, a modern mill has a capacity that often far exceeds the demand for paper in the average African country with its small population, low incomes and low literacy levels. The mills are very capital-intensive and need a well-developed physical infrastructure, since the industry uses great amounts of water and energy. Moreover, the absence of smoothly functioning regional markets and heavy international competition are not conducive to exports. Finally, much of Africa's forest is unsuitable for paper manufacturing in the first place.

With the development of petroleum refining, a number of African countries have acquired a good basis for the chemical industry. Details are scarce, since in many cases the petrochemicals industry is a very recent addition to manufacturing. In small oil-producing countries such as Gabon, the viability of the highly capital-intensive industry may be in serious danger as a combined result of a world market glut, the small size of the domestic market, and the steep drop in oil earnings needed to pay off and maintain the plants. Other chemical industries, such as those based on phosphates, do not seem to perform well in the smaller economies either. Countries like Togo and Zambia have experienced severe difficulties in this field; in Morocco, however, phosphate-based production has become a major industry.

Many African countries now have their own non-metallic minerals industries. Resources are often readily available, and for many products the domestic market (private consumers, the construction sector) is sufficiently large. Unfortunately, this is not always the case for the cement industry, the only non-metallic minerals industry on which details were available. The

main problem again appears to be the capital-intensive nature of this type of manufacturing. A modern cement plant is large, complex and costly. A sizeable domestic market is therefore essential, but the general decline of many economies has also caused a steep reduction in the demand for building materials. In Sub-Saharan Africa the domestic product is, moreover, often more expensive than imports from the Mediterranean area. The complexity of the plants frequently causes breakdowns, which cannot always be remedied locally, as the industrial support services and/or the required manpower are not available. Shortage of industry-specific skills, for example, has been mentioned as a serious problem in Senegal's cement industry.

Basic metals, likewise, are represented in a limited number of countries. Even where large raw material deposits exist, the highly capital-intensive nature of these industries and their heavy demands on infrastructure often make processing non-viable. Basic metals such as iron and copper are increasingly facing a highly competitive international environment and substitutability by synthetic products. In Zambia, a major copper producer, copper deposits are being rapidly depleted, which seriously exacerbates the problems of this single-product economy.

Theoretically, the engineering industries have a secure source of inputs where a basic metals industry exists. In practice, however, widely varying types of metal are needed, and even Africa's larger metals producers have therefore remained partially dependent on imports. Import dependence upon special metals/products is quite common wherever engineering industries exist, but in the case of Africa the present foreign exchange squeeze makes it very difficult to obtain such essential materials. The development of the engineering industries is also hindered by the ubiquitous shortage of skilled labour and engineers.

Capital-intensive, large-scale engineering (e.g. heavy machinery, motor vehicles) has only proved viable in a handful of the more developed African economies. The production of simple metal goods and equipment, especially for agriculture, is often better suited to the particular situation of many countries. This is one of the potential growth industries.

3.3 Plant-level problems

Plant-level problems are a special category mainly in the sense that problems of a more general nature - related to manufacturing, the economy, or the political/social environment - combine and crystallize at the plant level. To avoid repetition, only the major plant-level problems will be described below.

The most frequently stated plant-level problem is absence of qualified managers, foremen and supervisors. Lack of qualifications may refer to lack of training and/or experience. Where training is the issue, this is often the consequence both of the low general level of education and of the absence of special training facilities for (industrial) managers or production supervisors. The lack of experience points to another characteristic of many African economies - the lack of interest in industry among domestic entrepreneurs. Profits can often be made faster in other sectors of the

economy, especially in the services sector, and the long-term investment requirements are lower. Manufacturing is on the whole not perceived as an attractive option for a businessman. Factors that combine to create an unfavourable business climate for manufacturing are low demand, competition from established foreign producers (including Asian developing countries), the foreign exchange squeeze, instability and political interference.

The last problem mentioned, administrative interference, is especially notable in public sector enterprises. The absence of a sufficiently developed domestic entrepreneurial class and the desire to build up domestic industries have resulted in the establishment of a large number of public sector plants. The management of these, if not entrusted to expatriates, was put in the hands of civil servants with little knowledge of the technical, marketing or administrative aspects of industrial operations. The management issue is especially serious in countries like Zaire and Angola which, upon becoming independent, were left with virtually no human resources needed to run a modern economy.

Moreover, governments have often retained strong control over plant activities by stipulating product quantities, type and prices. Such regulations may result from a desire to supply the domestic market with essential goods at a reasonable price, but they are often formulated without sufficient understanding of a plant's possibilities and problems. In addition, the inflexibility of these regulations is likely to hinder the adaptation of production to changes in demand or in the industrial environment.

Apart from competent managers, technicians and skilled labour are also in short supply. As a result, wastage, unnecessary breakdowns and product deficiencies are common. On the other hand, overstaffing of public enterprises may be a more serious problem than the available information indicates. Legislation or social reasons may prevent the laying-off of such redundant labour. Considerations of this kind are often perfectly valid, but hidden unemployment of course raises operating costs.

Supply and maintenance problems which are the result of low agricultural productivity and foreign exchange shortages have already been given ample attention. Cereal and vegetable oil mills in the Sahel countries have been among the most conspicuous victims of the poor state of the agricultural sector. Shutdowns are frequent. Maintenance, which is essential in a tropical climate, then tends to be neglected. This results in rapid deterioration of plant and equipment. In the more sophisticated, capital-intensive enterprises such problems are more likely the consequence of an inability to procure imported materials as a result of the foreign exchange squeeze. Maintenance problems are exacerbated by the fact that domestic repair facilities and spare parts manufacturers are uncommon. A longer-term, foreign-exchange related problem is the replacement of obsolescent capital stock. (Acquiring sufficient working capital, on the other hand, is not often mentioned as a serious issue. Where it is, it points to the domestic banking system's deficiencies in supplying industrial credit.)

Similarities between industries and their various constraints do not imply that operational problems of individual enterprises are always similarly serious. This is illustrated by the often widely divergent capacity utilization rates found among plants within a single branch. Obviously, the combined characteristics of an enterprise - its management, the type and age of plant, range of products, etc. - determine the degree to which the individual firm is affected by unfavourable circumstances.

Regenerating industry must therefore be based on two lines of simultaneous action:

- it must attempt to remove the more general obstacles to industrial growth, i.e. it must improve the environment in which an industry operates;

- within this context, it must identify and provide support to individual enterprises which can be expected to function well under circumstances that are far from perfect, and which make a maximal contribution to renewed growth.

The next section contains a number of suggestions for action at both of these levels.

4. Issues for future action

4.1 Elements of industrial regeneration and rehabilitation in Africa

Since the proclamation of the Industrial Development Decade for Africa, the terms industrial rehabilitation and regeneration have come very much into focus.

Plant rehabilitation means that industrial growth would be achieved by rehabilitating individual existing entities, if these would be potentially viable. However, the resulting industrial structure would not necessarily be better suited for the present and future conditions facing African industry.

The concept of industrial rehabilitation should therefore be broadened and interpreted as securing optimal use of existing capacities and resources for future, general industrial growth - that is, to regenerate the African industrial development process. The true challenge, then, is to identify which enterprises are best suited for rehabilitation, that is, where scarce foreign exchange and other investible resources will be most efficiently used to upgrade production and company performance with the largest possible effect on overall growth. The second task is to combine the plant rehabilitation process with a restructuring programme of the industrial sector as a whole to ensure growth dynamism, domestic economic integration, and/or the provision of support industries and services. Such a programme will entail investment in new capacities in industry, infrastructure, services and primary commodity production. The third task should be the adjustment of the policy and administrative framework to better support the domestic and international efforts towards the industrial regeneration objective.

Thus, rehabilitation is not just technical rehabilitation, but a process that has technical, technological, organizational and managerial as well as economic, financial, marketing, design, and engineering aspects. It should be understood that restructuring, both at a sub-sector level and at the level of a company or industrial plant, takes into account the economic and financial aspects, as well as the general and technical management structure, product technology and range, and domestic and foreign markets. There is therefore a need for introducing effective and dynamic marketing, a concentration of human, physical and financial resources on a few manageable projects or markets, a closer analysis of market trends, and attention to technological development.

The problem of formulating a systematic approach to rehabilitation has resulted in the "top-down-approach" used by the Regional and Country Studies Branch in its in-depth rehabilitation studies.* The top-down approach stresses the importance of the environment in which manufacturing operates. Important aspects in the global, regional, and country specific environment become guidelines in the search for ways and means to restore industrial growth in a given country. Industrial growth being the ultimate objective, it is likely that certain enterprises would best be helped by changes in the policy or economic environment, rather than by measures of assistance directly at the plant level.

In particular and extreme cases "industrial rehabilitation" may actually lead to recommendations for plant closures. In such cases it is recognized that there are important social and political implications to be considered; ex ante, however, closure cannot be excluded even then. In such cases the established meaning of the concept of rehabilitation may block such actions because it restricts the view of decision-makers to the industrial structure as it exists. The concept of regeneration as a wider and more forward-looking concept will help all parties concerned to understand that closure may be a necessary part of an attempt to establish an industrial structure with better prospects for sustained growth.

