OCCASION

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

DISCLAIMER

FAIR USE POLICY

CONTACT

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

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

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

Distr.
LIMITED
PPD.166
29 June 1990
Original: ENGLISH

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INDUSTRIAL DEVELOPMENT REVIEW SERIES

NAMIBIA

Industrial development at independence

PREFACE

This Industrial Development Review is one of a series of country studies prepared by the Regional and Country Studies Branch of the United Nations Industrial Development Organization (UNIDO).

The Reviews present brief factual and analytical surveys of industrial development in developing countries. Such industry-specific Reviews are in demand for a variety of purposes: to provide an information service to relevant sections within UNIDO and other international organizations and aid agencies concerned with technical assistance to industry; to be used as a reference source for financial organizations, public and private industrial enterprises and economic research institutes in developed and developing countries; and to serve as a handy, useful information source for policy-makers in developing countries. The Reviews do not represent in-depth industrial surveys. With an exclusive focus on industry they present information and analyses on the broad spectrum of the industrial development process in the countries concerned in a condensed form.

The Reviews draw primarily on information and material available at UNIDO headquarters from national and international sources as well as data contained in the UNIDO data base. The presentation of up-to-date information on sub-sectoral manufacturing trends is usually constrained by incomplete national data on the industrial sector. To supplement efforts under way in UNIDO to improve the data base and to monitor industrial progress and changes on a regular basis, it is hoped that the relevant national authorities and institutions and other readers will provide comments and further information. Such response will greatly assist in updating the Reviews.

The present Review was prepared with the assistance of Prof. Donald L. Sparks, UNIDO consultant, on the basis of information available at end-1989. It is divided into two rather distinct parts. Chapters 1 and 2 are analytical in character, giving first a brief overview of the country's economy and then a more detailed review of the structure and development of its manufacturing industries. Chapter 3 reviews possible industrial development strategies and policy options for independent Namibia. Chapter 4 examines the resource endowment for industrialization while Chapter 5 analyses the scope for resource- based industrialization based on Namibia's mineral-, fish-, and agro-based resource endowment. Chapter 6 examines the role of international co-operation for industrial development and identifies crucial areas requiring multilateral and bilateral technical assistance.

It should be noted that Reviews are not official statements of intention or policy by governments nor do the views and comments contained therein necessarily reflect those of the respective governments.

CONTENTS

LIST OF TABLES

LIST OF ANNEX TABLES

LIST OF ANNEX TABLES (continued)

EXPLANATORY NOTE

Regional classifications, industrial classifications, trade classifications, and symbols used in the statistical tables of this report, unless otherwise indicated, follow those adopted in the United Nations Statistical Yearbook.

Dates divided by a slash (1988/89) indicate a crop year or a financial year. Dates divided by a hyphen (1988-1989) indicate the full period, including the beginning and end years.

References to dollars ($) are to United States dollars, unless otherwise stated.

In tables: Three dots (...) indicates that data are not available or not separately reported.

Percentages may not add to 100 precisely due to rounding.

The following abbreviations are used in this document:

CDM	Consolidated Diamond Mines
CSO	Central Selling Organization
EEZ	Exclusive economic zone
ENOK	First National Development Corporation
GDP	Gross domestic product
b/d	Barrels per day
GNP	Gross national product
ISIC	International Standard Industrial Classification
MVA	Manufacturing value added
PTA	Preferential Trade Area
R	South African Rand
RSA	Republic of South Africa
RTZ	Rio Tinto Zinc
RUL	Rossing Uranium Ltd.
SADCC	South African Development Co-ordination Conference
SACU	South African Customs Union
SWAPO	South West African People's Organization
UNHCR	United Nations High Commissioner for Refugees
UNIDO	United Nations Industrial Development Organization
UNIN	United Nations Institute for Namibia

BASIC INDICATORS I
The economy

GNP (1989) : $1,420 million

Population (1988) : 1.3 - 1.6 million[a/]

GNP per capita (1988) : Above $1,000[a/]

Labour Force (1985) : 640,000[a/]

Area : 823,145 square kilometers (excluding Walvis Bay)

Unemployment, 1989 : 30 per cent[a/]

Growth of GDP (per cent) :

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
-2.1	-0.5	-2.0	-3.2	-1.2	-0.2	-3.1	2.8	2.3	3.0

Consumer price inflation (per cent) :

1986	1987	1988	1989
13.4	12.6	12.9	13.6

Structure of GDP (Percentage) :

	1970	1980	1987	1988
Agriculture & fisheries	14.2	11.5	12.0	10.3
Industry	30.6	43.6	35.9	40.3
Manufacturing	4.4	3.8	4.3	4.1
Services	50.8	41.1	47.8	49.4

Exchange rate (South African Rand equivalent to US$1) :

1984	1985	1986	1987	1988	1989	1990
1.44	2.19	2.27	2.04	2.26	2.70	2.76

a/ Estimate

BASIC INDICATORS 2
Natural resources

Principal crops (marketed value, R1000, 1986)	:	Vegetables (810), Sorghum (555), Maize (506), Cotton (279), Fruit (252)
Livestock (marketed value, R million, 1981)	:	Sheep (130.5), Karakul (20.1), Wool (..5)
Fish catch ('000 tons, 1987)	:	Anchovy (377), Pilchards (63), Mackerel (35)
Mining production (1988)	:	Uranium oxide (3,600 tons), Diamonds (938,000 carats), Blister copper (42,200 tons), Lead (4-,400 tons), Zinc concentrate (34,200 tons)
Energy production ('000 b/d equivalent, 1980 estimate)	:	Electricity (12.1), Liquid fuels (10.1), Wood/charcoal (6.5), Coal (3.9)

BASIC INDICATORS 3

Foreign trade and balance of payments

Exports (1989)	:	$920 million
Principal exports (per cent of total)	:	Uranium oxide (30.6), Diamonds (23.5) Base metals (20.7), Fish products (8.9) Live cattle (3.3), Meat products (2.8) Karakul, wool, mutton (1.8)
Destination of exports (per cent of total)	:	Switzerland (31) Republic of South Africa (25) Federal Republic of Germany (15) United States (5) Other (24)
Imports (1989)	:	$830 million
Principal imports (per cent of total)	:	Other consumer goods (28.6) Fuel (23.5) Capital goods (19.2) Grain (2.1) Other foods (1.7) Passenger cars (1.7)
Origin of imports (per cent of total)	:	Republic of South Africa (75) Federal Republic of Germany (10) USA (5) Switzerland (5) Other (5)
Balance of payments deficit (current account)	:	-$37 million (1988)

BASIC INDICATORS 4
The manufacturing sector

Manufacturing value added (MVA): (1987, at constant 1980 prices)	R61.7 million							
Annual growth of MVA (per cent, based on constant 1980 prices)	1980	1981	1982	1983	1984	1985	1986	1987
	-14.7	-1.8	10.4	2.1	-0.7	-3.5	1.0	2.0
Structure of manufacturing output (per cent mid-1970s)								
Food and beverages	70.4							
Wood and wood products	3.3							
Chemical products	1.8							
Metal products	17.1							
Printing and publishing	1.2							
Other	6.2							
MVA per capita (1987, constant 1980 prices)	R41 - R51[a/]							
Manufacturing employment (1988)	5,787							

a/ Estimate

BASIC INDICATORS 5[a/]
Inter-country comparison of selected indicators

	Unit	Namibia[b/]	Lesotho	Malawi	Zambia	Zimbabwe	Botswana
I. Demographic indicators							
Area	'000 sq. km	823	30	118	753	391	582
Population	millions (mid-1987)	1.2-1.6	1.6	7.9	7.2	9.0	1.1
Population density	persons per sq. km.	1.8	53	67	10	20	2
Population growth	per cent per annum (1980-87)	3.4	2.7	3.8	3.6	3.7	3.4
II. Economic indicators							
GDP	billion US$ (1987)	1.4	0.3	1.1	2.0	5.2	1.5
GDP growth rate	per cent p.a. (1980-1987)	-0.1	2.3	2.6	-0.1	2.4	13.0
GNP per capita	US$ (1987)	933-1,166[c/]	370	160	250	580	1,050
GNP per capita growth rate	per cent (1965-1987)	-1.9--2.8[d/]	4.7	1.4	-2.1	0.9	8.9
Agriculture	per cent of GDP (1987)	10	21	37	12	11	3
Industry	per cent of GDP (1987)	41	28	18	36	43	57
Manufacturing	per cent of GDP (1987)	4	15	...	23	31	6
Services	per cent of GDP (1987)	49	51	45	52	46	40
Gross domestic investment	per cent of GDP (1987)	17	26	14	15	18	...
Exports of goods	per cent of GDP (1987)	58	10	24	47	27	...
Imports of goods	per cent of GDP (1987)	55	...	26	37	20	...
External public debt	per cent of GNP (1987)	...	37	98	227	36	38
III. Industrial indicators							
MVA	1986 (million US$)	131	26	...	461	1,444	67
Growth rate of MVA	per cent (1980-1987)	1.5	12.9	...	0.8	1.8	4.5
MVA per capita	1986 (US$)	...	16	...	64	160	61
Share of manufacturing export in total exports[e/]	per cent	5	...	16	3	40	...

a/ Mainly based on the World Bank data presented in the World Development Report 1989. It should be noted that the UNIDO data base, United Nations statistics, national statistics and World Bank data base do not always tally precisely and, therefore, discrepancies may be found between Basic Indicators 5, and the text Tables.

b/ The following data on Namibia are for 1988: population, GDP, GDP growth, investment.

c/ GDP.

d/ 1980-1987 GDP per capita growth rate.

e/ Excluding base metals.

SUMMARY

Political independence in March 1990 was marked by the beginning of a new era of national reconstruction. Independent Namibia inherits an incipient manufacturing sector and a mineral-dominated economy. Manufacturing value added (MVA) accounts for around 4 per cent of gross domestic product (GDP). This epitomises the embryonic stage of the manufacturing sector and an industrialization level far below that of low- and middle-income countries in Sub-Sahara Africa, where MVA typically accounts for 11 per cent of GDP.

The fragility of Namibia's manufacturing sector manifests itself in its colonial legacy, an imposed trade dependence on South Africa, inadequate input supplies, limited domestic market, lack of educated and trained entrepreneurs, and high energy and transport costs. The state of Namibia's economy is rightly emphasized by a UNIN report as "a stereotype economy which produces what it does not use and uses what it does not produce". Thus, Namibia's Independence is accompanied by formidable challenges to diversify economically and to build up an efficient industry.

The problem is one of fostering industrialization with underdeveloped essential ingredients: capital, skilled labour, technical know-how, institutional infrastructure and policy direction. The limited size of the domestic market precludes economies of scale. Crucial choices have, therefore, to be made on the scale, timing and phasing of investments in support of industrialization. Enhancing the country's capacity to absorb investment and aid flows for efficient use in promising ventures would be a crucial issue. Care would need to be taken to avoid excessive overcapacity so common in many African countries. Product choice and modes of production appropriate to the embryonic stage of industrialization, would have to be tackled. Policy issues related to the provision of basic needs would also need to be addressed. Substantial gaps exist in the industrial structure (e.g. textiles) and diversification towards a more viable balanced structure would need consideration.

In the past Industrial expansion was inhibited by competition of South African firms, which undercut prices whenever Namibian firms tried to produce a specific good. A clear industrial policy would need to be formulated on how much firms should be protected initially against foreign competition without fostering inefficiency. Namibia's present state of manufacturing warrants some protection for import-substituting industries in the medium term. During this early stage of import substitution, skills would be acquired, necessary infrastructure and technological bases established. Once infant industries are safely anchored and the initial base created, the manufacturing sector could gear itself towards the more advanced stage of producing simple engineering goods domestically. In fostering industrialization Namibia will need to start with removing constraints on the efficient use of the country's rich mineral, livestock and fishing potential.

Mineral-rich Namibia is Africa's fourth largest non-fuels mineral producer and leading gem-quality diamond producer, accounting for 30 per cent of world output. The country has the world's largest uranium mine and some of the largest known tin an lithium reserves. It is Africa's second largest producer of leads, third largest producer of caumium, and fourth largest source of zinc and copper. Local processing of minerals is limited because of the high capital costs of creating processing facilities.

Namibia processes minerals for the construction industry, but there is no local production of cement. Current needs are being supplied almost totally from South Africa. Availability of clay and gypsum could make a local cement industry feasible. Concrete block production could emerge as a downstream manufacturing activity. Ceramics, hand-made pottery and crushed stone for gravel could be fully processed locally.

The fish processing industry is facing a serious problem of overcapacity. Even if current consumption per head doubled over 20 years at a 3 per cent rate of growth of population, only 10 per cent of white fish landed and canned would be consumed. Namibia's fisheries industry will thus have to depend on export markets for long-term expansion. As foreign markets for Namibia's major fisheries products - fish meal, oil, canned and frozen fish - are highly competitive there is a need to make important changes in this sector to sharpen the competitive edge of fish processing. Scope for joint ventures exists.

Viable product areas in agro-industries include cattle, pig and poultry breeding, vegetable growing, meat processing and dairy producing. Namibia used to be a net exporter of dairy products but now only supplies fresh milk. Dairy products such as fresh milk, cream, cultured milk, butter, yoghurt and cheese are promising areas for expansion. Tinned and powdered milk could be promoted, given the limited number of homes with electricity and refrigerators. Other potential agro-industries are grain mills, fertilizer plants, timber plants, edible oil refineries, beverage distilleries and food packaging.

