



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

16963

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

PPD.
3 August 1988
ENGLISH

PROGRAMME FOR THE REHABILITATION OF
AFRICAN MANUFACTURING INDUSTRY
Volume 1

The regeneration of African industry - Major issues*

Background document to the programme

prepared by
Regional and Country Studies Branch
Industrial Policies and Perspectives Division
Department for Programme and Project Development

186

* The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Mention of company names and commercial products does not imply the endorsement of UNIDO. This document has been reproduced without formal editing.

Preface

This study, Volume 1 in the series "Programme for the Rehabilitation of African Manufacturing Industry", outlines major issues and serves as a background document for the subsequent volumes in the series. Volumes 2 and 3 in the series are now being finalized. Volume 2 contains profiles of all African countries - these are to serve as "basic fact sheets" for the formulation of rehabilitation projects. Volume 3 contains the results of a field survey of the Zambian manufacturing sector, with emphasis on the rehabilitation of selected plants in the agro-industry.

The studies have been prepared by UNIDO's Regional and Country Studies Branch. The present volume was written in conjunction with Hjalmar Brundin and Paul Hesp, UNIDO consultants.

Contents

<u>Chapter</u>	<u>Page</u>
Preface	i
Contents	ii
Introduction	iii
1 AFRICAN INDUSTRY IN THE 1990S AND THE CONCEPT OF REGENERATION ..	1
1.1 From rehabilitation to regeneration	i
2 EXTERNAL OBSTACLES TO MANUFACTURING PRODUCTION	4
2.1 The global environment	4
2.2 The debt issue	5
2.3 The policy and political environment	11
2.4 Infrastructural shortcomings	13
2.5 Inter-sectoral linkages	15
3 THE PRESENT STATE OF AFRICAN INDUSTRY	16
3.1 General trends	16
3.2 Country groups	16
3.3 Major subsectors	18
4 MAJOR INTERNAL OBSTACLES	21
4.1 Weak inter-industry linkages	21
4.2 Branch-specific problems	21
4.3 Plant-level problems	23
5 ISSUES FOR FUTURE ACTION	25
5.1 Elements of industrial regeneration in Africa	25
5.2 UNIDO's role	26

Introduction

As part of the programme of the Industrial Development Decade for Africa, UNIDO's Regional and Country Studies Branch (REG) is preparing a series of studies determining both the major problems of African manufacturing and the potential for regenerating the sector. The aim is to outline policies and measures that may result in overall improvements and to identify individual plants for rehabilitation assistance. The present document presents, in brief, the major problems that have been identified, and an approach towards solving these.

In virtually all African countries, industry has been hit by two major, connected problems: stagnating or slowly growing markets and a debt related shortage of foreign exchange. Most African countries are still largely dependent on raw material exports. Decreasing world market prices have therefore strongly affected the national economies, and hence the domestic markets for industry. International markets are not growing fast enough to provide a sufficiently large niche for African industry. The decrease in foreign exchange earnings, combined with the mounting arrears in debt repayments, has made it very difficult to supply Africa's highly import-dependent industries with essential inputs and spare parts. The prospects for strong market expansion and a rapid solution of the debt/foreign exchange problem are thus dim. It is unlikely that African manufacturing will experience a strong, general expansion in the foreseeable future, although the sector is beginning to play a major role in some of the economies.

There are sharp contrasts between African countries and sub-regions in terms of industrial development levels and prospects. The North African nations, e.g., with their relatively high development levels and strong ties to European markets, are in a better position to pursue their industrialization than the landlocked Sahel countries, where development of the domestic rural economies will be a determining factor for the scope of future industrial development.

The prospects of, and constraints to, industrial development must be seen in the context of the factors mentioned above and of other economic and political issues that constitute the environment in which industry operates. Accordingly, the approach chosen for the analysis of rehabilitation needs is top-down: the major constraining factors in the industrial environment are set first. Then, a brief analysis is made of the manufacturing sector, after which an attempt is made to pinpoint problems at the branch and plant level. Finally, possible forms of remedial action are formulated.

In a number of cases, plant rehabilitation may be the solution to an industry's problems; the situation in many African countries, however, is such, that rehabilitation without the implementation of other support measures - infrastructural improvements, policy changes, stimulation of and

closer linkages with agriculture, etc. - will only lead to short-term results. In other words, plant rehabilitation should take place within a framework of measures contributing to the regeneration of the manufacturing sector as a whole.

This document first outlines the concepts of industrial regeneration and rehabilitation to provide a setting for the ensuing discussion, which follows the top-down approach. A second chapter reviews the major external factors (both economic and political) that have contributed to the present state of the African manufacturing sector. Chapter three presents a brief sketch of the sector, differentiating between country groups and subsectors. Chapter four focuses on the obstacles to development that are internal to the sector. Chapter five, finally, suggests actions to be taken and UNIDO's possible involvement in these.