From the analysis in the preceding sections, a number of essential elements of a successful regeneration and rehabilitation drive emerge. The following list contains items, in one form or another, that may be found in the present industrial policies of many African countries. An awareness of the complexity of the issue is thus emerging among policy makers and advisers. These key elements are:

- re-assessment of industrial development priorities in the light of the medium-term overall outlook (this may entail closure of plants);
- improving the data collection on the sector, in order to provide a more solid basis for such assessments;

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* For a more extensive description, see issue no. 1 in this series: "Regeneration of African manufacturing industry: an approach".

- special incentives for industries which strengthen domestic linkages (present regulations often favour import-dependent industries);

- identification of new ways of supplying import-dependent industries with essential inputs and spare parts;

- more attention to the development of medium- and small-scale industry (i.e. a policy shift away from large-scale, capital-intensive manufacturing);

- infrastructural improvement, including the institutional infrastructure;

- better vocational and high-level (technical, managerial) training, within the context of overall educational improvements;

- stimulation of agriculture, and meshing of industrial and agricultural projects where this is possible;

- greater flexibility or abolition of price regulations;

- simplified administrative procedures, including price controls;

- decentralization of economic decision-making within public sector industries;

- encouragment of private entrepreneurship and industries;

- involvement of private sector representatives in the policy making process;

- reduction of regional trade barriers;

- rehabilitation of enterprises which have viable, long-term prospects even under the present, relatively unfavourable conditions.

4.2 UNIDO's role

If African industry is to find ways to new growth - a growth that will not take place spontaneously - the concerted efforts of all national participants, supported by international agencies, are necessary. UNIDO can make an important contribution in this regard. UNIDO's potential contribution should be considered in relation to:

(a) on-going technical assistance projects;

(b) African governments;

(c) other international organizations and donors.

Many ongoing UNIDO projects in Africa are already directly involved with industrial rehabilitation. As a result, UNIDO has established a good basis of knowledge in this field which at present is found throughout the Organization. To benefit African countries most, this knowledge should be appropriately synthesized. The present African country briefs represent a first attempt on the part of UNIDO's Regional and Country Studies Branch to systematize such knowledge for the region as a whole. This Branch's recently completed in-depth country diagnostic surveys of Zambia and Angola* represent a next step. These surveys, based on field work by a multidisciplinary team of experts and on intensive discussions with national authorities, use the "top-down" approach to tackle industrial regeneration and rehabilitation issues at the country level. A primary objective is determining the assistance UNIDO could provide within the context of national programmes for industrial regeneration, including identification of potential rehabilitation projects.

Industrial regeneration projects will play a vital role in restoring industrial growth in Africa in the next decade. This report makes it clear that industrial regeneration must be viewed and must take place within an economic and political context. Obtaining a clear understanding of the macro-environment of the manufacturing sector in various countries will thus be an essential part of UNIDO's future work. This will entail going beyond the usual scope of technical assistance projects.

UNIDO has a unique competence for bridging the gap between macro- and micro-economic analyses. As an Organization possessing impartial expertise on industrial development, UNIDO has a special role to play in relation to African governments actively seeking to implement reforms aimed at regenerating the manufacturing sector. The experience of IMF/World Bank supported economic recovery programmes in African countries is mixed. In such particular cases UNIDO may have a mediatory role to play. Some clarification on this point can be found in the UNIDO Global Report 1987:

> "The economic recovery programme for Africa should not involve fiscal austerity measures that play havoc with financially vulnerable import substitution industry, but should be based on a well-structured strategy for strengthening the local industrial base and a renewed effort towards regional or sub-regional industrial co-operation."

UNIDO could make significant contributions to formulating industrial policies as part of economic recovery programmes that will harmonize better with African conditions. The Orgainization's previous experience in assisting a wide range of African governments in industrial policy design and execution would be particularly useful.

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* "Special reports on industrial rehabilitation" series, issues no. 1 and 2.

UNIDO's impartiality and its unique expertise should enable the Organization to become a leading institution in the field of industrial regeneration during the coming years. This is not to say that UNIDO should carry out macro-economic analysis on the same scale as the World Bank or formulate economic adjustment programmes as far-reaching and comprehensive as those of the IMF. UNIDO's role is to assist Governments rather than to formulate prescriptions. Whenever this is appropriate in the case of industrial development issues, however, UNIDO should co-operate as closely as possible with these two institutions, because their role in the restructuring of African economies is a central one. Co-ordination with the programmes of other relevant institutions and organizations should also take place, including the International Finance Corporation, the European Economic Commission, and the United Nations organizations such as UNCTAD, ILO and FAO.

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UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

People's Republic of ALGERIA
(1)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Goubet	J12102	DP/ALG/87/029	Contrôle de la qualité des produits industriels
IO/IIS/INFR Mr. Nickels	J12103	DP/ALG/87/016*	Mobilisation de l'ingénierie nationale basée sur la méthode ACT
IO/IIS/PLAN Mr. Richard	J12413	XA/ALG/85/601	Assistance à l'Institut supérieur de gestion et de planification (ex RP/ALG/85/601) (see also XA/ALG/86/637) (IDDA)
IO/IIS/PLAN Mr. Richard	J12413	XA/ALG/86/637	Renforcement des capacités de recherche, de formation et de consultation de l'Institut Supérieur de Gestion et de Planification (ISGP) dans les domaines de la planification et de la gestion du secteur public industriel (see also XA/ALG/85/601) (IDDA)
IO/T/MET Mr. Grebtsov	J13209	DP/ALG/87/028	Introduction d'un système de gestion de la production et de la maintenance (SGPM à SIDER)
IO/T/ENG Mr. Gürkök	J13312	DP/ALG/86/009*	Développement des capacités de l'Entreprise nationale d'organisation et d'information (ENOR1) en matière de consulting industriel
IO/T/ENG Mr. Fritz	J13316	DP/ALG/85/003	Assistance à l'Institut national d'étude et de recherche en maintenance (INMA)
IO/T/CHEM Mr. Kopytowski	J13420	DP/ALG/86/008*	Plan directeur de développement de l'industrie chimique
IO/T/CHEM Mr. Oxley/Mr. Youssef	J13420	SI/ALG/87/802	Assistance technique dans l'identification des contraintes techniques des usines d'ammoniac et d'engrais azôtés et phosphatés puis leur résorption et l'amélioration de leurs performances
IO/T/CHEM Mr. Oxley/Mr. Youssef	J13420	SI/ALG/87/803	Assistance technique à l'industrie pétrochimique en Algérie pour l'amélioration de ses performances et l'élargissement de ses productions
IO/T/CHEM/PH Mr. Caizer	J13422	PF/ALG/86/P01	Assistance technique en vue de la production de contraceptifs oraux

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

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UNIDO's Approved and/or Operational Technical Co-operation Projects
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People's Republic of ALGERIA
(2)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/CHEM/PH Mr. Csizer	J13422	DP/ALG/86/007	Etude sur la production d'articles de conditionnement en verre et plastique pour l'industrie pharmaceutique
IO/T/CHEM/PH Mr. Csizer	J13422	DP/ALG/86/010*	Mise en oeuvre du plan de développement de l'industrie pharmaceutique
IO/T/CHEM/PH Mr. Csizer	J13422	DC/ALG/87/025	Etablissement d'une usine-pilote pour la production de solutés de perfusion intraveineux (multifund to DP/ALG/87/025)
IO/T/CHEM/PH Mr. Csizer	J13422	DP/ALG/87/025**	Etablissement d'une usine-pilote pour la production de solutés de perfusion intraveineux (multifund to DC/ALG/87/025)
IO/T/CHEM/PH Mr. Csizer	J13422	XA/ALG/88/662*	Assistance in the establishment of a pilot demonstration plant for production of intravenous fluids
IO/SD/FEAS Mr. d'Adesky	J14102	DP/ALG/86/019*	Assistance à l'Institut supérieur de gestion et de planification dans l'élaboration d'une méthodologie d'évaluation et de selection des projets d'investissement
IO/SD/FEAS Mr. d'Adesky	J14102	DP/ALG/86/021*	Etude de pré-investissement et promotion de projets industriels (EDIL) - preparatory assistance
IO/SD/FEAS Mr. d'Adesky	J14102	DP/ALG/86/022*	Développement et promotion des industries de loisirs (DEJIMAS)
PPD/SPA/ECDC	E04100	DP/ALG/87/023	Meeting on co-operative arrangements among developing countries on agricultural machinery, Algiers, 5 - 7 October 1987
IPCT/DTT/INF	G03100	DP/ALG/86/023*	Développement des capacités de l'Entreprise nationale d'organisation et d'information (ENORI) en matière d'information industrielle
IPCT/DTT/TEC	G03300	SI/ALG/88/801	Immediate assistance to the negotiation of the new complex for direct reduction of iron and steel, Bellara