The leather industry in Namibia is underdeveloped as hides and skins are sent to South Africa for tanning. It is estimated that Namibia can produce some 5,000 tons of cattle leather and 1,000 tons of goat and sheep leather annually if 500,000 hides and 1 million skins could be secured - an attainable goal for Namibia.

The newly elected South West African People's Organization (SWAPO) Government endorses the concept of a mixed economy in which parastatal companies, co-operatives and joint ventures are expected to play a significant role. Policy priorities of the new government also include, inter alia: significant re-investment of mining profits to finance further mineral exploration and development; the integration of mining with the rest of the economy through the mineral-based processing industries; the manufacture of construction materials and the development of refineries for the country's metals industry; and sorting and cutting facilities for its diamonds. The new Government has ruled out wholesale nationalization and sweeping measures of land redistribution. Thus the new Government endeavours to implement an industrial strategy in line with the changing global and regional realities.

The Government endeavours to create a national basis for reducing economic dependence on the Republic of South Africa. The economic blueprint stresses that Namibia would remain dependent for its industrial development on private capital and foreign investment. Policy priorities envisage a change in ownership pattern in order to redress the colonial legacy, but large-scale nationalization has been ruled out.

Within the overall perspective of national reconstruction, industrial strategies and policies of the new government basically aim at establishing a more self-reliant industrial sector by means of:

- the establishment of more local resource based industries;
- promoting small-scale, artisanal and handicraft industries;
- increasing the participation of Namibians in industrial operations through training and personnel development;
- selective Government participation in industrial enterprises;
- establishing import-substitution industries where domestic demand permits;
- promoting export-oriented industries; and
- restoring regional balance in industrial development.

The achievement of the industrial development objectives would also require the establishment of an institutional and planning infrastructure. In order to optimize the contribution of existing manufacturing enterprises to the economy, a restructuring programme and in certain cases rehabilitation may be needed.

In endeavouring to achieve economic diversification through industrialization, international co-operation has become indispensable for Namibia. Such co-operation for industrial development has to address many constraints arising from the small domestic market, limited purchasing power of the people, scattered population, high internal transport costs, critical shortage of trained and experienced industrial manpower, etc. The most likely areas of industrial co-operation for which detailed programmes will have to be drawn up and implemented include, inter alia: formal and informal training of industrial manpower; preparation of pre- investment studies; mobilization of domestic and external finance for industry; adaptation and development of technology; industrial research; industrial joint ventures; provision of consultancy services; small-scale industrial projects; and assistance in the establishment of a sound institutional framework for industrial development.

Independent Namibia became the 160th member of the United Nations, the 51st member of the Organization of African Unity (OAU), the 10th member of SADCC, and was also admitted as the 50th member of the Commonwealth. Namibia has applied for membership of the Lomé Convention, which provides for co-operation between EC and ACP countries allowing certain products to enter the EC on a duty-free basis. Namibia already trades with a number of EC members. The Federal Republic of Germany, Switzerland, France and the United Kingdom are among Namibia's major trade partners. The Convention would also provide opportunities for financial, technical and industrial co-operation. This would augur well for diversification of Namibia's international economic linkages in the medium and long term.

Independent Namibia maintains its de facto membership of the Southern Africa Customs Union (SACU) which also includes South Africa, Botswana, Swaziland and Lesotho. SACU entails preferential trade agreements and sharing

of revenues. Further, Namibia is likely to remain inside the Rand system for two years at least. Thus, the Republic of South Africa will retain a strong influence on the country's economic development in spite of withdrawal of budgetary aid which has usually been in the $160-$200 million range annually.

Namibia will need strong support from the international community if its development efforts are to succeed. The Government may consider a variety of technical assistance options for industrial development. Such support can come from the United Nations system and from multilateral and bilateral donors, particularly the EC. UNIDO could play a leading role in directing multilateral technical assistance inputs to the following crucial areas of technical co-operation for industrial development:

1. Assistance in industrial planning, policy formulation, and preparation of an industrial survey.

2. Subsectoral analysis in order to identify prospects for enterprise development of fish processing, meat processing, agro-industry, can production, oil-seed crushing, engineering industry, mineral processing, and other priority industries.

3. Missions composed of industrial economists and experienced businessmen to review the existing business environment and to advise on measures to improve investment climate.

4. Assistance to policy-makers in the preparation of guidelines on enterprise development, an investment code and investment guide, and organizing training courses in various aspects of entrepreneur development and enterprise management.

5. Meetings of high level experts from a cross-section of countries for exchange of ideas and experience on mineral processing.

6. Assistance to research and development on appropriate technologies for small-scale enterprises.

7. Assistance in establishing institutional framework for industrial development, and "twinning" of specialized service institutions in developed and developing countries with their counterpart institutions in Namibia.

8. Assistance to industries to conduct feasibility studies and to present them to bilateral and multilateral agencies for financial and technical assistance.

9. Assistance to Namibian enterprises to draw upon a vast commercial and technical know-how possessed by their overseas counterparts, i.e., enterprises engaged in the same or complementary lines of business.

10. Provision of appropriate technological inputs for energy generation and water supply for each firm. These essential ingredients may be ensured through solar-wind energy production and bore wells.

11. Identification of projects that suit industrial complementation in the subregion in general and the resource endowment of Namibia in particular.

12. Assistance to the transitional phase of Namibia's integration into SADCC and PTA for industrial and trade co-operation in the form of joint investment, planning, management, production, marketing and trade.

A careful elaboration and assessment of these options and the establishment of priorities are essential for dovetailing technical co-operation with Namibia's absorptive capacity for aid.

1. THE ECONOMY OF NAMIBIA

1.1 Economic structure

The year 1990 is marked by the beginning of a new era of national reconstruction in Namibia. Political independence in March 1990 is accompanied by the formidable task of breaking the colonial legacy in order to achieve economic independence using the country's rich mineral, livestock and fishing potentials.

At independence Namibia inherits a mineral-dominated economy; Namibia is Africa's fourth largest non-fuel mineral producer. It is the world's leading gem-quality diamond producer, accounting for some 30 per cent of world output. Namibia has the world's largest uranium mine and some of the largest known tin and lithium reserves. It is Africa's second largest producer of lead, third largest producer of cadmium and fourth largest source of zinc and copper. Minerals typically account for over 30 per cent of GDP, and are the country's largest source of foreign exchange earnings. Although the mining sector is still by far the greatest contributor to GDP, its share has declined in the course of the 1980s. The decrease in the importance of mining was the result of stagnant export earnings in spite of the depreciation of the Rand.

About 70 per cent of the population depend either directly or indirectly on agriculture, although that sector only contributes some 10 per cent of GDP (see Table 1.1). This low share is a consequence of the fact that most people are involved in subsistence agriculture, where productivity is low. Commercial agriculture is characterized by large-scale stockbreeding for export. There is, in other words, a strong dualism in the sector, which is a reflection of past policies. The country is heavily dependent on food imports for the non-rural population.

A major sector which increased its share in GDP was government services, which accounted for 9.4 per cent of GDP in 1980, and for 17.5 per cent in 1984. The increase in the share of government services by 1984 is the result of a reorganization and expansion of the Namibia administration in the early 1980s. In subsequent years, the sector's share remained more or less at the same level. A similar development took place in wholesale and retail trade. There was little change in other sectors.

Namibia had a population of 1.3-1.6 million people in 1988. With a *per capita* income of more than $1,000 Namibia has the third highest income per head in developing Africa, representing more than three times the regional average. The proceeds from Namibia's mineral wealth, however, have not been shared equally among its population. The income distribution in Namibia is one of the most unequal in Sub-Saharan Africa. This income inequality has been caused by the past *apartheid* policies of the Republic of South Africa, which resulted in privileged access of few to skills, education, jobs, capital, land and other resources.

At present, the Republic of South Africa is Namibia's most important trading partner, absorbing a large part of Namibia's exports and providing some 75 per cent of its imports. Virtually all goods are imported and exported via the South African transport system. Namibia is a member of the RSA dominated Southern African Customs Union (SACU), and SACU customs revenues represented 22 per cent of the administration's revenue in 1988/89.

Namibia's manufacturing sector is small, accounting for some 4 per cent of GDP and 10 per cent of the formal labour force. The sector is dominated by the food and beverages industry, which accounts for some 70 per cent of output. Because of the incipient and narrow manufacturing base, Namibia imports - usually from the Republic of South Africa - much of its manufactured goods needs. A United Nations Institute of Namibia (UNIN) report recently described Namibia as a "... stereotype of the economy which produces what it does not use and uses what it does not produce...". There is a lack of indigenous industrial skills, particularly at the managerial and marketing levels. In the past, fish processing in Walvis Bay has been the country's largest manufacturing employer, but the decline of the pilchard stock and the reduction of canning in Walvis Bay has reduced these activities.

The dependence on the Republic of South Africa has generally inhibited local industrialization. Small Namibian firms have often expressed concern over the market penetration by large and powerful Republic of South Africa industrial groups.

1.2 Recent economic trends

With a real GDP growth rate of 1.8 per cent per annum in the 1970s and a negative growth rate of 1.0 per cent during the 1980s, economic development in Namibia in the last two decades has been characterized by stagnation and decline. Coupled with a 3.4 per cent annual growth rate of population this resulted in a significant fall in real per capita income. Mild economic recovery occurred in the late 1980s, as real GDP grew at 3.1 per cent, 2.8 per cent and 2.3 per cent in 1986, 1987 and 1988 respectively. GDP in real terms grew at 3.0 per cent in 1989. This reluctant economic recovery was due largely to improved world prices for commodity exports, mainly uranium, diamonds and base metals. Although the long-term constraint on development is caused by Namibia's narrow production base, there appears reasonable prospects for economic growth in the 1990s in the face of continuing global recovery of commodity prices for minerals, an upturn of profits and investments for the Namibian mining industry and possible aid flows in the post-Independence era.

The agricultural sector grew significantly in 1987 due primarily to better cattle marketing and increased productivity. In 1988 the agricultural sector recorded a sluggish growth rate of 3.2 per cent. The sector's performance may have been affected in 1989 by a prolonged drought in the region north of the Namibia desert. In the face of improvements in the pelagic fish catches, the fishing industry made an upturn in growth in 1988. The mining industry rebounded mildly in 1988 from a decline of nearly 2 per cent in 1987. If diamonds were excluded the mining industry actually declined by a 6.5 per cent in 1987. The sales of several segments of Namibia's mining industry picked up in 1988. After six consecutive years of depressed growth in building activity, the construction industry grew significantly at 6 per cent in 1988 as a result of a dramatic increase in investment on constructionin the second half of 1987. A 2 per cent decline in manufacturing output in 1988 was attributed largely to lower output in the meat and fish processing industries.

Table 1.1: Structure of Namibia's GDP by sector of origin, 1980-1988 (percentage) [selected years]

	1980	1984	1986	1988
Agriculture and fishing	11.5	8.0	8.4	10.3
Mining and quarrying	43.6	35.9	36.0	33.8
Manufacturing	3.9	4.6	4.4	4.1
Electricity and water	1.8	2.3	2.4	2.4
Construction	3.5	2.8	2.2	2.2
Wholesale/retail trade	8.1	12.3	12.1	12.4
Transport/communications	5.3	5.8	5.8	6.2
Finance/business services	5.3	5.9	5.9	5.9
Social/community services	1.3	1.9	1.9	1.9
General Government	9.6	17.5	17.8	17.7
Other products	2.6	3.0	3.0	3.1
GDP at factor cost (constant 1980 prices)	1,444.1	1,346.8	1,388.9	1,459.7
GDP at current prices	1,444.1	1,969.6	2,926.5	3,743.3

Sources: United Nations Institute for Namibia. Namibia: Perspectives for National Reconstruction and Development, Lusaka, UNIN 1986; Sparks, Donald L. and Murray, R., Namibia's Future: The Economy at Independence, EIU Special Report No. 197, The Economist Intelligence Unit, London 1985; Namibia/SWA Statistical/Economic Survey 1989.

Table 1.2: Gross domestic fixed investment in Namibia, 1980-1987 (by economic activity, Rand million, constant 1980 prices)

Sector	1980	1981	1982	1983	1984	1985	1986	1987
Mining	112.4	66.0	36.4	27.7	19.7	16.8	31.7	36.3
Agriculture & fishing	20.5	16.6	16.1	14.3	10.6	8.1	7.5	7.6
Manufacturing	15.8	20.3	6.7	6.8	6.4	5.1	3.9	3.2
Electricity, water	14.1	31.9	22.6	13.9	3.2	3.6	4.3	2.4
Construction	15.5	12.0	14.1	6.9	6.5	3.3	2.2	2.6
Trade, catering accommodation	12.0	15.2	14.0	8.0	9.1	7.2	6.0	5.4
Transportation, communication	25.9	28.0	29.3	24.1	15.1	18.4	12.8	13.4
Finance, insurance business services	13.2	11.1	15.3	16.5	2.7	17.1	15.5	21.1
Community services	3.7	7.3	7.4	3.7	3.7	4.2	3.7	3.6
General Government	202.3	168.8	147.9	108.6	91.3	102.6	83.0	80.9
Total	435.4	377.2	309.8	230.5	188.3	186.4	170.6	176.5

Source: SWA/Namibia Ministry of Finance, 1988 and SWA/Namibia Statistical/Economic Review, 1989.