Chapter 1

African industry in the 1990s and the concept of regeneration

African industry needs to find ways towards renewed growth. However, growth will not come about automatically. The concerted efforts of all governments concerned and international agencies, including UNIDO, will be of decisive importance. The underlying causes of the present situation in African industry will be elaborated upon in the following chapters of this report. The severe nature of the problem makes it clear that self-sustained growth in African manufacturing will not be achieved during this decade. Modalities for assistance, therefore, will have to be based upon a long-term approach. A strategy for the 1990s is needed. Before going into the details of an approach along the lines of regeneration, the concept as such needs some explanation.

1.1 From rehabilitation to regeneration

Since the proclamation of the Industrial Development Decade for Africa, the term rehabilitation has come very much into vogue. As often happens when new code-words appear on the scene - especially on the international scene - they rapidly lose their possible original distinct and clear connotation. In order to avoid further confusion, therefore, the term "regeneration" has been adopted in this report instead of rehabilitation. In order to clarify the meaning of this concept, it may be useful to begin one analytical step earlier, i.e., to consider the basic alternative strategies for solving the problems facing African industry.

Basically there exist two distinct approaches to the problem at hand, industrial growth:

According to the first approach, the emphasis should be on industrial growth rather than on industrial rehabilitation, i.e. trying to rehabilitate existing industrial entities would be inferior as an economical alternative to investment in new enterprises. Rehabilitation simply implies throwing "good" money after "bad" money. In the worst case, the mistakes made previously would be repeated. At best, the economically viable enterprises within the African manufacturing sector would be identified and rehabilitated. However, the resulting industrial structure would not be that best suited for the present and future conditions facing African industry.

According to the second approach rehabilitation is the best way of securing economic use of existing resources. It would be a gigantic capital waste not to make at least an effort and try to rehabilitate African industry. After all, so it is argued, the principal problem is the adverse external environment of the 1970s, which has left many enterprises starved of foreign exchange. The true challenge, then, is to identify which enterprises are best suited for rehabilitation, i.e. where scarce foreign exchange will be most efficiently spent for rehabilitation purposes.

Rehabilitation has been given a very broad definition in UNIDO's policy papers on the subject, indeed sufficiently broad to be regarded as a synthesis of two different stand-points. Quoting two policy papers will clarify this:

"Rehabilitation must be a dynamic, forward-looking concept. To restore industry back to what it was may not be sufficient. (This) may lead the industry back to what it was before the rehabilitation exercise started which could have been in the doldrums. After all, inability to cope with changes in external conditions may have been the cause of the industry's poor performance in the first place."^{1/}

The many aspects of the concept of industrial rehabilitation are clarified in the description of the programme for rehabilitation. Rehabilitation is not just the technical rehabilitation of men and machines:

"In addition to technological, organizational and managerial aspects, there are economic, financial, marketing, design, and engineering aspects. It should be understood to refer to the restructuring, both at a subsector level and at the level of a company or industrial plant, taking into account the economic and financial aspects, as well as the general and technical management structure, processes and product technology, product 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. It is to this end that a systematic programme of rehabilitation would need to be launched."

The problem of formulating a systematic approach to rehabilitation has resulted in the "top-down-approach" advocated by Regional and Country Studies Branch (REG). It has its conceptual basis in the conviction that the only meaningful unit of analysis is a country.

In order to acquire an insight into the nature and extent of the problems of African industry, REG has prepared country briefs on all African countries. These are now being followed by in-depth diagnoses of a selected number of countries. In accordance with this approach, the basic concept has been changed from rehabilitation to regeneration.

There are at least three good reasons for using regeneration as the central concept rather than rehabilitation:

Firstly, despite its wide interpretation, rehabilitation is primarily a concept derived from a plant-level approach to the problem at hand (industrial growth). In other words, while the actual approach is "top-down", the conceptual approach has remained "bottom-up". Changing the concept to regeneration is thus a very logical result of the chosen work approach.

Secondly, and more importantly, the top-down approach stresses the importance of the environment in which manufacturing operates. Important aspects in the global, regional as well as the 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 environment, rather than by measures of assistance directly at the plant level.

1/ "Indicators of the rehabilitation of African agro-based manufacturing industry: a suggested approach"; PPD/IPF/REG, 14 February 1988.

Thirdly, in particular and extreme cases "industrial rehabilitation" may boil down 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.