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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People's Republic of ANGOLA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/AGRO Mr. Antinori	J13103	DP/ANG/86/004**	Assistance in the rehabilitation of the bread production chain
IO/T/ENG Mr. Sharapov	J13314	SI/ANG/87/802	Technical assistance in the reconstruction of fabrica 'F.I.D.R.O. de Angola' for production of vehicles for food transportation and mobile refrigerators
IO/T/ENG Mr. Sharapov	J13316	DP/ANG/82/020*	Maintenance and repair centre (phase III) (Associated Agency: UNV)
IO/SD/FEAS Mr. Klykov	J14101	US/ANG/87/075	Opportunity study for the establishment of a production capacity of wind-driven water pumps in Angola
IO/SD/FEAS Mr. Klykov	J14102	DP/ANG/85/003*	Establishment of a unit for preparation and analysis of industrial projects (phase I)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

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UNIDO's Approved and/or Operational Technical Co-operation Projects
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People's Republic of BENIN

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DP/BEN/86/004*	Assistance à l'étude de factibilité d'un dispositif de promotion des petites et moyennes entreprises
IO/IIS/PLAN Mr. Richard	J12413	DU/BEN/83/010*	Assistance à la planification nationale du développement économique et social
IO/T/MET Mr. Nogueira da Silva	J13208	US/BEN/85/027	Etude de préfaisabilité pour l'installation d'une mini-aciérie (related to US/GLO/85/019)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

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UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of BOTSWANA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/AGRO Mr. Eräneva	J13102	DP/BOT/86/002*	Establishment of a knitwear factory in Lobatse
IO/T/AGRO Mr. Eräneva	J13102	US/BOT/87/097*	Establishment of a clothing unit in the department of supplies to organize and support technically local manufacture of school and other uniforms
IO/T/CHEM Mr. Hagan	J13419	DP/BOT/84/001*	Assistance to the small-scale Portland Pozzolana Cement Plant (multifund to SM/BOT/84/001)
IO/SD/FEAS Mr. Suzuki	J14102	DP/BOT/85/002*	Assistance to the Project Research Unit

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

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UNIDO's Approved and/or Operational Technical Co-operation Projects
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BURKINA FASO

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/IMR Mr. de Pierpont	J12207	XP/BKF/88/080	Etude pour la définition d'une politique et d'une stratégie nationales de maintenance industrielle (related to DP/BKF/86/006)
IO/IIS/PLAN Mr. Richard	J12413	DP/BKF/86/006*	Programme d'accompagnement au plan de développement industriel (phase I) (see also XP/BKF/88/080)
IO/T/ENG Mr. Seidel	J13312	SI/BKF/87/802	Assistance d'urgence pour le démarrage des activités de reconditionnement de fabrication des pièces de rechange des machines agricoles (see also XA/BKF/86/615)
IO/T/ENG Mr. Fürkus	J13316	SI/BKF/87/801	Identification et mise en place d'une structure d'intervention pour la réflection des points d'eau villageois
IO/T/ENG Mr. Seidel	J13319	XA/BKF/88/661*	Renforcement des capacités d'entretien et de réparation pour le parc de tracteurs agricoles et autres équipements mobiles et lourds (phase d'extension) (continuation of XA/BKF/86/615)
IO/T/CHEM Mr. Biering	J13419	US/BKF/83/058*	Rehabilitation of the brickworks VOLBRICERAM
IO/T/CHEM/PH Mr. Wijesekera	J13422	US/BKF/81/057*	Assistance à la production de produits pharmaceutiques à partir de plantes médicinales sélectionnées
IO/SD/TRNG Ms. Schurz	J14202	XP/BKF/88/059	Bourses de formation au profit du personnel de l'unité textile Faso-Fani
PPD/SPA/ECDC	E04101	UC/BKF/87/062	Establishment of a tannery: construction and operation of the plant, co-operation between Burkina Faso and Yugoslavia (in co-operation with IO/T/AGRO)
PPD/SPA/ECDC	E04101	XP/BKF/88/004	Etude d'opportunité en vue de l'établissement de mini-centrales hydro-électriques: coopération Burkina Faso/Pakistan

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of BURUNDI

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DP/BDI/81/008**	Industrial promotion and transfer of technology (multifund to ST/BDI/81/T01)
IO/IIS/INFR Mr. Tourou	J12103	DP/BDI/86/009	Assistance préparatoire au Centre de promotion industrielle
IO/T/AGRO Mr. Buljan	J13104	SI/BDI/86/906	Assistance in operating the tannery effluents treatment plant in Bujumbura (multifund to UC/BDI/87/011)
PPD/SPA/ECDC	E04101	XP/BDI/88/044	TCDC Burundi/Romania - study tour for the manufacture of umbrellas and raincoats

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of CAMEROON

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Pavlik	J12101	DP/CMR/86/018*	Information industrielle
IO/IIS/INFR Mr. Nickels	J12103	DP/CMR/87/004	Développement des petites et moyennes entreprises - preparatory assistance
IO/IIS/IMR Mr. Bassili	J12209	DP/CMR/87/005	Industrie du bois - preparatory assistance
IO/IIS/PLAN Mr. Richard	J12413	DC/CMR/83/001	Plan directeur d'industrialisation (multifund to DP/CMR/83/001)
IO/IIS/PLAN Mr. Richard	J12413	DP/CMR/83/001**	Assistance à l'élaboration d'un plan directeur d'industrialisation (Associated Agency: UNCTAD) (multifund to DC/CMR/83/001)
IO/T/CHEM Mr. Biering	J13419	DP/CMR/86/020	Matériaux de construction
IO/SD/FEAS Mr. Kurowski	J14101	DP/CMR/87/001*	Etudes, expertises et conseils d'appui à la mise en oeuvre du Plan Directeur d'Industrialisation
IO/SD/FEAS Mr. Kurowski	J14101	XP/CMR/88/007	Etude de pré-faisabilité pour l'exploitation forestière et établissement des scieries (financement du voyage international de 3 experts chinois)
IO/SD/FEAS Mr. Kurowski	J14103	XP/CMR/88/095	Training seminar on financial analysis and the Computer Model for Feasibility Analysis and Reporting (COMFAR)
PPD/IPP/STAT	E03401	DP/CMR/87/011	Assistance à la préparation des statistiques industrielles
PPD/SPA/COOP/STF	E05200	SF/CMR/88/001	Assistance à la compagnie financière et industrielle pour l'identification, le développement et la formulation de projets industriels

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of CAPE VERDE

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/IMR Mr. Bassili	J12209	UC/CVI/87/016	Assistance for quality control of imported wood (continuation of XP/CVI/86/047)
IO/IIS/PLAN Mr. Richard	J12413	DP/CVI/84/002**	Assistance à la planification et au développement industriels (continuation of DP/CVI/83/005)
IO/IIS/PLAN Mr. Richard	J12413	SI/CVI/88/801	Assistance à l'analyse du système d'incitations au développement industriel
IO/IIS/PLAN Mr. Richard	J12413	SI/CVI/88/802	Assistance à la simplification des procédures d'administration industrielle
IO/SD/FEAS Mr. d'Adesky	J14102	XP/CVI/86/090	Séminaire de formation concernant l'analyse des projets industriels
PPD/SPA/ECDC	E04100	UC/CVI/87/018	Assistance to the shoe factory of the 'Société de Production de Chaussures (SOCAL)'
PPD/SPA/ECDC	E04101	XP/CVI/88/016	Solidarity ministerial meeting for co-operation in the industrial development of Cape Verde, Praia, 6 - 10 June 1988 (phase II of XP/CVI/86/046)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

CENTRAL AFRICAN REPUBLIC

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/CHEM Mr. Biering	J13419	SI/CAF/86/877	Assistance à l'industrie de terre cuite

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of CHAD

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DP/CHD/8[illegible]	Assistance à la relance des PMI tchadiennes
IO/T/CHEM Mr. Biering	J13419	DP/CHD/83/007**	Assistance à la relance de la production des matériaux de construction
IO/SD/FEAS Mr. Klykov	J14101	DP/CHD/83/008*	Etude pour l'établissement d'une cimenterie dans le Mayo-Kebbi

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

People's Republic of the CONGO

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DU/PRC/84/007	Assistance to the development of small and medium industries
IO/SD/FEAS Mr. Kurowski	J14102	DP/PRC/83/007*	Bureau central d'expertise et d'évaluation des projets d'investissements (CEPI)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of CÔTE D'IVOIRE

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/IMR Mr. de Pierpont	J12207	DP/IVC/87/018*	Renforcement du crédit de la Côte d'Ivoire pour le suivi et la restructuration des entreprises
IO/IIS/PLAN Mr. Richard	J12413	DP/IVC/83/005**	Assistance au développement industriel - phase IV (continuation of DP/IVC/79/006) (Associated Agency: ITC)
IO/IIS/PLAN Mr. Richard	J12413	DP/IVC/87/027*	Mise en oeuvre du schéma directeur de développement industriel
IO/SD/TRNG Mr. El Gallaf	J14201	DP/IVC/87/012*	Renforcement du Centre Ivoirien de Gestion des Entreprises (CIGE) (phase II) (continuation of UC/US/IVC/82/128)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of DJIBOUTI