After a number of years of sluggish demand, real gross domestic expenditure showed a sustained recovery in 1987-1988. This recovery was due to a sudden upsurge in consumer spending, a continued rise in government expenditure and a large inventory build-up. As a result, total real gross domestic expenditure increased by 8.7 per cent in 1988 and by 7.6 per cent in 1987, compared with 1.3 per cent growth in 1986 and 1.1 per cent in 1985.

Gross domestic investment at current prices has shown a steady increase, but it was not in excess of the rate of inflation, implying a decline in real terms. Between 1980 and 1988, fixed investment (at constant prices) fell from R112 million to R58 million in mining, from R20.5 million to R15 million in agriculture and fisheries and from R15.8 million to R3 million in manufacturing. Total fixed investment in 1988 was only 50 per cent of Government expenditure, while the reverse was true in 1980.

In 1989, RSA public enterprises began to withdraw from Namibia, often taking capital equipment back as well, or selling assets to white entrepreneurs. The RSA subsidy to the Namibian administration has been lowered from an average of R380 million in earlier years to R300 million in 1988 and R80 million in 1989/90. The consequence must have been a running down of public services, which again is likely to have influenced economic performance in 1989. The number of new registered companies however almost doubled in the first 11 months of 1989. The great majority would appear to be trading partners, many among them being RSA firms setting up a Namibian branch. The most important other countries of origin of new investment are the Federal Republic of Germany and the United Kingdom.

The rate of inflation in the Republic of South Africa influences the price level in Namibia. As the majority of Namibia's merchandise imports originate from the Republic of South Africa, higher prices in the Republic of South Africa are usually passed on to Namibia. In 1986 the price of imported commodities increased by some 21 per cent, but this rate has declined to 13.7 per cent in 1987 and 13.3 per cent in 1988. The consumer price index level declined from 13.4 per cent in 1986 to 12.6 per cent in 1987 and reached 12.9 per cent for 1988. In the first quarter of 1989 the rate increased by 16.2 per cent. Food price rises slowed from an average of 17.4 per cent in 1987 to 13.5 per cent in 1988, but increased by some 15 per cent during the first quarter of 1989.

Merchandise exports grew by 17.3 per cent in 1988, following a growth of 9.2 per cent in 1987. All categories of exports (except "other minerals", i.e. minerals other than diamonds and uranium) improved significantly in 1988. Export earnings from agricultural produce rose by 6 per cent after a 54 per cent increase in 1987 and fish and fish products increased by nearly 50 per cent. Diamond exports also increased by over 50 per cent. Namibia's trade balance thus improved during 1988, to a surplus of R180 million, compared with a surplus of R4 million in 1987. Nevertheless, the current account balance ended in 1988 with a R83 million deficit, after six years of large surpluses. This deterioration was caused by large increases in mining dividend payments to foreign investors, reduced Republic of South Africa budgetary assistance, increased transport and insurance costs on imports and the Republic of South Africa's phasing out of financial support for the local railway administration.

Table 1.3: Namibia's current account of the balance of payments, 1980 1988
(Rand million)

At current prices	1980	1981	1982	1983	1984	1985	1986	1987	1988
Merchandise exports	1138.0	946.7	1009.2	941.3	1001.1	1594.4	1994.0	1811.4	2125.6
Merchandise imports (-)	901.9	1082.2	1124.5	1024.4	1176.5	1267.2	1543.4	1807.6	1946.1
Trade balance	236.1	-135.8	-115.3	-83.1	-75.4	327.2	450.6	3.8	179.5
Net payments for non factor services (-)	167.4	173.1	185.3	192.8	200.8	261.6	317.7	381.1	407.3
Net export of goods and non- factor services	68.7	-308.9	-300.6	-275.9	276.2	65.6	132.9	-377.3	-227.8
Net factor repayments (-)	152.8	102.7	132.7	76.4	112.6	298.6	320.0	187.2	403.5
Net transfer receipts	71.2	342.6	466.4	518.6	541.4	583.2	758.4	616.4	548.0
Balance on current account	-12.9	-69.0	33.1	166.3	152.6	350.2	571.3	51.9	-83.3

Source: SWA/Namibia Statistical/Economic Review, 1989.

The newly elected South West African People's Organization (SWAPO) Government endorses the concept of a mixed economy in which parastatal companies, co-operatives and joint ventures are expected to play a significant role. Policy priorities of the new government also include, inter alia, significant re-investment of mining profits to finance further mineral exploration and development, the integration of mining with the rest of the economy through the mineral-based processing industries and the manufacture of construction materials. The new Government has discounted wholesale nationalization and sweeping measures of land redistribution.

In the agricultural and livestock sector, economic restructuring is sought through land reform, and a ban on the export of live cattle to South Africa for slaughter. The new government also seeks to transfer financial resources from the mining sector to the agricultural production and agro-industries. The Government envisages to rejuvenate Namibia's fishing sector through the declaration of a 200 mile exclusive economic zone (EEZ) and through the protection of the world's richest hake grounds, estimated to be R2 billion worth annually.

The country's rate of unemployment now exceeds 30 per cent. The new government envisages job creation through agricultural development. There are in fact few job opportunities in the over-crowded northern farming areas. The government's priorities relate to large-scale, high technology, capital-intensive projects for the building of dams and downstream canal systems on the country's northern rivers. These projects will need to be accompanied by rural development schemes for the provision of roads, water, electricity, schools and health installations which could pave the way for employment generation. Many of these projects would require large amounts of external financing, and some R500 million annually is to be sought for this purpose. A similar amount would be needed to balance the budget after the withdrawal of the RSA subsidy to the Administration. In 1980, tax revenue still exceeded government consumptive expenditure, but there has been a budget deficit during recent years, in spite of an increase in domestically generated revenue which brought down the deficit by 4 per cent in 1989/90, to R448 million.

With regard to the large-scale projects, it is argued, on the basis of experience elsewhere in Africa, that these may not be cost-effective, and that a more cautious approach based on small-scale, technologically appropriate projects which focus on the subsistence sector is likely to have a more positive impact. Fortunately, Namibia's foreign debt is low, the Republic of South Africa having proposed to take over 75 per cent of the $400 million commercial debt. This should make it easier to find external financing.

The process of national reconstruction is likely to be achieved through flexibility in policy approach to suit the changing global and regional economic realities. Although aid flows from donors to the newly liberated country might increase in the 1990s, Namibia will have to significantly enhance the aid-absorption capacity as well as its ability to win the confidence of investors.

1.3 Key issues

The new Government will determine the extent to which it will retain economic and financial ties with South Africa which constitutes a large market for Namibian goods and is the major source of Namibia's imports. Namibia is integrated into its financial system as all financial transactions take place in South African Rand. Together with Lesotho and Swaziland, Namibia is part of the Rand Monetary Authority - a single monetary zone co-ordinated by monetary authorities in South Africa.

The International Monetary fund (IMF) has prepared proposals for the creation of a Central Bank in Namibia. The possibility of creating a new currency for Namibia is an issue to be addressed. Namibia's weaker balance of payments position with South Africa may require an initial arrangement of the new currency retaining the de facto parity with the rand.

Namibia's membership of SACU carries the advantage of unrestricted regional market and customs revenues, but local industry will be hampered by tariff-free imports. The relatively efficient South African producers may continue to retain the competitive edge over Namibian products, unless some initial protection is offered to Namibian firms.

Namibia's prospects for reducing economic dependence on South Africa depend, inter alia, on the development of transport and trade links with neighbouring countries. In the short- and medium-term, given the inherent trade and economic links with South Africa, the new government has little choice but to accept an ongoing relationship with South Africa. An international settlement ensuring Namibia's unrestricted access to facilities at Walvis Bay is pivotal for Namibia. There are indications that Namibia would seek R 500 million aid annually for development projects.

The fragility of Namibia's manufacturing sector manifests itself in colonial legacy, imposed dependence on South Africa in trade orientation, inadequate input supplies, limited domestic market, lack of educated and trained entrepreneurs, water scarcity, and high energy and transport costs. Independence to Namibia is accompanied by formidable challenges to economic diversification and industrial transformation.

The problem is one of fostering industrialization with underdeveloped essential ingredients - capital, skilled labour, technical know-how, institutional infrastructure and policy direction. The limited size of the domestic market preclude economies of scale. Crucial choices have, therefore, to be made regarding scale, timing and phasing of investments in support of industrialization. Even if international capital is available to the newly liberated country, the crucial issue relates to enhancing the capacity of the country to absorb aid flows for efficient use in promising ventures. Apart from product choice and modes of production appropriate to the incipient stage of industrialization, difficulties still arise as to the policy choices. The potential for industrial expansion was inhibited by fierce competition exercised by South African firms which undercut prices whenever Namibian firms tried to produce a specific good.

An industrial policy framework would need to be formulated. Namibia's present state of manufacturing warrants some protection for import-substituting industries in the medium term. For during this early stage of import substitution skills are acquired, and necessary infrastructure and technological bases are established. Once the infant industries are safely anchored and the initial base created, the manufacturing sector could gear itself towards more advanced stages of consumer and some intermediate goods.

Fig.1. REAL GROWTH OF MANUFACTURING VALUE ADDED AND GDP, 1980-1987 (CONSTANT 1980 PRICES)

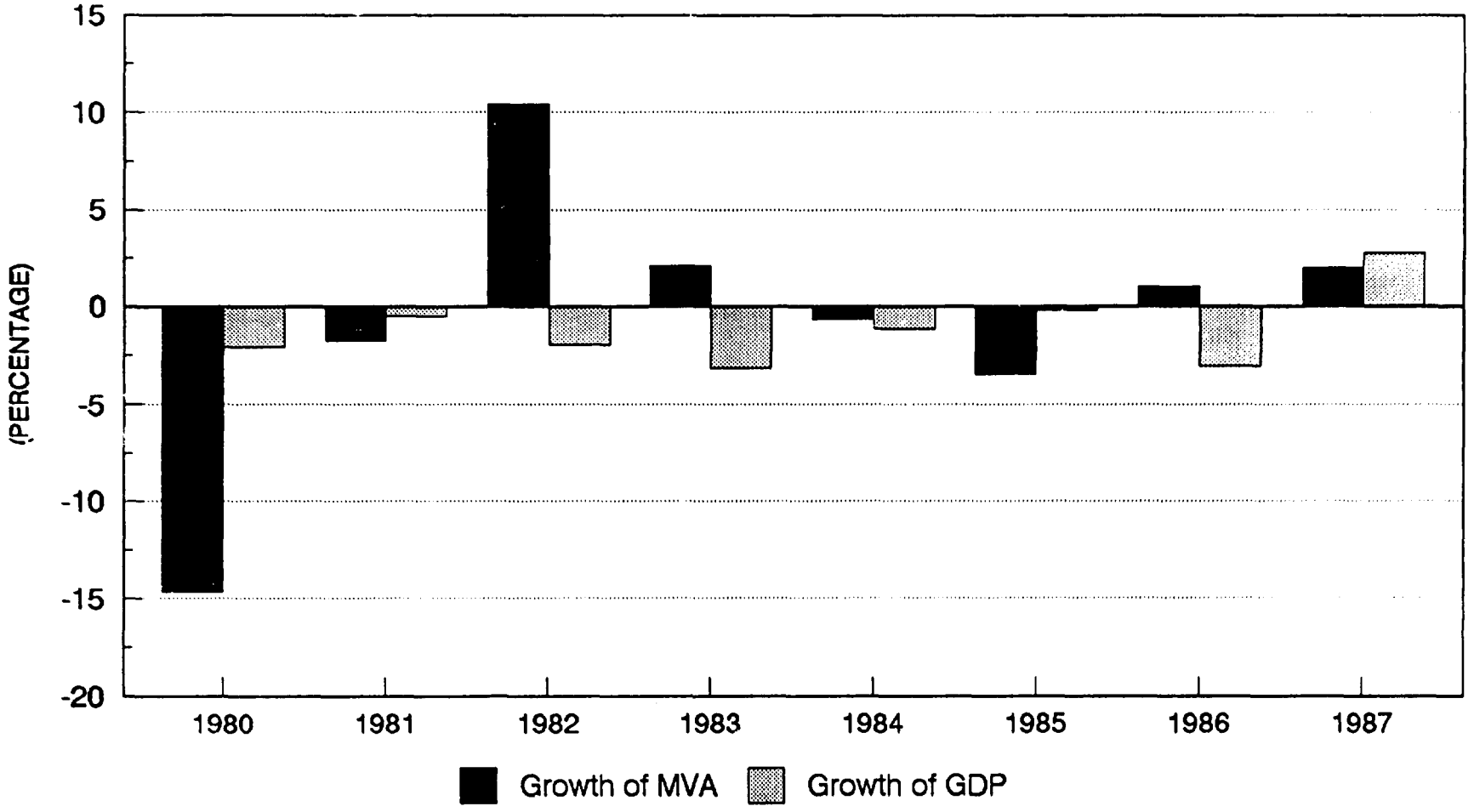


Fig.2. Distribution of GDP by sector of origin, 1970 and 1988 (percentage)