Chapter 2

External obstacles to manufacturing production

There is a series of explanations for the depressed state of Africa's manufacturing industry which are external to manufacturing as such. Exploring the scope for restored growth and full use of the potential for industrial development will encompass analyzing at least the major constraining factors. Some of those constraints are clearly beyond the influence of the countries themselves. In this category fall events pertaining to the global environment in which African manufacturing operates. At the domestic level are the factors controlled by governments, such as fiscal, monetary and trade policies. Also found at the national level are factors such as 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. Between these two extreme categories the single most serious constraint is found, the debt issue, which, therefore, is at the heart of the matter in more than one sense. Before dealing with the debt issue directly it is useful to touch briefly upon the global environment and try to pinpoint which recent events and existing mechanisms work against Africa's manufacturing.

2.1 The global environment

Macroeconomic developments in the industrialized countries influence manufacturing in developing countries in several ways. Firstly, exchange rate fluctuations affect trade volumes and the size of debt burdens. The sharp fluctuations of the US dollar have in recent years been a major issue in international financial developments. A rising US dollar may increase export revenues of primary commodities priced in dollars. However, it 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 haphazardous.

Secondly, 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.

Thirdly, 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 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. International prices for most primary commodities have fallen, in some cases 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 and related products. Oil also plays an important role in the exports of Egypt, Kenya, Mozambique, Tunisia and Zaire. Oil prices were in 1986 in real terms 44.4 per cent of the 1980 level. A United Nations price index for all the exports from sub-Saharan Africa shows that 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 then would 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 is constrained not so much by prices as by lack of markets. The "new protectionism" in world trade mainly consists of non-tariff trade barriers which often are difficult to identify in detail. The tendency is particularly discouraging for infant industries in developing countries, trying to make a break-through on world markets. Lack of access to world markets is not a major explanation for the present state of Africa's manufacturing. However, unless the protectionist tendency is reversed, it 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 regarded as 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 connexion 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 case of many oil exporting countries, as a way of increasing the rate of growth 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.

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. Thus, Egypt alone accounts for over 20 per cent of total African debt. Other Northern African countries are also major debtor countries; Algeria's debt is

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 various years for various countries. The figures should, therefore, be taken only as very rough approximations of the true magnitudes.

approximately \$25 billion and Morocco's is around \$13 billion. The only sub-Saharan country with a total debt of that magnitude is Nigeria, which has a foreign debt of approximately \$26 billion. Egypt, Algeria and Nigeria together account for almost half of the continent's total debt.

Africa's share of the debt of all developing countries is around 16 per cent. Although this share, as well as the size of the African debt in absolute figures, may seem modest in the international perspective, the debt issue is very much at the centre of economic policy making in countries across the African continent. This becomes even more understandable when looking at the size of the debt and the debt service in relative terms.

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.

The magnitude of Africa's debt problem becomes clearer when looking at the debt to export ratio. For the whole continent this is approximately 300 per cent in 1987. All developing countries had a debt to export ratio in 1986 of some 180 per cent. For the countries south of Sahara the ratio is about 325 per cent, while North Africa's ratio of around 190 per cent is more in line with the aggregate. Again the variation is considerable across countries. Sudan and Tanzania have the highest ratios of over 1,500 per cent. Burkina Faso and Niger have debt to export ratios approaching 1,000 per cent. Among the major debtor countries Egypt has the highest debt to export ratio with over 900 per cent, while Algeria and Nigeria for 1987 had estimated debt to export ratios of around 300 per cent, i.e. their debts corresponded to three years of export revenues (at existing oil prices, see below).

Absent in debt statistics is another leading oil exporting country: Libya. Although Libya has accumulated substantial trade debts over the past few years, it has no officially recorded foreign debt.

The debt service ratio, i.e. interest and amortization payments as a percentage of export earnings, was before debt relief some 33 per cent for the whole continent in 1986. The ratio was 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 their 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 is the countries with large debts and debt burdens but with sizeable manufacturing sectors and 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

<u>\$200 GDP per capita</u>		<u>\$200-\$300 GDP per capita</u>		<u>\$300-\$400 GDP per capita</u>	
Country	Total debt (million US\$)	Country	Total debt (million US\$)	Country	Total debt (million US\$)
Equatorial Guinea	152	Benin	890	Cape Verde	113
Guinea-Bissau	307	Gambia, The	273	Kenya	4,504
Malawi	1,114	Madagascar	2,899	Liberia	1,303
Mali	1,716	Niger	1,459		
Mozambique	n.a.	Somalia	1,580		
Zaire	n.a.	Sudan	8,272		
		Uganda	1,193		
		United Republic of Tanzania	3,955		

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. Also they clearly have manufacturing sectors suffering 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 2.1.

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, and particularly for those of the sub-Saharan region, there has been a sharp fall in financial flows. A calculation by the United Nations Secretariat for the Advisory Group on Financial Flows for Africa shows that net credit flows in 1985-87 were \$2.4 billion lower than 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.