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/SD/FEAS Mr. Rezek	J14102	DP/DJI/86/014*	Renforcement du développement et de la promotion industrielle

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Arab Republic of EGYPT
(1)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Boutoussov	J12101	DP/EGY/86/026*	Improvement of laboratories for semi-industrial services
IO/IIS/INFR Mr. Chanana	J12103	DP/EGY/86/004	Development of small and medium feeder industries in the automotive manufacturing sector (phase II)
IO/IIS/INFR Mr. de Crombrugghe	J12104	UC/EGY/86/042	Assistance to the Engineering Industrial Design and Development Centre (EIDDC) in establishing an industrial sub-contracting exchange (related to DP/RAB/86/001)
IO/IIS/INFR Mr. Chanana	J12106	UC/EGY/87/135	High-level advisory assistance to the private sector
IO/IIS/IMR Mr. Khan	J12208	DP/EGY/81/028*	Industrial consultancy services (Associated Agency: ILO)
IO/T/AGRO Mr. Eräneva	J13102	DP/EGY/86/010**	To establish a national garment, fashion and design centre
IO/T/AGRO Mr. Miranda da Cruz	J13103	DP/EGY/81/010*	Sugar cane training and development centre
IO/T/AGRO Mr. Koenig	J13103	DP/EGY/86/002*	Food development centre
IO/T/AGRO Mr. Berg	J13104	US/EGY/88/044*	Upgrading of technical capabilities of selected shoe factories
IO/T/MET Mr. Grebtsov	J13208	DC/EGY/85/004	Intercountry programme for managed maintenance systems in metallurgical and other industries in Africa (multifund to DP/EGY/85/004 and UC/UD/RAF/85/131)
IO/T/MET Mr. Grebtsov	J13208	DP/EGY/85/004	Intercountry programme for managed maintenance systems in metallurgical and other industries in Africa (multifund to DC/EGY/85/004 and UC/UD/RAF/85/131)
IO/T/MET Mr. Grebtsov	J13208	SI/EGY/88/802	Quality improvement of standard and low-alloy steels in basic oxygen furnace (BOF)
IO/T/MET Mr. Grebtsov	J13210	DC/EGY/85/002	Energy conservation in metallurgical, glass and other industries (multifund to DP/EGY/85/002)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Arab Republic of EGYPT
(2)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/MET Mr. Grebtsov	J13210	DP/EGY/85/002**	Energy conservation in metallurgical, glass and other industries
IO/T/ENG Mr. Fürkus	J13313	DC/EGY/83/001	Energy conservation in industry (multifund to DP/EGY/83/001)
IO/T/ENG Mr. Fürkus	J13313	DP/EGY/83/001*	Energy conservation in industry (multifund to DC/EGY/83/001)
IO/T/ENG Mr. Gürkök	J13313	DP/EGY/88/029*	Manufacture of high rupture capacity fuses
IO/T/ENG Mr. Sharapov	J13314	SI/EGY/88/801	Assistance in application of CAD/CAM in railwagon design and manufacturing
IO/T/ENG Mr. Fürkus	J13318	DP/EGY/88/001**	Manufacture of wind turbines for electricity operation
IO/T/ENG Mr. Gürkök	J13300	DP/EGY/87/022*	Development of equipment design capability of Hawamdieh Factory (multifund to DC/EGY/87/022)
IO/T/CHEM Mr. Hagan	J13419	SF/EGY/87/002**	Technical assistance to the Suez Cement Company (Suez Cement Plant)
IO/T/CHEM Mr. Hagan	J13419	SF/EGY/87/005**	Supervisory technical services for the Suez Cement Company (Quattameya Cement Plant)
IO/T/CHEM Mr. Youssef	J13420	DC/EGY/81/029*	Plastics development centre for agricultural purposes (multifund to DP/EGY/81/029)
IO/T/CHEM Mr. Youssef	J13420	DP/EGY/81/029*	Plastics development centre for agricultural purposes (multifund to DC/EGY/81/029)
IO/T/CHEM Mr. Youssef/Mr. Oxley	J13420	SI/EGY/88/803	Efficiency improvement of the Misr Rayon Polyester Staple Fibre Production Plant
IO/T/CHEM Mr. Volodin	J13421	DP/EGY/85/008**	Egyptian Fertilizer Development Centre (EFDC)
IO/T/CHEM Mr. Sugavanam	J13421	DP/EGY/81/006**	Establishment of a multipurpose pesticide pilot plant
IO/T/CHEM Mr. Sugavanam	J13426	DP/EGY/88/020*	Technical assistance in the production of pesticide intermediates
IO/T/CHEM Mr. Judt	J13420	DP/EGY/87/017*	Pre-feasibility study for production of potassium sulphate at El Max Salines

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Arab Republic of EGYPT
(3)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/SD/FEAS Mr. Wiedemann	J14101	UC/EGY/88/069	Advisory assistance in the production of plastic toys (in co-operation with IO/T/CHEM)
IO/IIP Ms. di Pietro	J19201	DP/EGY/88/032*	Industrial advisory services and training
PPD/SPA/COOP/STF	E05200	SF/EGY/87/004	Project development facility for engineering for the petroleum and process industries (ENPPI)
IPCT/II/PIF	G01102	UC/EGY/85/247	Investment promotion meeting for Egypt, Cairo, 2 - 6 November 1987 (multifund to UD/EGY/85/247)
IPCT/II/PIF	G01102	UD/EGY/85/247	Investment promotion meeting for Egypt, Cairo, 2 - 6 November 1987 (multifund to UC/EGY/85/247)
IPCT/DTT/TEC	G03300	DP/EGY/87/018	Support to the Genetic Engineering and Biotechnology National Programme
IPCT/DTT/TEC	G03300	DP/EGY/88/011	Plant genetic engineering and biotechnology

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

People's Democratic Republic of ETHIOPIA
(1)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Kozlov	J12102	DP/ETH/79/003**	National Quality Control and Testing Centre
IO/IIS/INFR Mr. Kozlov	J12102	DP/ETH/84/006**	National metrology centre
IO/IIS/INFR Ms. Gregor/Mr. Antonio	J12103	DP/ETH/83/012**	Handicrafts and small-scale industry development (phase II of DP/ETH/77/018)
IO/IIS/INFR Mr. Hisakawa	J12105	UC/ETH/85/234	Preparatory assistance for the establishment of pilot industrial centres for drought affected people (multifund to US/ETH/85/234)
IO/IIS/INFR Mr. Hisakawa	J12105	US/ETH/85/234	Preparatory assistance for the establishment of pilot industrial centres for drought affected people (multifund to UC/ETH/85/234)
IO/IIS/IMR Mr. Zaleski	J12207	DP/ETH/83/013**	Industrial project development (phase III) (continuation of DP/ETH/80/013)
IO/T/MET Mr. Buckle	J13209	DP/ETH/86/004*	Establishment of a pilot demonstration foundry - preparatory assistance
IO/T/ENG Mr. Fritz	J13316	DP/ETH/83/024**	Engineering and Design Centre (EDC) and Tool Centre (TC)
IO/T/CHEM Ms. Yalçindag	J13419	UC/ETH/84/103	Production and application of non-metallic sorbents in agriculture
IO/T/CHEM Ms. Yalçindag	J13419	XP/ETH/86/063	Assistance in the establishment of a pilot gem-stone processing unit (continued under SI/ETH/88/801)
IO/T/CHEM Ms. Yalçindag	J13419	US/ETH/87/233**	Assistance to the marble and stone industry (phase II of US/ETH/81/007)
IO/T/CHEM Ms. Yalçindag	J13419	SI/ETH/88/801	Assistance in the establishment of a pilot gemstone processing unit (phase II of XP/ETH/86/063)
IO/T/CHEM Mr. Judt	J13423	SI/ETH/87/801	Performance improvement of the Ethiopian Pulp and Paper Company
IO/T/CHEM Mr. Williams	J13424	SI/ETH/88/802	Demonstration of gasifier for the conversion of agricultural waste to fuel for irrigation pumping

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

People's Democratic Republic of ETHIOPIA
(2)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/CHEM Mr. Sugavanam	J13421	UC/ETH/85/214	Assistance for the establishment of a pilot pesticide formulation plant in Ethiopia
IO/SD/FEAS Mr. Suzuki	J14101	DG/ETH/84/001	Ethiopian Centre for Technology (phase II) (participating agency: UNCTAD)
IO/SD/FEAS Mr. Suzuki	J14101	DP/ETH/85/004*	Development of a portfolio for industrial opportunity
IO/SD/FEAS Mr. Suzuki	J14101	XP/ETH/86/003	Feasibility study of a baby food manufacturing complex
IO/SD/FEAS Mr. Suzuki	J14102	DP/ETH/83/001**	Assistance to Industrial Projects Service (IPS)
IO/SD/FEAS Mr. Suzuki	J14102	DP/ETH/84/005*	Development Projects Study Agency (phase II of DP/ETH/80/005)
PPD/IPP/STAT	E03400	SI/ETH/88/803	Computerization of industrial statistics