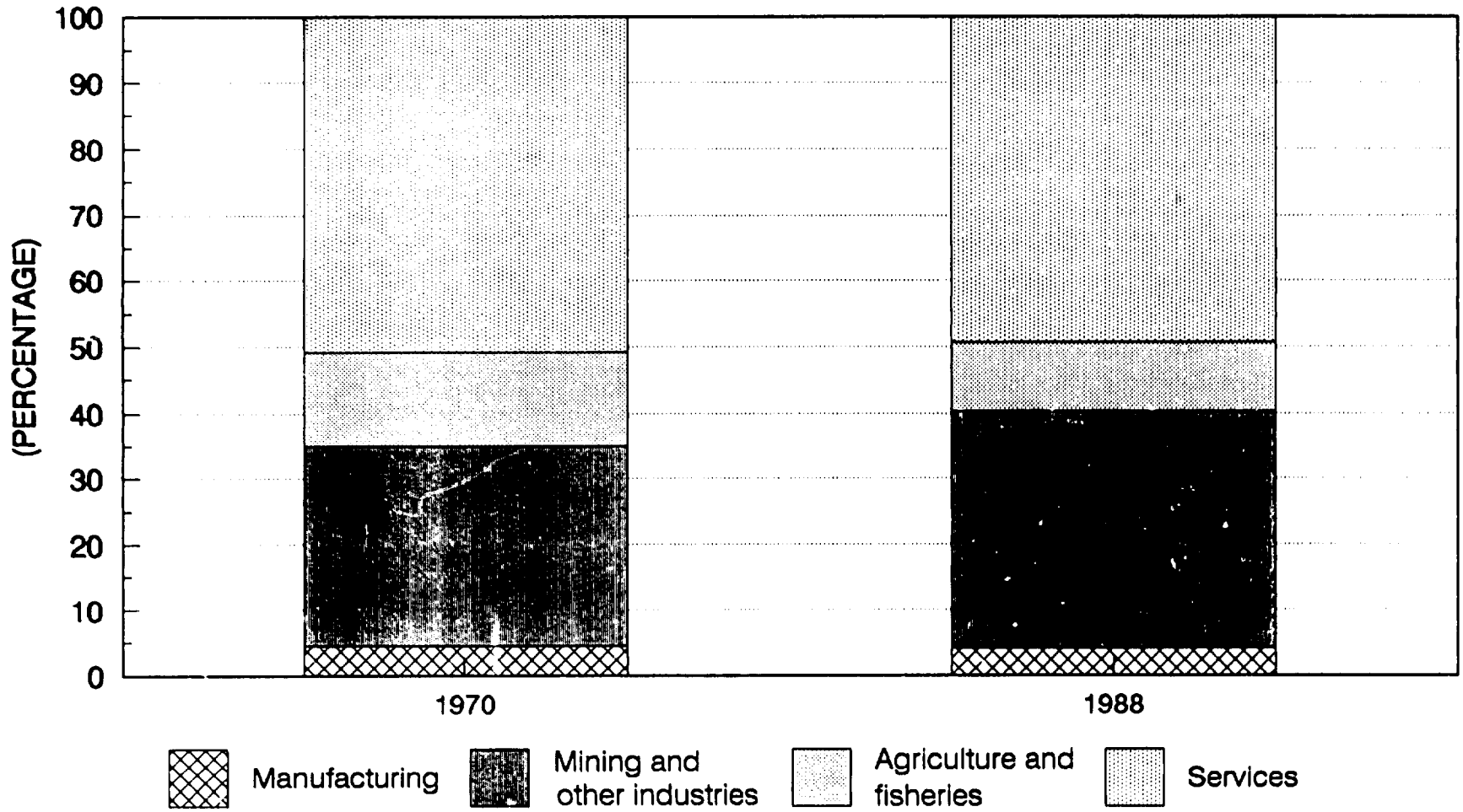
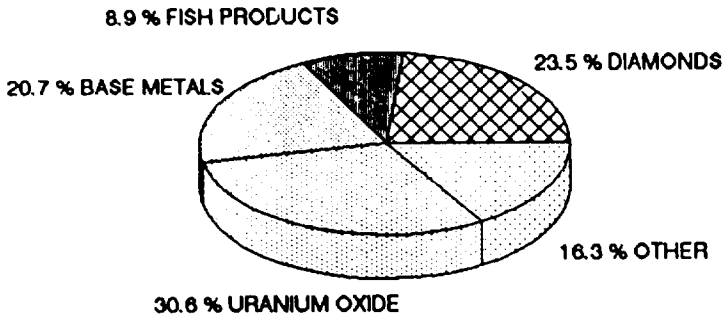
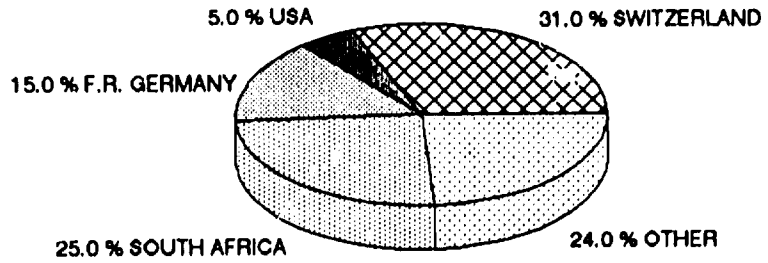


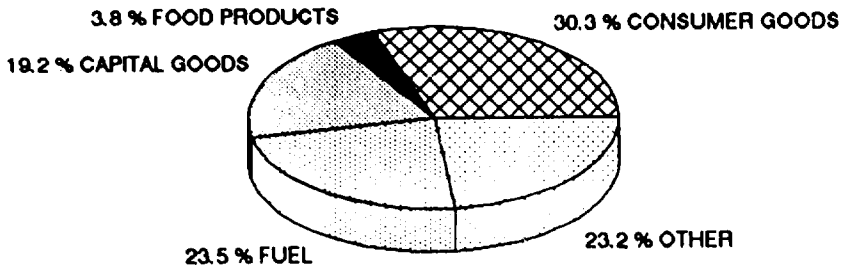
Fig.3. EXPORTS AND IMPORTS, 1988



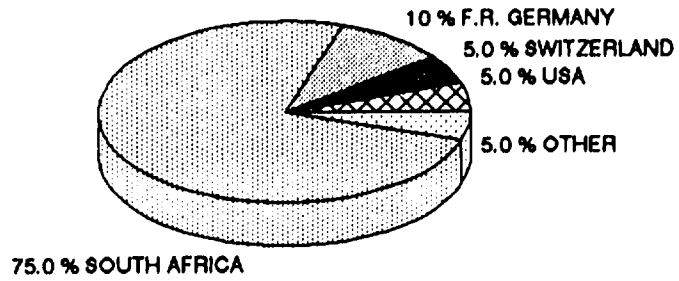
Composition of Exports



Destination of Exports

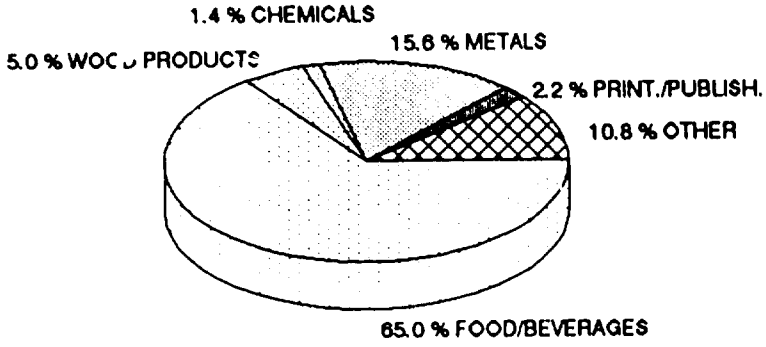


Composition of Imports

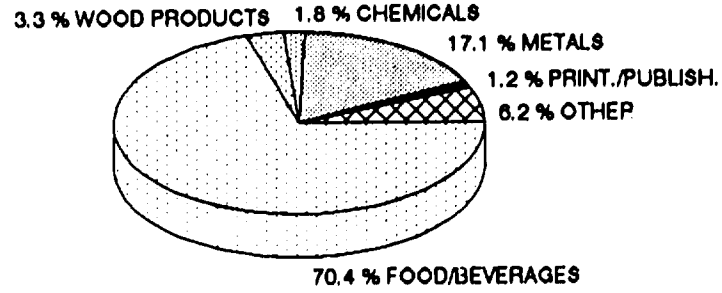


Origin of Imports

Fig.4. MANUFACTURING WORKFORCE AND OUTPUT SHARES IN MAJOR BRANCHES, 1976



WORKFORCE



OUTPUT

2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

2.1 Growth and structure of the manufactur ng sector

Namibia's manufacturing sector is small both in absolute and relative terms. Since 1960 the share of manufacturing in GDP has never exceeded 6 per cent, and since 1970 it has usually contributed between 4-5 per cent (Table 2.1). By 1987, manufacturing accounted for 5 per cent of GDP, or R157.4 million in current prices. This is low compared to the GDP share of manufacturing in many other African countries, and illustrates the predominant role of extractive economic activities in Namibia. Among low-income sub-Saharan countries for which information is available, Namibia's manufacturing sector is comparable with those of Sierra Leone (4 per cent of GDP, 1987), Benin (4 per cent), Liberia (5 per cent) and Tanzania (5 per cent).[1/]

There are a number of reasons why Namibia's manufacturing sector has remained small: the limited range of raw material inputs, limited domestic market and the remoteness of markets within Namibia - implying high transport costs, little water, high energy costs, and the lack of an educated entrepreneurial class. To these should be added a number of factors related to the country's dependence on the Republic of South Africa. The Republic of South Africa, over the years of its rule, had developed a number of strategies to promote and ensure this dependency: Namibia's industrial sector was deliberately designed to serve the economic interests of the Republic of South Africa. For example, the large RSA industrial sector had unrestricted access to Namibia, and often undercut prices whenever Namibian firms tried to produce a specific product. RSA manufactured exports can be transported to Namibia via the RSA parastatal South African Railways and Harbour Corporation at concessionary rates, thus also undercutting real and potential Namibian competition. The quasi-integration of the economy with South Africa, and its subservient role, have prevented the rise of a truly domestic entrepreneurial tradition and human resource development for Namibians has been neglected.

2.2 Major manufacturing subsectors

There is very little information on growth and structural change of manufacturing in Namibia. Table 2.2 exhibits the branch distribution of manufacturing output, workforce and number of enterprises. No other, let alone more recent data, are available. The food processing industry stands out as the most important manufacturing subsector in Namibia accounting for over 70 per cent of total manufacturing output. This is an unusually high share even by developing country standards, only exceeded by Rwanda (77 per cent) among African countries. Among other low-income countries in sub-Sahara Africa[2/] for which data is available, the corresponding share of food industry in total manufacturing value added ranges from 12 per cent in Lesotho to 65 per cent in Sierra Leone. The major products of the Namibian food industry are: fish products [mainly pilchards and rock lobster] accounting

---

1/ World Bank, World Development Report, 1989, p. 168.

2/ Ibid., p. 174.

Table 2.1: Manufacturing share of GDP, 1970-1987
(selected years)

Year	Total GDP at current prices (R millions)	Manufacturing (at factor cost)	Manufacturing (as a % of total GDP)
1970	336.4	15.6	4.6
1980	1,444.2	56.5	3.9
1981	1,506.0	76.2	5.0
1982	1,679.7	82.7	4.9
1983	1,779.0	93.5	5.2
1984	1,969.6	102.6	5.2
1985	2,551.0	113.2	4.4
1986	2,929.2	131.9	4.5
1987	3,130.6	157.4	5.0

Source: Adapted from Department of Finance, Statistical/Economic Review, 1988, Windhoek, 1989.

Table 2.2: Branch distribution of manufacturing output, workforce and number of firms, 1976-1980
(selected years)

Sector	Output (% of total) (1976)	Workforce (% of total) (1976)	Firms (% of total) (1978-1980)
Food and beverages	70.4	65.0	36.4
Wood and wood products	3.3	5.0	28.4
Chemical products	1.8	1.4	5.4
Metal products	17.1	15.6	18.0
Printing and publishing	1.2	2.2	4.2
Other	6.2	10.3	17.6

Source: United Nations Institute for Namibia. Namibia: Perspectives for National Reconstruction and Development, Lusaka, UNIN, 1986.

for nearly 75 per cent of the branch; meat products 20 per cent; butter and cheese 2 per cent; and other food and beverages products accounting for the remainder. The large establishments in food industry are found in the fish and meat processing industry and these firms are on the whole export-oriented. Smaller firms in the subsector tend to be oriented towards the domestic market.

The predominance of fish processing within the food industry stands out very clearly, just as the high degree of spatial concentration of activities (Annex Table A-9). Large-scale capital-intensive production is the hallmark of the fish and also meat processing factories. Fixed capital is currently valued at around R100 million in the former and R65 million in the latter (1983 prices), nearly all of it concentrated in factories. The production plants are fully automated, but canning, deboning, filleting and freezing require large labour complements at certain stages of the production process and are therefore labour-intensive as well; the larger canneries needing 500 or more production workers each and the meat plants 350-450. The two rock lobster factories, although largely unmechanized, are nevertheless viable as labour-intensive operations because of the high unit value of their product, frozen lobster, and at the current level of production they employ up to 300 each. However, workers are frequently taken on and dismissed in large numbers as production rises and falls. Since these factories account for perhaps half of sectoral employment even in their current reduced state, such variability constitutes a major disruptive factor in the lives of thousands of workers and their families.