Debt reschedulings peaked in 1984, when a world total of \$104.4 billion worth of debts was rescheduled, \$100.5 billion by private banks and \$3.9 billion by official creditors. In connexion 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 to 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. A few countries, e.g. Angola and Guinea-Bissau, have rescheduled only bilaterally with major creditors. Some new finance is forthcoming in connexion with those debt reschedulings. However, part of the

recorded growth of the debt will consist of arrears and interest on arrears that are capitalized in connexion 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.

A reflection of the fact that financial flows generally have decreased, is that 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 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.

The effects of the debt burden on manufacturing are manifold. Some of the more important are:

- lack of necessary imported inputs and spare parts;
- depressed demand for manufacturing output;
- reduced number of options in economic policy making.

Firstly, this report often refers to the import-dependence of African manufacturing for inputs, spare parts and capital goods. One facet of the problem is thus that the lack of foreign exchange resulting from large indebtedness simply prevents production, regardless of whether production would be economically viable. In addition, the physical and social cost will be staggering. Unemployment, often already high, increases 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 maintenance of basic infrastructure jeopardized.

Secondly, manufacturing is suppressed also by low demand. Even for those industries that are able to maintain production in spite of the overall shortage of foreign exchange, the debt issue brings mainly negative effects. One could possibly nurture the notion that the lack of foreign exchange and resulting import squeeze could result in the emergence of new import substitution industries. However, there are no indications of this taking place in any of the African countries. The process of switching from import dependence to locally-based production does not seem to have come very far. This is less a technical issue than a result of the contracting markets. Although some exceptions exist, the general finding is that the fall in aggregate demand, as one result of the debt crisis, has led to lower production for manufacturing in general, including branches that are less import dependent.

Thirdly, the heavy debt service burden seriously curtails the number of policy options governments can consider in their planning. Moreover, the fact that the policy-making process focuses on the debt issue to such an extent threatens to result in overlooking crucial development aspects, especially in the long-term. 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.

From the point of view of manufacturing, especially from that point of view of regenerating industrial production, it is of crucial importance that adequate access to foreign exchange be secured including commercial credits. Presently, however, there are few countries in Africa where this is the case. As mentioned earlier, private banks have all but stopped their balance-of-payment lending.

Government-supported export credits are still a possibility, but also have become scarcer. In terms of access to medium and long-term government-supported export credits, African countries are much worse off than in the 1970s. As illustrated below, most countries have access to short term credits (up to one year), but only on a limited scale to medium and long-term credits. The huge losses incurred on export credits 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.

A study by the International Monetary Fund (IMF) in 1984 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 that respect. This improvement has benefitted a few African countries, e.g. Côte d'Ivoire, Ghana and Morocco.

For the average African country, medium- and long-term export credits are rarely available from other countries than those providing bilateral aid and political support. It follows that there does not exist any objective listing of African countries in terms of access to export credits.

With that important caveat in mind it may be of interest to illustrate how an export credit, or export credit guarantee agency may rank the African countries.

Firstly, many agencies - as commercial banks also may do - divide all countries into different groups, which in broad terms will reflect the credit ranking of the countries. Far from all agencies do this, but those who do typically work with three or four different premium groups. The two "better" groups will be used for old and some newly industrialized countries plus some small and very rich oil countries. Developing countries make up the lower group(s). Among the agencies that work with up to three premium groups all African countries would be in the highest premium group. In the few cases when there are four or more premium groups, Algeria, Botswana and possibly Tunisia would be countries in the better group.

Secondly, within the lower group there are still large differences in terms of access to export credits. This can roughly be illustrated by subdividing the African countries into three groups:

- (a) Countries with very limited access even to short term credit and consequently more or less confined to foreign aid as their only source of foreign finance: Because short term credits are so vital to economic activity of countries, short term debt is ususally not rescheduled. Official as well as private creditors therefore generally maintain these flows; cutting them off is a very unusual and harsh measure. Often it is a temporary measure, taken in connexion with on-going rescheduling negotiations. Among the African countries this group could include, for example, Congo, Equatorial Guinea, The Gambia, Guinea-Bissau, Guinea, Liberia, Mozambique, Sierra Leone, Somalia, Sudan, Tanzania, Uganda and Zambia. Many agencies will include Nigeria in this category but would be quick to change cover policies at any sign of improvement in this huge and potentially important country's payment record and/or economic fortunes.
- (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, total country limit or against premium. This group would include all countries not belonging to group (a) or (c) which would be 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 for the 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. It is also in the context of this category of countries that special political relations have an impact. For example, France's special relations with most of its former colonies will be reflected in some countries having access to French export credits only. Egypt has special political relations with United States and its allies. As a result, and despite Egypt's severe debt problems, many Western countries maintain within the African context relatively generous flows of export credits to Egypt.