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of the GAMBIA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/CHEM Mr. Rydeng	J13419	DP/GAM/86/013	Trial batch kiln for lime burning
IO/T/CHEM Mr. Rydeng	J13419	XP/GAM/86/039	Lime industry (continued under (XP/GAM/88/039)
IO/T/CHEM Mr. Rydeng	J13419	XP/GAM/88/039	Lime industry (continuation of XP/GAM/86/039)
IO/T/CHEM Mr. Judt	J13420	DP/GAM/86/008	Salt production and marketing in Darsilami village

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of GHANA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/IMR Mr. Bassili	J12209	DU/GHA/86/008	Promotion of external trade
IO/IIS/PLAN Mr. Eckert	J12415	DP/GHA/86/001**	Strengthening industrial planning and programming in support of the Government's industrial sector adjustment programme
IO/T/AGRO Mr. Antinori	J13103	UC/GHA/88/018	Industrial utilization of local sorghum and other domestic raw materials in the malting and brewing processes in Ghana
IO/SD/FEAS Mr. Loeser	J14102	DP/GHA/87/026*	Feasibility analysis unit for pre-investment studies
IPCT/II/PIP	G01100	SI/GHA/88/801	Assistance in an advisory capacity in the organization of the investment conference to be held in Accra, from 24 - 26 February 1988

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of GUINEA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/IHFR Mr. Zerezghi	J12105	DP/GUI/87/012*	Renforcement des capacités d'assistance à la création et à la réalisation de projets de petitites et moyennes tailles
IO/IIS/ AN Mr. Ric d	J12413	DU/GUI/84/007*	Assistance à la capacité de planification et gestion de l'économie nationale
IO/T/MEI Mr. Buckle	J13209	DP/GUI/82/009**	Assistance au renforcement du Centre d'entretien et de réparation des équipements industriels à Conakry
IO/T/CHEM/PH Mr. Wijesekera	J13422	SI/GUI/86/914	Maintenance and repair of equipment of the Central Analytical Laboratory Matoto (LCAM)
IO/T/CHEM/PH Mr. Wijesekera	J13422	XP/GUI/88/053	Assistance au Laboratoire national d'analyse et de contrôle de qualité de Matoto
IO/SD/TRNG Ms. Schurz	J14202	XP/GUI/88/045	Training in the field of sugar production
PPD/SPA/ECDC	E04100	XP/GUI/86/107	Study tour to institutions for promotion of industrial projects: co-operation Guinea/Cameroon, Ivory Coast

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of GUINEA-BISSAU

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Zerezghi	J12105	DU/GBS/86/006*	Renforcement institutionnel du Ministère des ressources naturelles et industrie (MNRI)
IO/IIS/IMR Mr. Bassili	J12209	SI/GBS/87/802	Diagnostic survey of and ad hoc advice to Sociedade de Comercializacao e Transformacao de Maderas (SOCOTRAM) wood processing plant
IO/T/AGRO Mr. Galat	J13103	SI/GBS/87/801	Assistance in performance improvement of fish processing plants
IO/T/ENG Mr. Kopolo	J13312	XP/GBS/88/091	Preparatory assistance to GUIMETAL in metalworking and production of agricultural tools and implements
IO/T/CHEM Mr. Biering	J13419	SI/GBS/87/803	Assistance in the field of ceramic industry
IO/T/CHEM Mr. Derrough	J13424	XP/GBS/88/064	Technical assistance in the petroleum products sector (continuation of XP/GBS/86/089)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of KENYA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Ms. Taluy/Mr. Antonio	J12103	DP/KEN/84/011*	Assistance to small-scale industries, Kenya Industrial Estates Limited (phase III) (continuation of DP/KEN/81/017)
IO/IIS/INFR Ms. Taluy	J12103	DP/KEN/86/013*	District Development Profile Studies - Assistance to the Ministry of Industry
IO/IIS/INFR Ms. Taluy	J12103	DP/KEN/87/009	Technical support for KIE's micro-businesses and extension services - Nyanza Province
IO/IIS/INFR Mr. Antonio	J12106	DP/KEN/87/012	Kenya Industrial Training Institute (KITI) entrepreneurship development programme - preparatory assistance
IO/T/AGRO Mr. Buljan	J13104	US/KEN/84/163*	Leather development centre (LDC)
IO/T/ENG Mr. Gladilov	J13316	DP/KEN/86/048	Establishment of a design and mechanical engineering laboratory of the Kenya Industrial Research and Development Institute (K.I.R.D.I.) - preparatory assistance
IO/T/CHEM Mr. Youssef	J13420	SI/KEN/87/801	Advisory mission on the rehabilitation of 'Synthetic Fibres Kenya Ltd.'
IPCT/II/PIF	G01101	DP/KEN/86/064	Industrial investment programme - preparatory assistance

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Kingdom of LESOTHO

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/PLAN Mr. Paschke	J12413	DP/LES/87/010*	Industrial strategy and co-ordination
IO/IIS/PLAN Mr. Paschke	J12413	TF/LES/88/001	Associate expert (Ms. Pape)
IO/IIS/PLAN Mr. Paschke	J12413	TF/LES/88/002	Associate expert (Ms. Mizoguchi)
IO/T/MET Mr. Buckle	J13209	DP/LES/86/012	Mini-foundry - casting facility

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of LIBERIA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Hisakawa	J12105	TF/LIR/84/001*	Associate expert (Mr. de Pascale) (multifund to DP/LIR/87/007)
IO/IIS/INFR Mr. Hisakawa	J12105	TF/LIR/87/001	Associate expert (Ms. van Oyen) (multifund to DP/LIR/87/007)
IO/IIS/INFR Mr. Hisakawa	J12105	TF/LIR/87/003*	Associate expert (Mr. Nakano) (multifund to DP/LIR/87/007)
IO/IIS/INFR Mr. Hisakawa	J12105	DP/LIR/87/007**	Development of small and medium-scale enterprises (phase II) (continuation of DP/LIR/80/007)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Democratic Republic of MADAGASCAR

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Zerezghi	J12105	DP/MAG/86/007**	Promotion de la petite et moyenne industrie par le canal de la Société d'étude et de réalisation pour le développement industriel
IO/IIS/IMR Mr. Bassili	J12209	DP/MAG/87/009*	Restructuration de l'atelier bois de la Société d'études de construction et réparation navales (S.E.C.R.E.N.)
IO/T/ENG Mr. Seidel	J13312	DP/MAG/87/004**	Structure d'appui en matière de maintenance industrielle
IO/T/ENG Mr. Seidel	J13313	DP/MAG/84/007*	Programme de recherche/développement en énergies nouvelles et renouvelables
IO/T/CHEM Mr. Biering	J13419	DP/MAG/82/009*	Promotion des matériaux locaux de construction
IO/T/CHEM/PH Mr. Wijesekera	J13422	DP/MAG/84/017*	Assistance au Centre national de recherches pharmaceutiques pour la fabrication de produits pharmaceutiques à partir de plantes médicinales
IO/SD/FEAS Mr. d'Adesky	J14102	DP/MAG/82/010**	Etudes de pré-investissement pour le développement industriel
PPD/SPA/ECDC	E04101	UC/MAG/87/183	Coopération entre la République Populaire de Chine et la République Démocratique de Madagascar pour la production du biogaz (en collaboration avec IPCT/DTT/TEC)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of MALAWI

Backstopping Responsibility All.	Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Goubet	J12102	DP/MLW/85/005*	Strengthening of the Malawi Bureau of Standards
IO/IIS/INFR Mr. Antonio/Ms. Gregor	J12106	DP/MLW/88/027*	Business advisory services for women
IO/IIS/IMR Mr. Farah	J12206	DP/MLW/88/018*	Industrial consultancy services
IO/IIS/IMR Mr. Farah	J12206	DP/MLW/88/035	Industrial advisory services (continuation of SM/MLW/81/034)
IO/SD/FEAS Mr. Suzuki	J14101	US/MLW/86/149	Feasibility study on the establishment of a small-scale paper mill
IO/SD/FEAS Mr. Loeser	J14101	US/MLW/87/087	Feasibility study for a refrigerator, deep freezer, and cold room assembly plant (in co-operation with IO/T/ENG and IPCT/II)
IO/SD/FEAS Mr. Loeser	J14101	US/MLW/87/088	Feasibility study for a flour mill (in co-operation with IO/T/AGRO and IPCT/II)
PPD/IPP/REG	E03200	US/MLW/88/093	Survey of the sugar industry in Malawi for future rehabilitation
PPD/IPP/REG	E03202	DG/MLW/87/001	Industrial sector study and project formulation mission