Namibia has experienced fluctuations in its fish processing, reflecting the fluctuations in the supply of the major fish species, particularly pilchards. Overfishing of this stock in the late 1970s brought the fish canning industry to a virtual standstill. Many processing plants were sold and shipped to Chile, but overall capacity would still seem to be sufficient, even if some rehabiiitation may be needed. The stocks have partly recovered since the 1970s, and fish processing as a value added activity should remain important to independent Namibia.

The domestic supply of cattle for beef processing has been affected by RSA demand for Namibian cattle on the hoof. Along with wide price fluctuations, this has resulted in processing plants remaining idle for much of the time and occasionally running at full capacity. Facilities and cold storage standards have been upgraded to EC standards, and this might help the diversification of future exports.

Beside the big factories, most of the remainder of the food processing sector is in small-scale. Most of it concerns the processing of agricultural products for local consumption where the need for speed of delivery or prohibitive transport costs have given local producers some preference over RSA importers. Dairy production, which has been reduced largely to the supply of fresh milk, apart from a couple of small butter and cheese plants, was only saved from bankruptcy by nationalization under the aegis of the RSA parastatal First National Development Corporation (ENOK). The oil press and refinery, which in the early 1980s had a legal monopoly for the sale of cooking oil and supplies a sizeable part of sales of margarine through a subsidiary, was also sponsored by ENOK. Other significant producers include a large grain mill, a chocolate factory, several small producers of biltong, a brewery, a wine bottling establishment, and several soft drink bottlers.

The second most important manufacturing subsector after food processing is the metal products industry accounting for 17 per cent of total manufacturing output, which is high by African standards. The metal products subsector produces a wide range of products mainly for the domestic market such as structural steel, metal building components, metal construction materials, parts and bodies for road vehicles, and small repair and maintenance activities. A large part of the repair and maintenance firms' activities are directed to the mining industry. The same would be true for the firms producing crushing plants and parts for earth-moving machinery. Some of the firms serve the fisheries industry. The Walvis Bay boatyard, for example, is a specialist builder of inshore wooden fishing boats and has heavy engineering and machine repair capacity.

The metal products and related engineering industries can play a potentially important role in fostering industrial development, in diversifying the industrial base and in generally nurturing industrial entrepreneurship in Namibia. The emphasis could be on production of simple consumer goods and on essential products and repair required by agriculture, fishing, mining, transport, construction and industry itself.

Other manufacturing subsectors are relatively unimportant. There is a fairly large number of wood processing enterprises, but their impact on employment creation has been modest and the contribution to output is limited to 3.3 per cent. Most of the firms are small carpentry workshops. There are only a few wood products suppliers among Namibia's major enterprises (Annex Table A-9). Other subsectors include the chemical products, printing and publishing subsectors which account for less than 2 per cent of output each while the remaining subsectors accounted for 6.2 per cent. Thus the Namibian manufacturing sector is not only small but also lopsided with substantial gaps in industrial structure (e.g. textiles) and in need of expansion and diversification.

2.3 Manufacturing employment

The manufacturing sector does not provide significant employment for Namibia's formal economy. According to the First National Development Corporation (ENOK) in Windhoek, almost 6,000 people were employed in manufacturing industries in 1988. In companies under sole proprietorship, 1,193 men and 260 women were employed. In corporations, 3,706 men were employed and 628 women (see Table 2.3). If the small informal sector and part-time employees are added to this, the total would probably approach 8,000.

Employment in the Namibian industry can be divided into the following categories: (1) highly mechanised firms; (2) artisan workshops; and, (3) cottage workshops.[1/]

1/ See UNIDO, Industrial Development Programme for Independent Namibia - A Preliminary Report, Regional and Country Studies Branch, 1984 (Restricted).

Table 2.3: Employment in Namibia's manufacturing sector by education levels, 1988

Educational level	Male	Female	Total
Sole proprietorships			
Secondary school	102	52	
Some secondary school	188	63	
Some education	321	110	
Little/no education	582	35	
Sub-total	1,193	260	1,453
Corporations			
Secondary school	176	49	
Some secondary school	620	174	
Some education	929	128	
Little/no education	1,981	277	
Sub-total	3,706	628	4,334
Total	4,899	888	5,787

Source: First National Development Corporation, Windhoek, 1989.

Highly mechanised firms are usually the relatively large establishments (employing at least 20 people) whose output is usually exported. Output from these firms includes mineral processing, fish and meat processing as well as beverages and chemical firms. Most of the expertise - technological or managerial - remains with whites. Recently blacks have been given limited supervisory positions, but most black workers remain in unskilled jobs.

Artisan workshops generally serve the local market and usually employ less than 20 people. These establishments include bakeries, butcheries, and building material producers. There has recently been a trend to train more blacks for jobs in these establishments. Nevertheless, blacks are generally excluded from management in these firms.

Cottage workshops generally produce goods for the rural and tourist markets using traditional skills and local inputs. These activities include woodcarving, basketware, pottery and unlicensed beer brewing. Skills have generally been handed down by older family members and productivity as well as wages are often low.

Real wages for Namibians have not improved substantially during the past generation, although nominal wages in manufacturing for Namibians showed some increases in the early 1980s. Wage rates differ substantially from firm to firm and from town to town. Nevertheless, unskilled labour in the manufacturing sector typically earns about R200 per month, for semi-skilled R400 and skilled R600. White wage rates are probably in the R2,000 per month range.

A relatively large number of persons with higher level skills may leave for South Africa now after Independence has been attained. Moreover, there is likely to be a shift in the structure of manufacturing towards the production of more basic needs goods for domestic consumption by, among others, the food products, building materials and textiles subsectors. The textile industry would be a virtually new industry for Namibia. Both emigration and the probable expansion of certain industries point to an urgent need for expanding domestic training. A recent estimate of the industrial management and skill needs after Independence is shown in Annex Table A-17. Accommodating the increased demand for skilled and higher-level personnel will pose a considerable challenge to the new Government.

2.4 Exports and imports of manufactures

Namibia is an open economy and its foreign trade is of major importance. The share of both exports and imports is relatively high respectively 58 per cent and 55 per cent in 1987. Namibia has had a positive trade balance during 1985-1988 amounting to R179.5 million in 1988 compared with a record R450.6 million surplus in 1986. Namibia's external trade is closely interlinked with that of South Africa. Other major trade partners are Republic of Germany, Switzerland, the US and the UK.

The major proportion of Namibia's exports consist of mineral products (80 per cent in 1983) mainly uranium and diamonds (Table 2.4). Other export items are fish products (13 per cent), primarily fishmeal, while agricultural exports, mainly meat, are rather limited (8 per cent). Only a fraction of Namibia's exports consist of manufactures. Recent estimates suggest that some 5 per cent of exports are manufactured goods, primarily fishmeal, tinned fish and base metals. The main overall export markets are Switzerland (31 per cent in 1988), Republic of South Africa (25 per cent), Federal Republic of Germany (15 per cent) and the United States (5 per cent). The trade connection with Switzerland is so strong because most diamonds are exported via Switzerland for sale by the Central Selling Organization (CSO) in London.

In contrast to the low share of manufactures in total exports Namibia's imports consist overwhelmingly of manufactured goods (Table 2.5). The most important category of manufactured imports is motor vehicles, machinery and equipment. A large part of the energy and chemicals imports also consist of manufactured products, and the same holds true for imports in the food, beverages and tobacco category. South Africa is by far Namibia's largest supplier, providing it with some three-quarters of all its imports. The Federal Republic of Germany, the US and Switzerland are the other important suppliers to Namibia: the four supply virtually all of Namibia's imports.

Data on trade in manufactured goods underline the necessity of strengthening domestic processing and industrial production for domestic and regional markets. Namibia may consider a review of its trade linkages with a view to diversifying towards SADCC and PTA countries as well as EC countries within the framework of the Lome Convention and other developed countries.

Table 2.4: Composition of Namibia's visible exports, 1975-1983 [selected years]
(R millions)

	1975		1977		1979		1981		1983	
	Value	%	Value	%	Value	%	Value	%	Value	%
Agricultural products	89.3	24	164.6	23	129.2	13	117.8	13	74.0	8
Karakul pelts	18.6	5	28.6	4	59.6	6	27.2	3	18.5	2
Meat and meat products	70.7	19	136.0	19	49.7	5	81.6	9	46.3	5
Others (wool, etc.)	-	-	-	-	19.9	2	9.0	1	9.2	1
Fishery products	59.5	16	71.6	10	59.6	6	90.7	10	120.3	13
Fishmeal	44.6	12	43.0	6	19.9	2	36.3	4	64.7	7
Tinned fish	11.2	3	14.3	2	9.9	1	18.1	2	27.8	3
Others (lobster, etc.)	3.7	1	14.3	2	29.8	3	36.3	4	27.8	3
Mineral products	223.3	60	479.5	67	844.8	85	698.0	77	731.0	79
Diamonds	119.1	32	250.5	35	467.1	47	272.0	30	231.3	25
Uranium	-	-	14.3	2	268.4	27	299.1	33	323.9	35
Copper	59.5	16	107.4	15	29.7	3	36.3	4	64.8	7
Lead	26.1	7	57.3	8	39.8	4	45.3	5	46.2	5
Zinc and other minerals	18.6	5	50.0	7	39.8	4	45.3	5	64.8	7
Total visible exports	372.1	100	715.7	100	993.9	100	906.5	100	925.3	100
Visible exports as % of GDP at current prices	58		75		78		63		54	

Source: South West Africa/Namibia, Department of Finance, Statistical Economic Review, SWA/Namibia, 1984 (Windhoek, SWA/Namibia Inf. Service, 1984) p. 25. R.H. Green, Kimmo Kiljunen, Marja-Liisa Kuljunen, Namibia: The Last Colony (London, Longman, 1981) p. 281. W.W. Asombang, Export Marketing Strategies for Economic Development (Washington D.C., SADEX, 1980) pp. 14-15.

Table 2.5: Composition of Namibia's visible imports, 1975-1983 [selected years]
(R millions)

	1975		1977		1979		1981		1983		Average
	Value	%	Value	%	Value	%	Value	%	Value	%	%
Food, beverages and tobacco	62.8	15	113.5	21	117.1	18	193.7	19	185.6	19	18.9
Energy and chemicals, especially oil, coal, and electricity	83.8	20	129.7	24	172.5	28	305.8	30	293.0	30	27.9
Motor vehicles, machinery and equipment	146.6	35	97.3	18	98.6	16	234.5	23	224.6	23	21.1
Metals and metal products	41.9	10	43.2	8	49.3	8	102.0	10	97.6	10	9.1
Paper/paper products	8.4	2	16.2	3	18.5	3	30.6	3	29.3	3	2.7
Textiles	29.3	7	59.4	11	73.9	12	122.3	12	117 2	12	11.4
Other finished goods	46.1	11	81.0	15	86.2	14	30.6	3	29.3	3	8.9
Total visible imports	418.9		540.3		616.1		1019.5		976.6		100.0

Sources: South West Africa/Namibia, Department of Finance, Statistical Economic Review, SWA/Namibia, 1984 (Windhoek, SWA/Namibia Inf. Service, 1985) p. 24. Reproduced from W.W. Asombang, Trade Policy Options for Independent Namibia (Lusaka, UNIN, 1985). UNIN - Namibia: Perspectives for National Reconstruction and Development, Lusaka 1986.

2.5 Location of manufacturing firms

Namibia's 325 manufacturing firms are located primarily in or near the major urban population centres (see Table 2.6 which excludes Walvis Bay). There is very little formal sector manufacturing in the rural north, where half of the population lives. With 170 firms, Windhoek predominates followed by Swakopmund with 25; these two cities account for nearly two thirds of all Namibia's manufacturing firms. No other city or town has more than 16 manufacturing entities.

Table 2.6: Location of Namibia's manufacturing firms, 1987/1988 (excluding Walvis Bay)

Location (city or town)	No. of firms
Tsumeb	7
Otavi	5
Grootfontein	9
Otjiwarongo	9
Outjo	8
Khorixas	2
Omaruru	7
Swakopmund	25
Usakos	3
Karibib	4
Okahandja	16
Windhoek	170
Gobabis	8
Rehoboth	8
Mariental	3
Keetmanshoop	8
Karasburg	2
Lüderitz Bay	8
Gibeon	1
Other	22
TOTAL	325

Note: This survey listed no firms in Oshakati, although there are at least three such firms which should have been listed.

Source: First National Development Corporation, Windhoek, 1989.

A UNIDO study[1] shows that, in the early 1980s, Walvis Bay was the second most important manufacturing centre in Namibia. It had the largest concentration of fish processing industries in the country. Annex Table A-9 shows the crucial role played by Walvis Bay and it underlines the high degree of industrial concentration in the country.

The importance of the food processing industry is highlighted in Annex Table A-9 which shows manufacturing firms by ISIC category and location. The relatively high number of metal-working shops is also brought out. While these would constitute good basis for a modest metal goods branch serving the domestic market (e.g. for simple agricultural equipment), they could also play a key role in the provision of industrial services (repair and maintenance, etc.) to other manufacturing enterprises. The table also shows clearly that Windhoek is the only industrial centre with a full range of manufacturing industries. The structure of manufacturing in Walvis Bay, however, is not shown.