It may seem that the current trend with regard to the debt issue is mostly negative for the developing countries; however, this is not true of all developments. On the positive side there are several developments to be noted. Firstly, the Paris Club of official creditors has extended grace as well as amortization periods in recent rescheduling agreements, for both typically from 5 to 10 years. As the first African country, Côte d'Ivoire has been granted a Multi Year Rescheduling Agreement (MYRA) by the Paris Club. The definition conditionality applied by the Paris Club is being reviewed and a case is being made to change criteria. For example, the United States is arguing for the introduction of some measure of "structural change" as a criterion. However, the problem of high interest rates remains unresolved in the Paris Club, despite arguments by Sweden and the United Kingdom in favour of some form of interest rate relief in reschedulings with poor countries.

Secondly, there is closer co-operation between the IMF and the World Bank (IBRD) with respect to economic recovery programmes. So-called Policy Framework Papers (PFPs) are prepared jointly with the country in question, whereby emphasis is given to long-term growth and short-term social and income distributional aspects.

Thirdly, 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 co- and parallel financing of development projects.

Fourth, there is a growing international consensus that special arrangements have to be made for the poorest countries. Interest rate capping and capitalization has been mentioned. Among the various means of reducing the size of the debt there is a whole series of measures discussed and sometimes also tested. The most common are:

- securitization of debt, i.e. the conversion of debt to low risk financial instruments denominated in local currency;
- debt-equity swaps, i.e. the conversion of debt to risk bearing equity capital in the debtor country. This is the most common form of swap, tried in a number of Latin American countries. In all swaps the debt is traded at a discount via the secondary market. Other swaps include debt-export swaps (Peru), debt-nature swaps (Bolivia and Ecuador), debt-aid swaps (Bolivia) and debt-education swaps (Bolivia and Peru).
- debt-buy-back schemes also take advantage of the discount existing on the secondary loan market; in case aid is used for financing, they are virtually the same as debt-aid swaps, although the techniques for doing the transaction differ.

For African countries debt-aid swaps or aid financed debt-buy-back schemes are the most appropriate methods to ease the debt burden and take advantage of the discount on the secondary market. To date many donors have simply forgiven some of their debts, i.e. applied debt-forgiving schemes, but then the market depreciation of the debt cannot be turned into a financial asset in the debtor country. Debt-equity swaps have not yet been tried in any African country. It could possibly be an alternative in Egypt and Morocco, but within the foreseeable future not in other African countries.

2.3 The policy and political environment

The international community often finds reason to remind developing countries of their policy shortcomings and failures. As part of a political process that is understandable. However, the final verdict on where the blame belongs for Africa's dismal development performance up to date, the responsibility for the policies and their impact, may well be reserved for history. In this context it suffices to note that the policies actually pursued often have been looked upon as reasonable at the time they were instigated. 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 kept increasing.

International evidence suggests that growth in manufacturing is easiest and maybe even 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 pains and costs of adjustment has 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 reduce government ownership and control over manufacturing, and promoting private domestic and foreign investments in manufacturing, promote small-scale industries based on local raw material and measures designed to restore internal and external balance in the economies. Foreign exchange reforms, reduced budgetary spending and tighter monetary policies are foremost among those reforms.

As mentioned earlier some of the attempted reform programmes have met with difficulties. One set of explanations is the often too ambitious programmes, too drastic changes in too short time periods.

Another set of explanations for slow or no progress in the reform programmes is the generally weak institutional structure from which African countries suffer. Reforms have been stalled and diffused because the administrative apparatus 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 is it sufficiently strong to ensure that all the necessary and often small administrative routines are changed as required.

In countries that have had some success, Côte d'Ivoire and Ghana for example, sustained growth of manufacturing seems to have quickly run into constraints among the factors external to the control of the government. It seems clear, therefore, that policy reforms alone can be no panacea for restored manufactured growth. On the other hand, policy reforms, for many reasons including financial ones, may be necessary as part of programmes for regenerating manufacturing in African countries.

The existence of political conflicts in many African countries must also be mentioned within the context of external obstacles to manufacturing. The aggressive and subversive actions against the SADCC states is the prime example. However, conflicts are disrupting economic activities in many other parts of Africa, e.g. Western Sahara, Ethiopia, Uganda as well as the frontal states in the south. The existence of such political conflicts would minimize 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. In reading the present section, it should be kept in mind that - as in many other respects - the North African countries are far less affected by infrastructural shortcomings than those in Sub-Saharan Africa.

The transport problems of countries in Africa are closely related to their trade problems: in the absence of a good transport infrastructure, the movement of goods is seriously impeded and becomes very costly.