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of MALI

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/IMR Mr. de Pierpont	J12207	DP/MLI/85/011*	Choix de technologies appropriées pour nouvelles entreprises industrielles
IO/IIS/IMR Mr. de Pierpont	J12207	DP/MLI/86/018*	Assistance to the 'Centre d'études et de promotion industrielle' (CEPI) (phase III) (continuation of DP/MLI/82/012)
IO/IIS/PLAN Mr. Richard	J12414	DP/MLI/82/014*	Assistance à la direction nationale des industries (DNI)
IO/T/ENG Mr. Seidel	J13312	US/MLI/85/258*	Création d'une unité de production en série de pompes à eau manuelles de type India et Mali (phase II) (connected with CD/MLI/81/C03, DP/MLI/82/003) (continuation of US/MLI/82/051)
IO/SD/FEAS Mr. Amaizo	J14101	US/MLI/86/210	Etude de préfactibilité pour l'établissement d'un complexe textile à Bougouni (in co-operation with IO/T/AGRO)
PPD/SPA/ECDC	E04101	SI/MLI/87/802	Assistance à la Direction nationale des industries pour la formulation et la mise en place d'un système national de normalisation et contrôle de qualité

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Islamic Republic of MAURITANIA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DP/MAU/87/007*	Développement du secteur privé

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

MAURITIUS

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Goubet	J12102	DP/MAR/88/001	Assistance to the Mauritius Standards Bureau
IO/IIS/INFR Mr. Chanana	J12103	DP/MAR/88/002	Extension service cell

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Kingdom of MOROCCO

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Goubet	J12102	DP/MOR/86/015*	Assistance dans le domaine de la normalisation, le contrôle de la qualité et la métrologie
IO/IIS/INFR Mr. Nickels	J12103	US/MOR/87/173*	Développement de la coopération industrielle entre le Royaume du Maroc et la République Fédérale d'Allemagne dans le domaine des petites et moyennes industries électro-mécanique basée sur l'emploi de la méthode ACT (Analyse de la Complexité Technologique)
IO/IIS/INFR Mr. de Crombrugghe	J12104	DP/MOR/87/017	Assistance à l'établissement d'une bourse de sous-traitance et du partenariat dans les Industries Métallurgiques Mécaniques Electriques et Electroniques (IMMEE) (related to DP/RAB/86/001)
IO/T/ENG Mr. Gürkök	J13313	SI/MOR/86/885	Immediate assistance to AGA-Ingénierie for the establishment of computerized engineering data bank
IO/T/CHEM Mr. Youssef	J13420	UC/MOR/87/114	Fact-finding mission in the field of extraction and development of natural rubber from guayule
IO/SD/TRNG Mr. El Gallaf	J14203	XA/MOR/88/664	Programme de formation à la maintenance entretien et réparation industrielle y compris méthodes et techniques de formation

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

People's Republic of MOZAMBIQUE

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Ms. Taluy	J12103	DP/MOZ/86/015*	Rehabilitation of the small-scale industries (Associated Agency: ILO and World Bank)
IO/T/AGRO Mr. Miranda da Cruz	J13103	US/MOZ/80/179*	Rehabilitation and development of the bakery industry
IO/T/AGRO Mr. Miranda da Cruz	J13103	DP/MOZ/85/016	Rehabilitation of the existing yeast factories
IO/T/AGRO Mr. Buljan	J13104	US/MOZ/86/276*	Assistance in the establishment of a tannery in Tete
IO/T/MET Mr. Iliev	J13208	DP/MOZ/81/022*	Strengthening national capabilities in steel industry development (phase II) (under completion)
IO/T/MET Mr. Iliev	J13208	DP/MOZ/85/009*	Technical assistance to the existing industries under Unidade de Direccao da Metalurgia (continuation of DP/MOZ/82/002)
IO/T/MET Mr. Iliev	J13208	SI/MOZ/87/802	Advisory services on rehabilitation of CIFEL foundry and metal workshops in Maputo
IO/T/ENG Mr. Belo	J13320	SI/MOZ/87/801	Assistance in fish packaging at PROPESCA (can manufacture)
IO/T/CHEM/PH Mr. Csizer	J13422	DP/MOZ/83/004*	Preparatory assistance for the establishment of a pilot plant for pharmaceuticals
IO/T/CHEM Mr. Judt	J13420	TF/MOZ/82/001*	Strengthening the sea salt production capacity of Mozambique
PPD/AREA/AFR	E02100	UC/MOZ/88/198	Technical assistance to the Directorate of Salt Industry (UDIS) - UNIDO consultations with counterpart agency
IPCT/II/PIP	G01101	UC/MOZ/87/025	Assistance in identification and formulation of industrial investment and rehabilitation projects

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of the NIGER

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DP/NER/85/007**	Extension de l'assistance à l'Office de Promotion de l'Entreprise Nigérienne (OPEN) (phase III) (continuation of DP/SM/NER/83/004)
IO/IIS/PLAN Mr. Richard	J12413	DP/NER/87/022*	Assistance au Plan d'appui à l'initiative privée et à la création d'emploi (PAIPCE) (in co-operation with IO/SD/TRNG)
IO/IIS/PLAN Mr. Richard	J12415	DP/NER/87/009*	Planification et promotion des industries liées à l'élevage
IO/T/AGRO Mr. Antinori	J13103	XP/NER/88/031	Production de produits alimentaires essentiels
IO/T/MET Mr. Nogueira da Silva	J13208	SI/NER/85/802	Technical investigations on the production of sponge iron for steel-making utilizing indigenous iron ores and coals in Niger
IO/T/CHEM Mr. Judt	J13420	SI/NER/88/801	Assistance à la production semi-industrielle du natron et du sel au Niger par les femmes
IO/T/CHEM Mr. Judt	J13427	SI/NER/88/802	Assistance technique pour le démarrage de l'unité de production de sel de TIDEKELT

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Federal Republic of NIGERIA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Pavlik	J12101	DP/NIR/83/021*	Federal Institute of Industrial Research, Industrial Information Centre (phase II of DP/NIR/75/069)
IO/IIS/INFR Mr. Kozlov	J12102	DP/NIR/78/001*	Assistance in textile testing and quality control (phase II)
IO/IIS/IMR Mr. Khan	J12206	DP/NIR/85/023*	Assistance to the new Nigerian Development Company
IO/T/AGRO Mr. Eräneva/Mr. Moll	J13102	SF/NIR/87/0G2	Diagnostic appraisal for rehabilitation of Kaduna Textiles Ltd.
IO/T/MET Mr. Somnay	J13210	DP/NIR/87/031**	Assistance to the National Metallurgical Development Centre, Jos
IO/T/CHEM Mr. Hagan	J13419	SF/NIR/86/001**	Assistance to the Cement Company of Northern Nigeria (CCNN), Sokoto, Nigeria
IO/T/CHEM Mr. Judt	J13427	DP/NIR/87/005*	Assistance to rural women engaged in salt processing
IO/SD/FEAS Mr. Rezek	J14101	DP/NIR/87/017*	Feasibility study on the establishment of a multi-purpose pesticide formulation pilot plant
IO/SD/FEAS Mr. Rezek	J14100	SF/NIR/88/001*	Studies on investment opportunities in selected industrial subsectors
PPD/AREA/AFR	E02101	DP/NIR/86/001	Preparation of industrial section of 4th country programme (1987-1991), programming mission
PPD/SPA/COOP/STF	E05201	SF/NIR/87/001	Project development facility for the Nigerian Industrial Development Bank (NIDB)
IPCT/DTT/TEC	G03300	DP/NIR/87/006*	Assistance to the National Office of Industrial Property (NOIP)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

RWANDESE Republic

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DP/RWA/84/006*	Assistance au développement industrielle du Rwanda (continuation of DP/RWA/75/011)
IO/IIS/INFR Mr. Zerezghi	J12105	UC/RWA/86/214	Assistance préparatoire dans l'établissement d'une industrie de cuir et d'articles en cuir (multifund to US/RWA/86/214)
IO/IIS/INFR Mr. Zerezghi	J12105	US/RWA/86/214	Assistance préparatoire dans l'établissement d'une industrie de cuir et d'articles en cuir (multifund to UC/RWA/86/214)
IO/IIS/PLAN Mr. Richard	J12415	DP/RWA/88/004*	Assistance à la gestion du développement industriel
IO/T/CHEM Mr. Biering	J13419	SI/RWA/85/803	Assistance à l'usine Rwandaise de pierres ornementales (URPO)
IO/T/CHEM/PH Mr. Wijesekera	J13422	DP/RWA/80/003*	Production de médicaments à base de plantes médicinales
IO/T/CHEM Mr. Judt	J13423	XP/RWA/88/042	Exploratory studies on papyrus and its suitability for solid paperboard manufacture
PPD/SPA/ECDC	E04101	XP/RWA/88/009	Study tour of two Rwandese specialists in the field of hides and skins industry to Sri Lanka

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Democratic Republic of SAO TOME AND PRINCIPE

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/IMR Mr. Hallett	J12207	DP/STP/88/003*	Assistance à la privatisation et à la promotion industrielle - première phase
IO/T/ENG Ms. Louvat	J13316	XP/STP/88/048	Assistance préparatoire pour la réorganisation de l'Atelier national de maintenance à Sao Tomé
IO/T/ENG Mr. Fürkus	J13318	SI/STP/88/801	Advisory services to the development of small hydropower
IO/T/CHEM Mr. Hagan	J13419	DP/STP/86/007	Industrie de la chaux et des matériaux de construction
IO/SD/TRNG Mr. Ramanantoanison	J14201	XP/STP/88/020	Programme modulaire de formation des cadres de l'industrie