2.6 Ownership and investment

Except for the small artisanal and cottage industries, virtually all the modern sector manufacturing firms are owned by whites, usually by individuals or by families. Ownership by South Africans predominate. As indicated in Annex Table A-8 a number of major firms in the food processing industry are owned by the RSA parastatal ENOK. Among the smaller firms, a sizeable number of firms appear to be owned by citizens of the Federal Republic of Germany. Some of the RSA-owned factories are ultimately part of overseas companies.

In the absence of data, little can be said about investment trends. ENOK has tried to promote both large- and small-scale investment in Namibia, and has set up several ventures itself in the early 1980s. With ENOK support, "a handful" of foreign companies has invested in Namibia, according to the 1984 UNIDO study. Eight small industrial estates had been built by 1982. Some of ENOK's own ventures in the food industry have proved failures. Some of the enterprises have meanwhile been privatized. There appears to have been some re-investment and expansion by existing privately owned firms, in spite of the uncertainty with regard to the country's future. Re-investment has been too low to prevent growing obsolescence of industrial plant. It is unclear to which extent the wave of present investment involves investment in manufacturing.

In the post-Independence era the investment pattern of Namibian industry will need to be diversified. While investment by Namibians would be limited, joint venture collaboration agreements with suitable partners in developed countries involving training of potential Namibian entrepreneurs would be an important avenue. In other cases, the promotion of co-operatives in selected small- and medium-scale industries with external assistance could be considered. In any case, the important policy implication is that foreign investment must involve human resource development of Namibians if Namibian industry is to prosper with some degree of indigenization.

1/ UNIDO, Industrial Development Programme for Independent Namibia - A Preliminary Report, 1984, Regional and Country Studies Branch (Restricted).

3. INDUSTRIAL DEVELOPMENT POLICY OPTIONS

3.1 Industrial strategy

The new government endeavours to create a national basis for reducing economic dependence on the Republic of South Africa. The economic blueprint of SWAPO stresses that Namibia would continue to rely on private capital and foreign investment for its industrial development as Namibia does not have sufficient finance or technical and managerial expertise to generate reasonable rates of industrial expansion. SWAPO policy priorities envisage a change in ownership pattern in order to redress the colonial legacy of denial, exclusion and exploitation. However, SWAPO has ruled out large-scale nationalization. The new government endeavours to establish a balance between just economic return for the Namibian people and reasonable profits for investors.

Major objectives of SWAPO policies aim at: acceleration of economic growth; substantial employment expansion; greater justice in the distribution of national wealth; full participation of the Namibian people in the process of economic and social reconstruction; creation of an integrated national economy; and establishment of non-exploitative economic relations.

Within the overall perspective of national reconstruction industrial strategies and policies of the new government basically aim at establishing a self-reliant industrial sector by means of:

- exploiting local resources for the establishment of resource-based industries;
- promoting small-scale, artisanal and handicraft industries;
- increasing the participation of Namibians in industrial operations through training and personnel development;
- selective State participation in the ownership and management of industrial enterprises;
- establishing import-substitution industries where domestic demand permits;
- promoting export-oriented industries; and
- restoring regional balance in industrial development.

3.2 Perspectives for industrial policy[1/]

Existing manufacturing enterprises

There is a need to accord priority to existing manufacturing enterprises in the implementation of industrial development programmes. Owing to reasons of insufficient raw materials, limited market for finished products and capital flight to South Africa, many existing manufacturing industries are

---

1/ Presentation of information and analysis contained in this section are based on United Nations Institute for Namibia, Namibia: Perspectives for National Reconstruction and Development (Lusaka, 1986).

working far below rated capacity. Rehabilitation and restructuring of these enterprises will need to be based on in-depth analysis of factors that threaten the continuation of existing enterprises.

There is an urgent need to maintain industries in meat packing, fish processing, can production, maize milling, oil-seed crushing and light engineering units. Meat packing industries are vital for ensuring a steady market for processed meat. Although there exists overcapacity in fish processing, adherence to quality standards may enhance external demand, leading to optimal utilization of processing facilities. Maize milling and oil-seed crushing is needed to meet local demand and to save foreign exchange on imports. The new maize and oil-seed processing units can easily be expanded.

New manufacturing facilities

The establishment of new manufacturing facilities will depend, inter alia, on their special importance in the economy of independent Namibia. However, availability of suitable local and imported raw materials and other inputs, adequate internal and external markets, technical, scientific, accounting and managerial capabilities are the main determinants. In establishing new industries, Namibia will need to enhance its import substitution capacity. Rapid small-scale industrialization in the North, hitherto neglected, would need to be considered to correct regional imbalance in industrial development. In formulating and implementing industrial projects the government could define the kinds of products the country can produce efficiently at comparative cost advantage.

Namibia processes minerals for the construction industry, but there is no local production of cement. Current needs are being supplied almost totally from South Africa. A local cement industry might be feasible because of the availability of clay and gypsum. Concrete block production could emerge as a downstream manufacturing industry. Other potential uses of minerals which could be fully processed locally are ceramics, hand-made pottery, and crushed stone for gravel. There is also scope for increasing value added in diamond production.

Among the agro-industries, cream, cultured milk, butter, yoghurt and cheese are areas for potential expansion. Other potential agro-industries include grain mills, fertilizer plants, timber plants, edible oil refineries, beverage distilleries, food packing, etc.

The perspectives for industrial strategy will need to encompass a programme for rehabilitation of existing enterprises and promotion of viable industrial projects that befit the country's natural resource base. As part of the overall reorientation of the Namibian economy, several key issues pertaining to the future course of industrialization will have to be addressed. These include:

- an assessment of industrial development alternatives;

- examination of potential for domestic resource-based industries;

- increased attention to production for the domestic market;
- accelerated human resource development; and
- improvements in infrastructure.

Domestic resource-based industries may be the cornerstone for long-term industrial expansion. As Namibia's limited domestic market will constrain the potential for growth of domestic manufacturing, markets outside Namibia will have to be identified. Trade with the Republic of South Africa will most likely be somewhat curtailed for political reasons. Botswana and Angola may not show much increased demand for the types of goods Namibia is likely to produce for the medium term. But intensified trade with other SADCC members and other West African countries having a different resources endowment could be explored.

Within the domestic resource-based industries, agro-industries (composed primarily of fish and beef processing) will be a vital subsector. However, efforts would also have to be made to create the basis for developing new agro-industry branches, such as fruit/vegetable processing and cereal processing, and to revive dairying.

The domestic market will remain modest. Employment will not increase dramatically, at least in the short term, but if attempts are made to locate new firms in the north (where they are economically feasible) this would not only improve the supply situation in the areas, but also ease employment problems and raise living standards. Small- and medium-scale industries producing basic needs goods are likely to be feasible types of new industry. As both expertise and financial capital will be in short supply, the new government will require technical assistance and financial support.

A shortage of trained manpower is likely to have a negative influence on the performance of existing industries, and on industrial expansion. In the short term expatriates with the necessary skills will be needed; these may have to be recruited externally. Meanwhile, the training of Namibians should be expanded as rapidly as possible to enable them to take over positions of responsibility in all branches of the industrial sector. This could, inter alia, be undertaken by integrating training schemes with foreign investment projects.

An investment code is under preparation. There are indications that the new investment code will treat local and foreign private investment as the cornerstone to development. A host of attractive incentives is likely to be offered to investors in order to attract them to promising ventures in fishing, mining and light manufacturing.

Infrastructure will not generally be a constraint for industrial expansion, although improvements would have to be made in the north if industrial and general economic and social development is to be accelerated there. Major expansions are unlikely in the short run as the cost would be prohibitive. The demand stimuli provided to domestic industries by infrastructural works will therefore probably be quite limited, at least in the short run.

There is a great need to expand institutional support for industrial development. Although its future role is uncertain, the First National Development Corporation (ENOK) has prepared a list of potential projects, mainly aid-funded contract opportunities rather than investment proposals. The potentially important role of the Chamber of Commerce and Industry, commercial banks and the newly established autonomous Namibia Economic Policy Research Unit (NEPRU) is stressed. The actual functioning of government agencies in the independent country could be seriously hindered by the reduction (over 20 per cent of the 1988/89 budget) and likely withdrawal of the present Republic of South Africa budget aid; donor support is therefore required. The creation of a separate Ministry of Industry may be considered after Independence. Otherwise the new national development agency may be involved in the drafting of an overall plan for industrial development.

The following section will outline a number of elements that are likely to be part of the country's future industrial development strategies.

3.3 Longer-term industrial objectives and options

Namibia's long-term industrialization strategy will likely include the following major goals:

- strengthening industry's role in the diversification of the economy;
- establishing local resource-based industries, especially rural industries in the north, to redress the imbalance of industrial location;
- selectively promoting State participation in certain key industrial sectors, where private indigenous entrepreneurship and capital is lacking;
- promoting or strengthening small-scale, artisanal and handicraft industries;
- expanding industrial employment and earnings;
- promoting increased participation of Namibians in industrial firms through training and personnel development;
- establishing import-substitution industries where domestic demand and economic viability permit;
- acquiring appropriate technology for balanced, sustained industrial development.

The small-scale and cottage industries sector would contribute to economic development through import substitution, providing basic human needs goods and employment in both urban and rural areas. They would help to save foreign exchange, and some could make a direct contribution to foreign exchange earnings. Such branches of small-scale and cottage industry would include: manufacturing of burnt clay bricks and of pipes and sanitary equipment made of ceramics; artisanal wood working, particularly in Ovambo,

Kavango and Caprivi; village-level mechanical grain milling; manual production of oil from local nuts; introduction of karakul wool spinning and weaving, especially in the Rehoboth, Bethanie and Gibeon areas; processing leather into shoes and bags, and small-scale tanning; furniture and kitchen utensils; tailoring shops and small workshops for processing local semi-precious stones for sale to tourists and for export.

The types of support required for the manufacturing sector, in particular the small-scale and cottage industries, would include:

- finance and credit;
- technical expertise and advice;
- managerial and technical support;
- equipment and inputs, part of which would have to be imported;
- informal and formal training;
- appropriate extension agents; and
- government procurement favouring, where possible, small and cottage firms over larger firms.

Although external assistance will be required for the provision of all types of support, its role could be crucial in the case of finance, credit and training. As noted above, there is a strong tendency to repatriate profits and other financial resources. These repatriations have accounted for up to 20 per cent of GNP, and the process is likely to be exacerbated by Independence. While the Government of Namibia will have to make every effort to retain or gain the confidence of private enterprises, it will be unavoidable to rely on the international community for the funding of a number of development projects.

4. RESOURCES FOR INDUSTRIAL DEVELOPMENT

Namibia has untapped human and physical resources which can be used for industrial growth and development after Independence. The challenge which the Government will face will be how to marshall these resources in the most effective way in order to achieve the goals of overall economic security, growth and equity.

4.1 Human resources

Namibia has a population of 1.2-1.6 million people - the exact size is not known because of irregularities during the last RSA census. Although the annual population growth rate is close to 3 per cent, Namibia still has one of the world's sparsest patterns of human settlement, with a density of about 1.5 people per square kilometre. Approximately 26 per cent of the country's population is urbanized, and since the 1960s the rate of urbanization has increased, partly as a consequence of RSA employment practices referred to below. Rural industrialization could help to reduce the flow to urban centres.

Namibia has a relatively high dependency ratio, 49.4 per cent implying that nearly 500 out of every 1,000 people are under the age of 15, or 65 and above. This ratio varies from region to region, but is highest in the rural areas. Namibia's economically active population (excluding the jobless, retired people, students, housewives and pre-school children) is low in both absolute and relative terms. On a country-wide average, only between 200-400 people per 1,000 could be categorized as "economically active". Namibia thus has a total labour force of perhaps 250,000-650,000 people. There are very few Namibians with industrial or other higher-level skills (see Table 4.2). Small-scale subsistence agriculture (which probably provides only 2-3 per cent of the country's GDP) is the occupation of most black Namibians, perhaps one half of the total population (see Table 4.1). About 25 per cent of the male rural population supplements household incomes through low-paid migrant work in the mines, large-scale commercial farms, and the fishing and manufacturing industries.

Prior to Independence, apartheid practices of the RSA regime ensured discrimination against blacks in the labour market. The Republic of South Africa developed a "contract labour system" whereby impoverished labour was recruited from the overcrowded subsistence agriculture areas to work on the large white commercial farms or in the urban modern economic sectors. The migrants were not integrated into the wider society. In many cases they were not even allowed to live with their families or dependants who were forced to stay behind in their respective "homelands" (Bantu reserves). The result has been (a) that black workers generally remained in the semi- or unskilled areas and whites continue to hold the vast majority of skilled jobs; (b) social disintegration and economic decline in the subsistence agriculture areas.

Table 4.1: Employment by economic activity, 1977

Activity	Percent of total employment
Small-scale agriculture	50.3
Large-scale agriculture	11.8
Fishing and fish processing	1.6
Mining	4.7
Manufacturing and public utilies	2.6
Construction	3.2
Transportation and communication	2.6
Commerce and finance	5.2
Government	6.3
Domestic services	7.3
Others	4.4

Source: R. H. Green, Manpower Estimates and Development Implications for Namibia (Lusaka: UNIN, 1978) and W. van Ginneken, Incomes and Wages in Namibia (Geneva: ILO, 1985).