The countries that suffer most from deficiencies in their external connections are the landlocked ones. The costs of their imports and exports are raised by:

- the distance that has to be covered (over an often inferior roadrail network);
- customs delays; and
- potential transport disruptions as a result of conflicts between nations (the latter two are likely to be the more important cost factors).

Africa has a higher share (one-fourth) of landlocked countries than any other continent. 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. Moreover, all of these countries are as dependent on imports for the manufacturing sector as the African countries with direct access to sea.

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 (see below). A bad domestic transport network can have a disastrous influence on the performance of large-scale plants: the United Republic of Cameroon's Celiucam 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 of connections with neighbouring countries has been neglected. This is, however, changing. 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 connections. 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, for example, 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.

Much of the institutional infrastructure has already been covered in the section on the policy environment. An essential element of the institutional infrastructure is the educational system. As the 1987 World Development Report put it:

"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 this respect, 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.

Private institutional support for industry is not well 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 would 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 kind as well.

1/ World Bank - World Development Report 1987, New York, etc., 1987, p.63.

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 case of 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 rudimentary processing only. Liberia, Zambia and Côte d'Ivoire provide examples. Liberia is a major producer of natural rubber, but 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, inter alia, related 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 bringing together agricultural production and industry within a single enterprise, as in the cotton textile industry (palm oil production, cigarette manufacturing and fruit canning also provide examples). Not all crops, however, are suited for the strictly controlled cultivation which is then required, and undesirable social side-effects in rural areas (of which Latin America provides examples) must also be taken into account.

Chapter 3

The present state of African industry

3.1 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 has sharply deteriorated relative to these other countries.

An upturn can be witnessed from 1985 onwards. Growth in Sub-Saharan Africa, measured in MVA terms, jumped from a negative -0.8 per cent in 1984 to 4.1 per cent in 1985, and has remained at that level; forecasts for 1988 even show a 4.5 per cent growth rate. Although no aggregate figures for the whole continent are available, it must be assumed that these would be higher, as - in general - growth in individual North African countries was even stronger.

It is doubtful whether the 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 however are crucial for industrial development as well, as industries tend to be dependent on overseas imports.

Structural change in African industry has been slow. Although a shift away from the dominant subsector - food products - is discernible in many countries, the share of industries that are strong growers elsewhere in the developing economies - electronics, garments, transport equipment - has on the whole remained very modest.

This being said, there are clear differences between groups of countries in the continent. The next section will attempt to present a broad categorization of African countries according to industrial development levels and potential.

3.2 Country groups

The most conspicuous difference is to be found between the North African and the Sub-Saharan countries. While the great majority of Sub-Saharan countries is classified as low income, the North African countries are all in the middle/high income groups. They thus dispose of a larger domestic market for industrial products. In all North African countries, per capita MVA is well above the 1984 African average of US\$ 58 (constant 1980 values); Egypt excepted, per capita MVA is even a multiple of this figure.

Like other countries in the continent, North African countries are in part dependent on raw material (oil/gas) exports, but meanwhile they have built up a relatively strong and diversified manufacturing sector, which has benefited from the proximity to European markets.

In Sub-Saharan Africa, manufacturing's major chance would lie in closer links with, and a simultaneous strengthening of, the agricultural sector. An expanding rural economy would create both a market for industrial products and a more stable raw material base for the food products subsector, which is the dominant industry in virtually all countries. With regard to manufactured exports, regional markets could, generally speaking, hold more promise than overseas markets.

While the difference between North and Sub-Saharan Africa is immediately clear, a closer look at the continent reveals a number of other, essential differences between groups of countries. These differences emerge clearly in spite of numerous statistical discrepancies. The lion's share of manufacturing is accounted for by less than a dozen countries.

In terms of value added, the leading countries are Morocco, Algeria, Egypt and Nigeria. All of these had a 1984 MVA of over US\$ 3,000 million (constant 1980 prices). These countries are followed by countries 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.

In all of the above countries, Nigeria and Libya excepted, the manufacturing sector's GDP share was over 10 per cent. The low shares for Nigeria and Libya are a consequence of the fact that these countries (the GDP of which 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 sector's share in GDP, which varies from 5 to 20 per cent. While with the exception of Kenya all countries mentioned before are middle/high income economies, the present countries are all in the low income category. Although these countries have a good manufacturing potential, they have had to deal with, or are dealing with, very serious economic and/or political problems.

A fourth category consists of small economies with a relatively large manufacturing sector. Apart from two countries, Mauritius and Swaziland, that mainly serve as a convenient location (cheap labour, low taxes, good transport connections) for export-oriented foreign enterprises, the category includes Rwanda. The manufacturing share of GDP is typically around 20 per cent.