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of SENEGAL

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/PLAN Mr. Richard	J12413	DP/SEN/85/006*	Assistance préparatoire au programme d'actions prioritaires pour l'industrie (plan d'investissement)
IO/IIS/PLAN Mr. Richard	J12413	DP/SEN/87/001**	Mise en oeuvre et d'approfondissement de la nouvelle politique industrielle
IO/T/AGRO Mr. Antinori	J13103	XP/SEN/88/049	Mango processing development (TCDC co-operation with Brazil)
IO/T/AGRO Mr. Antinori	J13103	SI/SEN/88/801	Plan de réorganisation et de restructuration de l'Institut de Technologie Alimentaire (ITA)
IO/T/ENG Mr. Seidel	J13312	SI/SEN/88/802	Assistance d'urgence en matière d'ingénierie à l'atelier mécanique de Dakar Marine
IO/T/CHEM/PH Ms. Quintero de Herglotz	J13422	DP/SEN/87/012*	Assistance à la formulation d'un programme de recherche-développement dans les domaines bio-médical et agro-industriel

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of SEYCHELLES

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/T/ENG Mr. Gürkök	J13317	US/SEY/86/141	Computer-aided electricity demand management and supply planning (phase I) (related to SI/SEY/88/801)
IO/T/ENG Mr. Gürkök	J13317	SI/SEY/88/801	Assistance to the Government of Seychelles to identify and assess strategies to control electricity demand (related to US/SEY/86/141)
IO/SD/FEAS Mr. d'Adesky	J14101	XP/SEY/88/072	Training seminar on financial and economic evaluation of industrial investment projects including the application of the UNIDO Computer Model for Feasibility Analysis and Reporting (COMFAR)
IO/SD/FEAS Mr. d'Adesky	J14101	UC/SEY/88/181	Opportunity study for the industrial uses of coconut

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of SIERRA LEONE

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Hisakawa	J12105	DP/SIL/86/002*	Growth centre programme
IO/IIS/INFR Mr. Hisakawa	J12105	DP/SIL/87/003*	Establishing an industrial development and financial organization for promotion of the small and medium-scale enterprise sector in Sierra Leone
IO/IIS/IMR Mr. Bassili	J12206	UC/SIL/86/317	Management assistance to Bush and Town Co. Ltd.
IO/IIS/IMR Mr. Farah	J12207	SI/SIL/88/801	Reactivation of the jute bag factory
IO/IIS/PLAN Mr. Eckert	J12413	DP/SIL/83/001**	Industrial development promotion and planning (phase III)
IO/T/ENG Mr. Fürkus	J13318	XP/SIL/88/061	Demonstration of industrial low temperature application of solar energy

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

SOMALI Democratic Republic
(1)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Chanana	J12103	XP/SOM/88/093	Assistance to the small-scale industries
IO/IIS/IMR Mr. Farah	J12206	DC/SOM/87/003	Establishment of industrial development information service (multifund to DP/SOM/87/003)
IO/IIS/IMR Mr. Farah	J12206	DP/SOM/87/003*	Establishment of industrial development information service (multifund to DC/SOM/87/003)
IO/IIS/IMR Mr. Farah	J12207	DU/SOM/86/015	Service of Messrs. Ross and De-Groot (under completion)
IO/IIS/IMR Mr. Farah	J12207	DC/SOM/88/007	UN volunteer support for rehabilitation of public industrial enterprises (multifund to DP/SOM/88/007)
IO/IIS/IMR Mr. Farah	J12207	DP/SOM/88/007*	UN volunteer support for rehabilitation of public industrial enterprises (multifund to DC/SOM/88/007)
IO/IIS/IMR Mr. Farah	J12207	DC/SOM/88/008	Industrial maintenance management (multifund to DP/SOM/88/008)
IO/IIS/IMR Mr. Farah	J12207	DP/SOM/88/008*	Industrial maintenance management (multifund to DC/SOM/88/008)
IO/IIS/IMR Mr. Farah	J12207	XP/SOM/88/047	Project management seminar (under completion)
IO/IIS/IMR Mr. Farah	J12208	DC/SOM/86/034	Establishment of an Industrial Consultancy Unit (multifund to DP/SOM/86/034)
IO/IIS/IMR Mr. Farah	J12208	DP/SOM/86/034**	Establishment of an Industrial Consultancy Unit (multifund to DC/SOM/86/034)
IO/T/AGRO Mr. Buljan	J13104	SI/SOM/87/801	Assistance to the leather industry
IO/T/CHEM Mr. Judt	J13420	SI/SOM/88/801	Development of existing salt-works in the Somali Democratic Republic
IO/SD/FEAS Mr. Rezek	J14101	UC/SOM/87/153	Pre-feasibility study for the production of agricultural tools, implements and simple equipment

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

SOMALI Democratic Republic
(2)

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
PPD/SPA/ECDC	E04100	XP/SOM/87/003	Solidarity ministerial meeting for co-operation in the industrial development of the Somali Democratic Republic - preparatory assistance
PPD/SPA/ECDC	E04101	UC/SOM/87/145	Expert service on technical co-operation between Somalia and India in the field of wind mills for water pumping (in co-operation with IPCT/DTT/TEC) (multifund to UD/SOM/87/145)
PPD/SPA/ECDC	E04101	UD/SOM/87/145	Expert service on technical co-operation between Somalia and India in the field of wind mills for water pumping (in co-operation with IPCT/DTT/TEC) (multifund to UC/SOM/87/145)

* Lar· ·ale project (= total allotment $150,000 or above)
** Tot. ·ment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of the SUDAN

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Pavlik	J12101	XP/SUD/88/067	Sudanese Industries Association data unit
IO/IIS/PLAN Mr. Akhvlediani	J12413	US/SUD/87/142	Plan directeur pour le développement des industries mécaniques
IO/IIS/PLAN Mr. Eckert	J12414	DP/SUD/80/006	Industrial survey of the Sudan
IO/T/CHEM Mr. Williams	J13424	UC/SUD/86/026	Field test programme for the production of charcoal fuel from cotton stalks using small-scale, decentralized techniques (multifund to XP/SUD/87/050)
IO/T/CHEM Mr. Williams	J13424	XP/SUD/87/050	Field test programme for the production of charcoal fuel from cotton stalks using small-scale, decentralized techniques (multifund to UC/SUD/86/026)
IO/SD/FEAS Mr. Rezek	J14102	DP/SUD/85/011*	Investor advisory assistance service
IO/SD/FEAS Mr. Rezek	J14102	TF/SUD/86/001	Associate expert (Mr. Fanoe)
IO/SD/FEAS Mr. Rezek	J14102	TF/SUD/86/002	Associate expert (Mr. Davidsen)
IO/SD/FEAS Mr. Rezek	J14103	SF/SUD/88/001	Assistance to the Industrial Research and Consultancy Centre (IRCC) in the procurement of personal computer and accessories
IO/SD/FEAS Mr. Rezek	J14103	XP/SUD/88/019	Seminar for the Industrial Research and Consultancy Centre (IRCC) on the application of the Computer Model for Feasibility Analysis and Reporting (COMFAR)
IO/IIP Mr. Anestis	J19200	SF/SUD/86/003*	Training component of the Sudan Sugar Rehabilitation Project (phase I - 1988)
IO/IIP Mr. Anestis	J19200	XP/SUD/88/100	Visit to UNIDO of Mr. Badr El Din Yousif Habbani, Chairman of the Sugar Project Implementation Committee at the Ministry of Industry and Mr. M. Ali El Fadlabi, Director of the Sennar Sugar Training Centre

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

TOGOLESE Republic

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Goubet	J12102	DP/TOG/86/013	Assistance dans le domaine de la normalisation et du contrôle de qualité
IO/IIS/PLAN Mr. Richard	J12413	DP/TOG/84/015*	Assistance à l'identification et au développement des investissements (multifund to SM/TOG/84/015)
IO/T/AGRO Mr. Antinori	J13103	SI/TOG/88/801	Assistance à la biscuiterie "La Pampa"
IO/T/ENG Mr. Seidel	J13312	CD/TOG/83/C01*	Assistance to UPROMA (multifund to DP/TOG/83/004)
IO/T/ENG Mr. Seidel	J13312	DP/TOG/83/004**	Assistance à l'Unité de production de matériel agricole (UPROMA) (multifund to CD/TOG/83/C01)
IO/T/CHEM Mr. Hagan	J13419	SI/TOG/88/802	Industrie de la chaux
IO/T/CHEM/PH Mr. Wijesekera	J13422	XP/TOG/88/028	Mise à jour d'études sur la fabrication de médicaments à partir de plantes (updating studies on the processing of herbal medicines)
IO/SD/FEAS Mr. Klykov	J14101	XP/TOG/88/060	Assistance pour la définition des termes de référence d'une étude de pré-investissement d'un chantier naval de réparation au Port de Lomé