Table 4.2: Education/training estimates for the labour force (early 1980s)

Level	Whites	Coloureds	Blacks	Total
University or equivalent	5,000	25	10	5,035
Other tertiary	5,000	12	10	5,022
Secondary or equivalent	10,000	3,000	200	13,200
Other post-primary	7,500	3,000	2,000	12,500
Complete primary	9,000	24,000	19,000	52,000
Substantial primary	negligible	9,500	110,000	119,500
Negligible or nil	negligible	9,500	300,000	309,500
TOTAL	36,500	48,550	431,220	516,757

Source: United Nations Institute for Namibia. Namibia: Perspectives for National Reconstruction and Development. Lusaka: UNIN, 1986 and the Institute for International Education's Conference on Education for Namibians, 1989.

During the Independence transition period, thousands of refugees have returned from Angola and Zambia under UNHCR auspices. Moreover, the loss of incomes due to the RSA Defence Forces withdrawal (these forces spent heavily in the northern area) has added to the number of people, numbering perhaps 60,000, who looking for new employment, of which no more than one third can be absorbed by the modern sector. Additionally, there is little prospect of integrating these people into the traditional rural economy in the short term. A public works programme might be considered in order to prevent the further spread of unemployment.

Over the years, Namibia's educational system has been closely meshed with that of Republic of South Africa. Since 1948, education has been based on the apartheid system. In the 1970s the Republic of South Africa introduced its "non-racial syllabus", which was quickly adopted by the white schools. But because the new system required new textbooks and teacher training, change was slow to come to black schools. And although in 1980 the Government established educational authorities in the 10 "homelands", these did not promote the development of a common education system. The educational system is changing, and in May 1989 the Administrator General (under pressure from the UN Special Representative) repealed the educational responsibilities of the second tier "homeland" authorities.

Traditionally, the authorities have spent five times the amount of money on white students than on blacks, and because of the need for poorer children to perform a variety of tasks at home, the drop-out rate for black pupils is extremely high. Secondary education is scant; only five schools offer vocational training to blacks. Until recently, all instruction was either in a local language or Afrikaans. There have been calls to make English both the national language and the language of instruction after Independence.

The shortcoming of Namibia's educational system can be summarized as follows. Of the nearly 20,000 students who left school in Namibia in 1981:1/

- 33 per cent were functionally illiterate;
- 45 per cent could proceed only to unskilled jobs;
- 17 per cent could be trained as skilled workers;
- 5 per cent could proceed to advanced training.

Many Namibians - principally exiles - have taken advanced training overseas under the auspices of the UNHCR, UNIDO, Commonwealth Namibia Programme and bilateral agreements between SWAPO and a number of Governments and private foundations. Two UN bodies have provided considerable training to Namibians: the United Nations Institute for Namibia, founded in Lusaka in 1976 has trained over 1,000 Namibians for jobs primarily in Government, but which will also be useful in industry; and, the UN Vocational Training Centre for Namibia, founded in Angola in 1983, provides courses in carpentry and

---

1/ According to Ellis, J., Education, Repression and Liberation: Namibia. London: CIIR, 1984.

fitting and turning. However, Namibia's human resources will need training, in virtually all areas, if the new State is to achieve economic independence through industrial growth and development. Training programmes will have to take account of the needs of a reoriented economy. The most strongly felt personnel shortages will be at the higher levels, as many of the whites now holding key positions are likely to leave the country. Training and education will be a major priority for the new, independent Government.

4.2 Minerals

At Independence Namibia inherited a mineral-dominated economy. It is rich in minerals, indeed it is Africa's largest non-fuel mineral producer. It is the world's leading gem-quality diamond producer, accounting for some 30 per cent of world output. Namibia has the world's largest uranium mine and some of the largest known tin and lithium reserves. It is Africa's second largest producer of lead, its third largest producer of cadmium and fourth largest source of zinc and copper. Other important minerals include hydrocarbons (coal, gas and perhaps oil), tungsten, vanadium, cadmium, silver, gold, columbite/tantalite, germanium and beryl. Other, non-metallic minerals include pyrites, lithium ores, fluorspar, mica, marble, sea and sodium salts and guano.

Minerals typically comprise some 30-40 per cent of GDP, and are the country's largest export and source of foreign exchange earnings, accounting for 72 per cent of export earnings, or $620 million, in 1988. In 1985 mining accounted for about half of the private sector economic activities. Taxes from minerals have ranged from R52.8 million in 1976 to R879.1 million in 1988. However, revenues from mining, as a percentage of total Government revenues have declined since 1977, from providing over 60 per cent of total taxes paid in Namibia to about 28 per cent in 1986.

Mining companies have continued their investment in mineral explorations in Namibia as it approached Independence. In 1987 they invested R21 million, and increased that to R39 million in 1988. According to the Department of Economic Affairs in Windhoek, 229 new prospecting licences were issued in 1988, up from 197 in 1987, and 1,670 new claims were registered, up from 580 in 1987. De Beers invested R225 million in expansion and a number of smaller mines have also increased capital investments.

Namibia's major mining products - in terms of employment and output - are diamonds, mined by Consolidated Diamond Mines (CDM) owned by De Beers, uranium, mined by Rossing Uranium Ltd (RUL), owned by a consortium led by Rio Tinto Zinc (RTZ), and base minerals - principally copper and lead - owned by Gold Fields Namibia, Ltd. (see Table 4.3). Tsumeb is the major operating division of Gold Fields Namibia, a virtual subsidiary of Gold Fields of South Africa. Together CDM and RUL, both foreign-owned, contribute about 80 per cent of the country's total mining revenues. Namibia's minerals are marketed primarily to Western Europe, Japan and the United States.

The Government may establish a comprehensive mechanism to monitor the extraction of minerals. A study of the structure and operations of the mining industry has already been announced by the new Government. The need for this is illustrated by a controversy under the RSA colonial administration. In 1982 the Thirion Commission was established - by the Republic of South Africa's

Table 4.3: Namibia's major minerals: production 1978-88

Mineral	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Diamonds ('000 carats)	1,898	1,653	1,560	1,248	1,014	963	930	909	1,009	1,019	938
Uranium oxide (short tons)	3,500	4,980	5,250	5,160	4,910	4,079	4,079a/	4,000a/	4,000a/	4,200a/	3,600a/
Copper (blister) ('000 tons)	46	43	40	40	50	54	49	47.6	42.3a/	37.7	42.2
Lead (refined) ('000 tons)	40	42	43	42	41	35	29	38.5	39.5a/	40.6	44.4
Zinc (concentrate) ('000 tons)	37	29	25	36	36	29	33	57	40a/	37.6	34.2
Silver (tonnes)								98	106	75	108

Source: Adapted from Sparks, Donald L. and Murray, R. Namibia's Future: The Economy at Independence. (EIU Special Report No. 197) London: The Economist Intelligence Unit, 1985, The Economist Intelligence Unit, Namibia, Botswana, Lesotho and Swaziland, Second Quarter 1989, CDM and De Beers annual reports and information supplied by Chamber of Mines, Windhoek.

a/ Estimates.

Administrator General - to investigate irregularities in diamond mining and its taxation. At that time, Namibia depended on the industry to supply it with all its data, and had no way of verifying the accuracy of this information. Further disclosures to the Commission in 1984 indicated that the territory in fact had little control over the industry, and that extensive transfer pricing by De Beers and CDM may have occurred. Namibia may have lost, among others, up to R1 billion in taxable diamonds sales in the early 1980s, although the exact amounts may never be known. The Commission pointed to another practice, overmining. Evidence suggested that CDM overmined during the 1970s, and that the deposits are being rapidly depleted. CDM denied that it engaged in transfer pricing, or that its mining levels were inappropriate or damaging to the country's future economy, citing its recent investments in off-shore exploration and recovery facilities. De Beers mining rights do not expire until 2010, but the company will be expected to enter into negotiations with the new Government over a number of important issues. For the mining industry as a whole, tighter Government control and/or higher taxes seemed likely at Independence, but private enterprise would basically continue to play the key role in the industry.

Diamonds

Diamonds are the most important mineral in Namibia, contributing about 25 per cent of its exports. The diamond industry is the country's largest single employer. Diamonds are not found underground, where they typically are located elsewhere in the world. Rather, they have been deposited at the Orange River's mouth at the Atlantic Ocean, where over the centuries they washed down from the Kimberley Fields of the Republic of South Africa. Mining operations must deal with keeping the ocean out while clearing away vast amounts of sand. For every carat recovered, some 23 tons of sand must be removed from the shore.

Ownership and marketing Namibia's diamonds is complex and secretive. CDM sells its diamonds via the Diamond Producer's Association, which is partly owned by the RSA Government. The gems are then sold to another De Beers company, the Diamond Trading Company, which organizes sales through the Central Selling Organization in London.

CDM's diamond production declined in 1988, from 1,019,636 carats to 938,275. This decline occurred despite CDM increasing the amount of material treated, 16 million tons, up from 13.4 million tons. The average grade of diamond recovered was only 5.8 carats per 100 tons, compared with 7.6 carats in 1987 and 16.7 carats in 1976, and at current extraction rates, the deposits will be exhausted in fifteen years time. But the price level of diamonds increased so that CDM recorded a R115 million after tax profit on R2.23 billion, compared with an after tax profit of R58 million in 1987.

In 1989 De Beers announced the development of a new mine at Elizabeth Bay, 30 km south of Lüderitz Bay. It is expected to cost R135 million and produce 250,000 carats annually. The stones there are reportedly 95-98 per cent gem quality. Facilities there will employ 350 people. De Beers had previously begun a new, R90 million mine inland, at Auchas on the north bank of the Orange River. De Beers gold mine near Karibib in central Namibia is scheduled to begin operations shortly. The open cast mine is expected to produce 1.8 tons of gold annually, with an estimated 13-year life based on initial reserves of 10.1 million tons (with an average grade of 2.2 grams of gold per ton). This mine may create about 200 new jobs.

Uranium

The Rossing mine, located about 60 km inland from Swakopmund is the world's largest single uranium producer, with maximum annual output of perhaps 7,000 tons. It is currently operating at approximately 65 per cent capacity. Rossing is owned by the UK-based Rio Tinto Zinc (RTZ) and other investors from the Republic of South Africa, Canada and France. As with diamonds, Namibia currently has little control over uranium exploration or overseas sales.

Rossing's output is sold on long-term contract basis to EC countries, Japan and Taiwan Province, although RTZ will not disclose the identity of its buyers. The US Department of Energy has estimated that in addition to the UK, the major customers were France (buying 11,000 tons of uranium oxide from 1981 to 1990), Japan (15,860 tons from 1984 to 1990) and the Federal Republic of Germany (10,600 tons from 1984 to 1990). Because of the uncertainty surrounding the future of nuclear energy in a number of countries, the prospects for further uranium development are not known.

Despite lower production, Rossing Uranium's earnings improved over 1987, according to RTZ which controls 46.5 per cent equity of the company and provides management and technical services. Rossing's output in 1989 was probably about 3,000 tons, down from perhaps 3,800 tons in 1987. Rossing provided RTZ with about R180 million profit, a 60 per cent increase of the previous year. According to RTZ's local director of metals, Rossing can play "an important part in the new era" of Namibia, as it already contributes about one fifth of private sector salaries and 17 per cent of GDP.

Base metals

Between 85 - 90 per cent of Namibia's base metal production is from the mines at Tsumeb. The major metals produced are copper and lead. The Tsumeb Corporation was consolidated in 1988 to include Berg Angus and Tsumeb, into a new company Gold Fields Namibia, Ltd. Namibia produces about 2 per cent of Africa's copper, but the smelter at Tsumeb was only operating at about 50 per cent capacity in the mid 1980s. Some of the copper concentrates which are processed in Namibia are imported from the Republic of South Africa. Namibia has about 670,000 tons of lead ore reserves, about 1.5 per cent of the world's total (and perhaps 20 per cent of Africa's total reserves). Lead has a number of uses after refining, including batteries, paints, cable coverings, ammunition, solder and building construction. Tsumeb's sales hit a record level of R363 million in 1988, due primarily from improved world prices for base metals. These sales translated into an after tax profit of R58 million, up from R20 million in 1987.

4.3 Agriculture

Namibia's agricultural sector is divided between capital-intensive, large-scale "modern" versus communal, subsistence "traditional" methods of production. Large-scale agriculture - usually found in the best farming areas of the country - typically accounts for some 10 per cent of GDP and exports, and is controlled primarily by white ranchers. There are now some 5,200 commercial farms owned by about 4,500 individuals and businesses. Some 48 per cent are owned by absentee owners. Livestock ranching contributes some 85 per

cent of all agricultural production, although this branch has declined in recent years due to poor weather conditions and overgrazing. Gross output from commercial farming has increased from R152 million in 1976 to R188 million in 1981 (see Table 4.4).

Table 4.4: Gross output from commercial farming, 1976-1981
(R million)

Year	Karakul	Sheep	Wool	Other	Total
1976	50.2	86.3	2.6	13.3	152.4
1977	36.2	78.6	2.9	14.9	131.6
1978	34.3	79.8	3.2	16.1	132.9
1979	49.7	82.7	2.3	17.1	148.8
1980	42.8	107.8	2.8	30.6	184.0
1981	20.1	130.5	2.5	35.2	188.3

Source: Windhoek Observer (31 March 1983).