The fifth category resembles the third, in that the countries do dispose of a considerable potential, and have suffered from severe economic and/or political problems. The category includes Zaire, Angola, Mozambique, Madagascar and Ghana. The role of manufacturing in these countries, however, is as yet very modest, or has diminished strongly as a consequence of ill-conceived policies and/or warfare.

In the remaining countries, the manufacturing sector is usually small. The GDP share is generally below 7-8 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 when these countries are landlocked. Examples are Somalia, Comoros and - among the landlocked countries - Niger. Finally, countries such as Equatorial Guinea and Mauritania had to start building a modern economy virtually from zero upon becoming independent.

When assessing the future role of industry and the support that these countries may need, it is important to keep these broad groupings in mind. In the North African countries and the half dozen 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 the 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 process of industrial decline witnessed elsewhere in Africa is unlikely to trouble these countries.

The countries in the third category and 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 prove of crucial importance in the case of 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 last category of countries in the medium term. Agro-processing will probably be the principal industry. Otherwise, the sector's contribution to domestic development is likely to be largest if it concentrates on providing simple agricultural equipment and certain agricultural inputs for which no large-scale capital-intensive plants are needed. 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.

3.3 Major subsectors

There are few countries in Africa where the food, beverages and tobacco subsector does not dominate manufacturing. (This again demonstrates how essential a prospering agricultural sector and strong linkages between agriculture and manufacturing are). In the majority of cases food processing is the most important industry (typically accounting for at least one-fourth of gross output and MVA in the sector), but in some cases beverages or tobacco come first. Food processing is usually of a fairly rudimentary type: the value added shares of the industry tend to be much lower than the output shares. In value added terms only, the industry often ranks second to beverages, textiles and mineral-based industries. In the United Republic of Cameroon, the 1985 value added of the beverages sector was three times as high as that of food products. Although the country is a major cocoa and coffee producer, little processing takes place beyond drying and dehusking.

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 subsector is textiles. Generally speaking, made-up textiles play a very modest role in the subsector, although this may be a matter of under-reporting (artisanal tailoring would

generally not be 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 MVA in 1985. The country's textiles branch, however, is relatively insignificant, Mauritius importing most of the cloth needed to produce made-up textiles.

The textile and garment industries are labour-intensive industries, just as the food-processing industries (beverages tends to be a capital-intensive rather than a labour-intensive industry). Together they generally account for a large share of MVA and are mainly found among Africa's major manufacturers. These have a sufficiently diversified industrial sector, and industrial employment is therefore more widely dispersed among branches.

The remaining subsectors are only strongly represented in a small number of countries. Petroleum refining, industrial chemicals and basic metals, all capital-intensive industries, tend to be restricted to countries which - apart from the raw materials - have a fairly high general development level. 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 have therefore established cement plants. The failure rate among these is rather high, among others because the domestic markets are too small to make production viable.

The metal products and machinery subsector is well-represented only 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 subsector. There is, however, considerable scope for medium- and small-scale production, and much of the production in the subsector may not be recorded because the 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 branch-wise growth figures shows that since the mid-1970s growth in most of the industrial branches in Sub-Saharan Africa has stagnated, or at best grown very slowly (as in the case of the major industry, food products). Clear exceptions are only provided by 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 took place, although a comparison is difficult because of differences in the available data. Here, vigorous growth was recorded in most branches. Slow growth only occurred in tobacco, rubber products, wood and wood products, pottery and earthenware and metal products. In the case of the latter three, it should be noted that related industries (furniture, cement, machinery) generally performed better.

In the North African countries and in Nigeria and Zimbabwe an "industrial tissue" is beginning to emerge, a reasonably integrated network of industrial enterprises in which all major subsectors are represented. The picture is very different elsewhere. It seems unlikely that the few fast-growth industries that are found 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 the smaller countries with a less developed manufacturing sector it would seem best to concentrate energy and resources on food processing and (cotton) textiles, industries requiring relatively low investments and having strong employment effects. A prerequisite would, however, be the strengthening of the agricultural sector, for the same reasons as mentioned under 3.2. 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.

Chapter 4

Major internal obstacles

4.1 Weak inter-industry linkages

Inter-industry linkages do not appear to be strongly developed in any African country. There is very little direct information about this issue - input-output statistics are hardly ever detailed enough to allow any conclusions in this respect. The continuing dependence of the manufacturing sector on overseas imports of intermediates, spare parts and machinery, however, indicates that inter-industry linkages are very weakly developed. 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 have to procure essential manufactured products from overseas, and are now noticing 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 e.g. 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.