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of TUNESIA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Nickels	J12103	DP/TUN/86/012	Application de la méthode d'Analyse de la Complexité Technologique (ACT) pour le développement de l'industrie electro-mécanique tunisienne
IO/IIS/INFR Mr. de Crombrugghe/Ms. Gregor	J12104	DP/TUN/86/007*	Assistance à l'établissement d'une Banque de Données Industrielles
IO/IIS/INFR Mr. de Crombrugghe	J12104	DP/TUN/86/008*	Assistance à la Bourse de sous-traitance nationale (related to DP/RAB/86/001)
IO/T/AGRO Mr. Antinori	J13100	UC/TUN/88/004	Transformation et valorisation des produits de la pêche et de l'aquaculture en Tunisie
IO/T/ENG Mr. Gürkök	J13313	UC/TUN/87/244	Development of management capabilities of the 'Centre Technique des Industries Mécaniques et Electriques (CETIME) (see also DP/TUN/86/003)
IO/T/ENG Mr. Seidel	J13316	DP/TUN/86/003*	Unité de conception et de fabrication assistée par ordinateur de moules au sein du CETIME/DO - CFAO (see also UC/TUN/87/244)
IO/T/ENG Mr. Belo	J13320	DU/TUN/87/008	Amélioration et maîtrise de la qualité de l'emballage pour l'exportation
IO/T/CHEM/PH Ms. Quintero de Herglotz	J13422	DP/TUN/86/010**	Mise en oeuvre de cinq programmes de recherche orientée au sein du Centre de biotechnologie (IHRST), Sfax, Tunisie
IO/SD/FEAS Mr. d'Adesky	J14102	DU/TUN/87/003	Renforcement des activités de l'Office de Développement du Sud

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of UGANDA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Tourou	J12103	DU/UGA/87/002	Programme support project
IO/IIS/IMR Mr. Farah	J12207	DP/UGA/83/001*	Technical assistance to the Ministry of Industry
IO/IIS/IMR Mr. Farah	J12207	BR/UGA/87/001*	Public industrial enterprises secretariat
IO/IIS/PLAN Mr. Eckert	J12413	BR/UGA/84/003*	Strengthening the Planning Unit of the Ministry of Industry
IO/T/AGRO Mr. Galat	J13103	DP/UGA/81/001*	Rehabilitation of Mukisa Foods Limited (under completion)
IO/T/MET Mr. Crowston	J13208	DP/UGA/84/018*	Assistance to the Ministry of Industry/Iron and Steel Industry
IO/T/ENG Mr. Gladilov	J13312	DP/UGA/86/015**	Manufacture of agricultural tools, implements and farm machinery
IO/SD/FEAS Mr. Klykov	J14101	XP/UGA/88/006	Feasibility study for the establishment of a container glass factory (in co-operation with IO/T/CHEM)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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United Republic of TANZANIA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Pavlik	J12101	DP/URT/81/037*	Establishment of the Tanzania Industrial Research and Development Organization (TIRDO) (phase II) (multifund to SM/URT/81/037)
IO/IIS/INFR Mr. Zerezghi	J12105	DP/URT/81/038*	Assistance to the industrial estate in Zanzibar
IO/IIS/IMR Mr. Farah	J12208	DP/URT/86/027	Assistance for strengthening the industrial management capabilities
IO/IIS/IMR Mr. Bassili	J12209	XA/URT/88/667*	Establishment of furniture/joinery and schools exercise book workshops: co-operation between Turkey and Tanzania
IO/T/AGRO Mr. Eräneva	J13102	DP/URT/78/018**	Strengthening of the National Textile Corporation (TEXCO)
IO/T/AGRO Mr. Eräneva	J13102	US/URT/85/229**	Production of sisal bags - assistance in production management and machinery maintenance
IO/T/AGRO Mr. Berg	J13104	IW/URT/82/W02	Establishment of a leather goods unit, Isanga, Mbeya
IO/T/MET Mr. Buckle	J13209	DP/URT/80/022*	Establishment of a Small Industries Development Organization (SIDO) foundry with integrated mechanical workshops
IO/T/CHEM/PH Ms. Quintero de Herglotz	J13422	DP/URT/77/013*	Assistance in the establishment of a pharmaceutical plant in Zanzibar
IO/T/CHEM/PH Mr. Wijesekera	J13422	DP/URT/81/026*	Assistance for the production of plant derived pharmaceuticals
IO/T/CHEM Mr. Sugavanam	J13426	SI/URT/86/875	Expert assistance for the establishment of a pesticide pilot plant under a soft loan advance from the Italian Government

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
(approved = PAD issued)

Republic of ZAIRE

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Cannas	J12103	DP/ZAI/81/014**	Développement des petites et moyennes entreprises (PME) zaïroises, spécialement dans la région du Kivu (Associated Agency: WTO)
IO/IIS/PLAN Mr. Richard	J12413	DP/ZAI/86/008**	Planification et promotion du développement industriel

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of ZAMBIA

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Pavlik	J12101	DP/ZAM/88/028	ZIMCO technology audit - preparatory assistance
IO/IIS/INFR Mr. Goubet	J12102	DP/ZAM/88/009*	Establishment of metrology facilities and laboratory accreditation scheme for the Zambia Bureau of Standards
IO/IIS/INFR Mr. Hisakawa	J12103	DP/ZAM/82/018*	Assistance to the Small Industry Development Organization (SIDO)
IO/IIS/INFR Mr. Hisakawa	J12103	DP/ZAM/86/010	Support to the development of the small-scale industrial sector in Zambia - preparatory assistance
IO/IIS/INFR Mr. Hisakawa	J12105	UC/ZAM/86/176	Rural industry development
IO/IIS/PLAN Mr. Akhvlediani	J12415	DP/ZAM/85/012*	Establishment of an industrial planning unit in the Ministry of Commerce and Industry
IO/T/MET Mr. Kikutake	J13208	DP/ZAM/88/025	Preparatory assistance for the establishment of a pilot and demonstration sponge iron plant - based on direct reduction of iron ores using coal as reductant
IO/SD/FEAS Mr. Suzuki	J14101	SI/ZAM/88/801	Assistance in the establishment of a copper fabrication plant in Zambia (in co-operation with IO/T/MET)
IO/SD/FEAS Mr. Suzuki	J14102	DP/ZAM/85/004*	Assistance to the Industrial Development Corporation (INDECO) project evaluation unit
IO/SD/FEAS Mr. Suzuki	J14102	DP/ZAM/85/007*	Assistance to the investment policy department of the National Commission for Development Planning (NCDP)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Approved and/or Operational Technical Co-operation Projects
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Republic of ZIMBABWE

Backstopping Responsibility	All.Acc.Code	Project Number	Project Title
IO/IIS/INFR Mr. Kozlov	J12102	US/ZIM/84/232*	Strengthening of the Standards Association of Central Africa (SACA)
IO/IIS/INFR Mr. Antonio	J12106	DP/ZIM/83/016*	Rural-based small industries support services - Small Enterprise Development Corporation (SEDCO) (phase II of DP/ZIM/80/020)
IO/IIS/INFR Mr. Antonio	J12106	TF/ZIM/87/001	Associate expert (Mr. Breitwieser)
IO/T/MET Mr. Iliev	J13208	DP/ZIM/86/004*	Assistance to ZISCOSTEEL in improvement of metallurgical quality control
IO/T/MET Mr. Iliev	J13208	DP/ZIM/87/001*	Assistance in modernization of electrical/automatical and technological equipment of the bar rod rolling mill at ZISCOSTEEL (continuation of DP/ZIM/85/007)
IO/T/MET Mr. Iliev	J13208	SI/ZIM/88/801	Assessment of the second-hand Steckel hot strip mill at Surahammar
IO/T/MET Mr. Iliev	J13210	DG/ZIM/86/023*	Establishment of a physical metallurgy section at the Department of Metallurgy
IO/SD/FEAS Mr. Loeser	J14101	US/ZIM/87/117*	Feasibility study for increasing the oil production capacity (in co-operation with IO/T/AGRO and IPCT/II)
IO/SD/FEAS Mr. Loeser	J14101	US/ZIM/87/243	Feasibility study for the production of chrome tanning salts (in co-operation with IO/T/AGRO and IO/T/CHEM)
IO/SD/TRNG Ms. Tassew	J14203	UC/ZIM/86/261	Energy auditing training course for Zimbabwe (multifund to DP/ZIM/88/005 and EA/ZIM/88/E01)
IO/SD/TRNG Ms. Tassew	J14204	EA/ZIM/88/E01	Energy auditing training course for Zimbabwe (multifund to UC/ZIM/86/261 and DP/ZIM/88/005)
IO/SD/TRNG Ms. Tassew	J14204	DP/ZIM/88/005	Energy auditing training course for Zimbabwe (multifund to UC/ZIM/86/261 and EA/ZIM/88/E01)

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

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* Also available in French.

** Restricted.