4.2 Branch-specific problems

Some of the major constraints on industrial development, such as the shortage of foreign exchange and of qualified personnel, are felt by virtually all industries. On the other hand, certain problems are industry-specific. Detailed research at the branch level being scarce at the time of writing, the remarks below are only meant to sketch these problems roughly.

A recurring problem that 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 must to a large extent be blamed on the removal of Africa's forest cover (in which sawmilling and pulp/papermilling play a role). Crop failure, anyway, 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.

An obstacle to stable agricultural development that might be at least 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 the provision of 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, on the one hand, given rise to extensive smuggling (Zambian maize is sold in Zaire for more than three times the official Zambian price); on the other, it has led to a lack of interest in cultivating controlled crops. A number of African countries is now overhauling the pricing system, and providing more incentives to farmers. The short-term effect may inter alia be unrest among urban populations, who see the prices of their basic foodstuffs rise. In the long run, however, better incentives to farmers should also lead to a better urban food supply. Moreover, they should result in greater rural prosperity, for the continent's population is still in great majority rural. For the agro-processing industries, the result 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. There are several reasons for their failure. First, a modern mill has a capacity that often far exceeds the demand for paper in an average African country with its small population, low incomes and low literacy levels. Moreover, the absence of smoothly functioning regional markets and heavy international competition are not conducive to exports. Second, the mills are very capital-intensive, and need a well-developed physical infrastructure (the industry uses great amounts of water and energy). Third, much of Africa's forest is unsuitable for paper manufacturing.

With the development of petroleum refining, a number of African countries has acquired a good basis for the chemical industry. Details are scarce, the petrochemicals industry being a very recent addition to manufacturing in many cases. 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 dispose of 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 would again appear 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.

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 unviable. 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 the 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.

4.3 Plant-level problems

Plant-level problems are a special category mainly in the sense that problems of a more general nature - related to the particular position of manufacturing, or generated elsewhere in the economy and the political/social environment - combine and crystallize at the plant level. To prevent repetition, only the major plant-level problems will be described below.

The most frequently stated plant-level problem is absence of qualified managers. 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. The lack of experience points to another characteristic of many African economies: the minimal interest that domestic entrepreneurs take in industry. 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, political 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 plants, the management of which, 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 has been noticed in public enterprises. Overstaffing may be a more serious problem than the available information indicates. Legislation or social reasons may prevent the laying-off of 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 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, i.e. a result of the foreign exchange squeeze. 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 between the various constraints to which they are subject do not imply that operational problems of individual enterprises are always similarly serious. This is shown 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 those individual industries the viability of which seems guaranteed under circumstances that are far from perfect, and which make a maximal contribution to renewed growth.

The next chapter contains a number of suggestions for action at both these levels.

Chapter 5 Issues for future action

5.1 Elements of industrial regeneration in Africa

From the analysis in the preceding chapters, a number of essential elements of a successful regeneration drive emerge. The following list may appear long; but it should be noted that, in one form or another, these elements 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. The key elements are:

- re-assessment of industrial development priorities in the light of the medium-term overall outlook (this may entail closure of plants);
- 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. movement away from large-scale, capital-intensive manufacturing in most cases);
- 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 abolishment of price regulations;
- simplified administrative procedures, including price controls;
- decentralization of economic decision making within public sector industries;
- encouragement of private entrepreneurship and industries;
- involvement of the 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.

5.2. UNIDO's role

UNIDO can make an important contribution to efforts to regenerate African industry. Its efforts should be seen 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 built up a good basis of knowledge in this field which at present is scattered throughout the Organization. To benefit African countries most, this knowledge should be systematized appropriately. The continent-wide series of African country profiles represents a first attempt on the part of REG to systematize such knowledge. It is intended to continuously update these profiles in co-operation with other parts of the Organization involved in regeneration efforts. The results will be available as a basic "country fact sheet" for the formulation of projects. The in-depth country diagnoses will present such background information in greater detail for selected countries. The first of these diagnoses dealing with Zambia, is now being completed. These studies focus on issues directly pertaining to industrial regeneration. The main emphasis will be on identifying the assistance UNIDO could provide within the context of national programmes for industrial regeneration, including identification of potential rehabilitation projects. The Zambia report e.g. identifies such projects in interrelated industries: cereal milling, stockfeeds, meat products and packaging.

If industrial growth is to be restored in Africa, industrial regeneration projects will play a vital role in the next decade. It is the thesis of this report that industrial regeneration must be viewed, as well as take place, within the economic and political context of the individual country. To obtain 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 efforts 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 Organization's previous experience in assisting a wide range of African governments in industrial policy design and execution would be particularly useful.

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. As indicated under above, its 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. These institutions would include the International Finance Corporation, the European Economic Commission and the United Nations organizations such as UNCTAD, ILO and FAO.