Most black Namibians are involved in agriculture. Approximately 120,000 heads of households are directly engaged in subsistence farming, and when their dependents are included, at least 700,000 Namibians are dependent on subsistence agriculture. However, the traditional agricultural sector generally only contributes some 2-3 per cent of GDP. Cattle from this sector is generally not slaughtered for export, but consumed locally. Subsistence crops include beans, potatoes and maize. The urban population is largely dependent on imported food.

Under the RSA regime, land was expropriated on a large scale for white settlers. Ranches owned by white ranchers covered approximately one-half of all arable land. Subsistence farmers occupy only 20 per cent of the good ranching land. In the less arid north planting and cattle herding have been disrupted by the war.

The drastic reduction of land for subsistence agriculture has forced large numbers of farmers to become low-paid migrant workers. After Independence, some redistribution of farmland is likely to be a priority of the new Government. To an extent, production is likely to be reoriented, to improve the supply to the domestic market, to enter new export markets, and to maintain or restore the ecological balance. Recently, planning of a 16,000 ha agricultural project for some 2,000 people has been initiated.

Namibia's agriculture will remain vulnerable to climatic conditions. Agricultural development strategies could be adapted accordingly. Under RSA rule, according to a UNIDO study, "in stock-rearing, overall rancher strategy has been to maximize production by stocking pastures to the full during a good rainfall sequence, then offloading surplus stock in large numbers during drought. Such a policy leaves them at the mercy of market gluts and low

prices which their oversupply worsens. It also risks ecological damage...".[1] Such stockbreeding methods should therefore be phased out, and a proper extension service, including agricultural branch, will have to be built up. Marketing of produce from small farmers will also need to get more attention.

4.4 Fisheries and marine resources

Traditionally, marine fishing has been Namibia's third most important economic sector, after mining and agriculture. If properly managed, fish represents an important renewable resource, and potentially it offers one of Namibia's most important prospects for industrial development if export markets can be developed. Fisheries now contribute as much as 20 per cent of exports and fish processing is one of the major industrial activities. It has been an important source of jobs, and there is significant room for expanded employment, particularly in the more labour- intensive fish processing sectors, as Namibia's control over marine resources will expand from 12 to 200 miles by establishment of an Exclusive Economic Zone (EEZ).

The cold waters of the Benguela Current off Namibia's coast are rich in fish. Some of the world's largest stocks of pilchards (sardines), anchovies, tuna, maasbanker and mackerel are found in these waters; indeed, in the mid-1970s Namibia was the world's largest producer of canned pilchards. Large-scale, capital-intensive operations based on Walvis Bay emerged during the 1950s and 1960s. However, overfishing by RSA ships - and to a lesser degree other foreign trawlers - in the late 1970s dramatically reduced a number of species, especially pilchards, traditionally the most important catch. For example, 676,000 tons of pilchards were caught in 1969, but by 1980 the total had been reduced to only 10,247. As a result of conservation efforts, pilchard catches have recovered to a limited extent and in 1987 some 62,000 tons were caught (see Table 4.5). The levels remain far below their 1960s and early 1970s levels, however. With the decline of the pilchard stock, deep sea trawler fishing has become the major force in the marine fisheries industry. The fish fleet, mainly operates from Walvis Bay. There are also about 200 foreign boats working the waters at any given time. Estimates of maximum output and sales of fish products are provided in Annex Table A-15.

Pelagic fish generally are not eaten in Namibia. Instead, such fish is mainly used to produce fish meal for cattle or fertilizers. Despite protein deficiency found in many coastal areas, fish as a source of protein has never been widely accepted.

Three companies have a major share of the local fishing industry, Sea Products SWA (SEASWA), South West Africa Fishing Industries (Swafisn) and Willem Barendsz. SEASWA is now a part of RSA owned Barlow Rand company. With the pilchard declines of the 1970s and early 1980s, many canning companies moved their operations from Walvis Bay to Chile. Some new white fish processing facilities, however, have been built in the past few years.

1/ UNIDO, Industrial Development Programme for Independent Namibia. Vienna - a Preliminary Report, Regional and Country Studies Branch, 1984, p.58 (Restricted).

Table 4.5: Namibia's fish catch, 1969-1988 [selected years]
(tons)

Type of fish	1969	1980	1981	1982	1983	1984	1987	1988
Pilchards	676,000	10,247	51,293	49,476	42,766	55,605	62,687	59,260
Anchovy	180,000	187,108	197,359	83,626	183,428	13,685	377,266	114,748
Mackerel	2,000	38,587	3,878	67,088	110,215	90,401	34,546	171,520

Source: Sparks, Donald L. "Namibia's Coastal and Marine Resources Potential" in African Affairs, The Journal of the Royal African Society, January 1985, pp. 477-496; Sparks, Donald L. and Murray, R. Namibia's Future: The Economy at Independence, (EIU Special Report No. 197) London: The Economist Intelligence Unit, and EIU, Namibia Country Report No. 1, 1989, London: Economist Intelligence Unit, 1989.

Virtually all of the fishing industry (including processing, fleet repair facilities and general infrastructure) is located in Walvis Bay, and to a lesser extent Lüderitz Bay. Rock lobster processing, seal pelt preserving and seaweed processing are located in Lüderitz Bay, while the vast majority of other activities is found at Walvis Bay. An agreement on Walvis Bay with the Republic of South Africa is of crucial importance, as the cost of establishing a new fishing base would be high. There would be several options for Namibia: creating a new fishing town in the north; using one of Angola's fishing towns as a temporary measure; or developing the port of Lüderitz Bay, in the south. However, industry at Lüderitz Bay must depend on a desalination plant for water and a small oil-fired power station for electric power. There are no containerized loading facilities or large storage facilities. Due to rapid silting, the port cannot handle deep water vessels. A final alternative would be to establish extensive off-shore facilities for processing (production, freezing and canning). Yet such a course would be almost prohibitively expensive, and would require substantial foreign support in the form of private equity interests, or foreign economic assistance.

Other resources found in the marine zone include guano on the 12 off-shore islands, and a variety of potential of fuel and non-fuel mineral resources, the exploration of all of which will require capital-intensive technologies and co-operation from the international development community.

4.5 Energy and water

Present supply and utilization

Sufficient energy and water supplies will be vital for Namibia's industrialization efforts. Energy and water needs will be most pressing in the north, the sources for energy generation and water for irrigation are located in the north, and industrial expansion is most likely to take place in the north. But at present, the energy and water distribution network serves RSA priorities. Attempts at more widespread geographical distribution would require expensive new transmission and distribution networks. Because of this, and because energy and water will be linked to the Government's broader economic development plans and objectives, new industrial requirements may not necessarily be met in the short run.

Energy

Virtually all of Namibia's coal and petroleum is imported from (or at least through) the Republic of South Africa. The South West Africa Water and Electricity Corporation is responsible for the bulk sales to Namibia's major consumers, and the pricing is done by the South African Electricity Supply Commission. Pricing and allocation decisions have been made by these two bodies for the benefit of the country's mining industry.

Currently, Namibia's energy use is skewed by population group, economic activity and economic sector. Over 50 per cent of all energy is consumed directly by the mining industry. Most of the country's energy goes to the major urban centres, not to the north where over 50 per cent of the population resides. One-fifth of total energy consumption comes from charcoal, which is virtually the only source of energy for most of the black rural population.

According to a UNIN study, in 1980 Namibia's total consumption of energy by manufacturing (excluding fish processing) included 45,000 tons of coal, 400 tons of gasoline, 1,700 tons of diesel and 125 million kwh of electricity. The construction and services sectors were responsible for some 11 per cent of Namibia's demand for commercial energy, using 67,000 tons of coal, 100 tons of gasoline, 1,200 tons of diesel and 230 million kwh of electricity.

Namibia's electric power generation has changed radically in the past decade. Prior to 1982 about 70 per cent of all electricity was produced by coal-fired generation stations. Since 1983, when the Ruacana station was completed, hydro-electricity stations can produce about 53 per cent of the country's electricity needs, coal-fired 42 per cent and oil-fired 12 per cent. Manufacturing was the major user of coal-generated electricity, accounting for 66 per cent of the total use.

Water

It is obvious that water supplies in Namibia, basically a desert nation, are precarious at best. Depletion of groundwater has already necessitated increased controls on the spacing of boreholes and the rate of water extraction in some areas. However, water is less of a current and potential problem for the northern part of the country. During the past decade, water

demand from the mining industry has slackened, while urban household and agriculture demand has increased by about 10 per cent. Mining demand has decreased since 1980 because of several mine closures and the reduced demand by Rossing, which traditionally uses some 80 per cent of all the mining industry's water. Namibia has experienced some success in water recycling. For example, Walvis Bay's reclamation plant can recycle nearly 25 per cent of the capital's water needs.

Energy and water use in future industrialization

Namibia's economy will continue to rely on mining and commercial agriculture after Independence, and both will need the majority of energy and water supplies. The manufacturing sector in Namibia is currently small, and uses only some 10 per cent of total energy consumption. After Independence, and with a move toward more rapid industrialization, this trend will change. As other primary industries grow and develop, the resulting demand for energy - of all types - will increase.

Namibia may want to develop its energy resources both for export and potential increased domestic demand. During the 1970s, considerable off-shore oil exploration was undertaken by US firms, under the auspices of the Southern Oil Exploration Corporation, a South African parastatal. In 1974 a Texaco-Chevron concession found methane gas at the Kudu fields about 150 km from the mouth of the Orange River. However, there has not been any additional exploration because of the uncertain political situation. Private oil companies estimate that the Kudu field could be the most promising offshore gas deposits in southern Africa, with a potential output of 1,000 million cu. ft. per day for 20 years. Many foreign oil firms are already preparing to lobby the new Government for exploration rights for areas offshore and inland, particularly near the Etosha Pan in the north. Namibia has considerable known coal reserves, and the potential for a small coal industry. Finally, the country has an arid climate and a long, exposed coastline. Therefore, the potential for solar and wind energy could also be explored.

Namibia may want to try to better ensure the long-term supply and distribution of water. While the nature of this arid country limits the possibilities, there are several projects that could be undertaken: (1) making more use of border rivers; (2) eliminating mining contamination of underground water by passing strict environmental protection laws; (3) increasing recycling; (4) investigating the use of labour-intensive local borehole/pumping schemes; and (5) developing mini-hydro projects. Finally, a thorough assessment of water requirements should be part of every feasibility study for new manufacturing projects.

4.6 Transport and communications

Namibia has a good transport and communications network for the activities that dominate the economy at present. The Namibian railway network consists of 2,600 km of track and apparently sufficient rolling stock. Some of the network is now very old, and in need of rehabilitation. This has, however, been postponed by the RSA railway authorities, partly because of the deficits incurred while operating the Namibian network, partly (presumably)

because of an unwillingness to invest in a country soon to become independent. According to the 1986 UNIN study referred to above, "the imbalance of imports and exports and the specialized nature of petroleum and live cattle cars" must be blamed for at least part of the deficits. It is conceivable that a more balanced approach to development in independent Namibia would reduce the cost of operating the network. At present, the Namibian railway system is only connected to the Republic of South Africa. A trans-Kalahari railway link with Botswana is being contemplated. Although very costly, it would help to intensify economic co-operation with SADCC countries, and would also render these less dependent on the RSA network, although the Walvis Bay issue would also have to be solved.

Walvis Bay is the only port capable of handling maritime traffic on a large-scale. It handles almost all of Namibia's trade. The port of Lüderitz Bay is very small, and located far away from the major concentrations of population and economic activities. Swakopmund, near Walvis Bay, is also small, and has not been used as a port for many years. Expansion of Lüderitz Bay and/or Swakopmund would be very costly. The construction costs of a new port, including the connections to the hinterland, would be prohibitive. Much therefore depends on the future status of Walvis Bay.

In 1986, the country had a road network of some 42,000 km, of which 90 per cent are gravel or dirt roads, usually of good quality. Like the railway network, the road network primarily serves the RSA-oriented economy, and in recent years was expanded to serve the activities of the RSA armed forces. The heavily populated subsistence agriculture regions of the North, conversely, have only few road connections. Road connections with neighbouring countries, the Republic of South Africa excepted, are few. Independence and concommitant shifts in development and external trade priorities are likely to result in new priorities in road construction. Telecommunications are good by African standards. Again, the network is heavily oriented to serving RSA interests at present, and improvements would be needed in black rural areas.

5. PROSPECTS FOR RESOURCE-BASED INDUSTRIALIZATION

There are untapped resources which independent Namibia could use more intensively to develop its manufacturing industry covering both crops, livestock, fish and minerals.

5.1 Prospects for agro-based and small-scale industries

Agricultural development will be a high priority issue at Independence. Agro-based industries to increase value added and promote rural development would have an important role in an overall agricultural development programme. Agriculture can play at least three roles in Namibia's industrialization efforts: (1) it can act as a supplier of local raw materials for industrial processing; (2) the agricultural sector can be a major user of industrial output from other sectors; and (3) it could become a source of income which would stimulate demand for locally-produced industrial consumer goods.

After Independence, Namibia will be in a position to import and export more freely, being no longer forcibly tied to the RSA market. A number of smaller branches of agriculture could grow after Independence. These include pig and poultry breeding, vegetable growing and dairying. Diary produce has a great deal of growth potential. Namibia was previously a net exporter of dairy products, but now only supplies fresh milk, mainly for the richer population. Dairy products such as fresh milk, cream, cultured milk, butter, yoghurt and cheese are areas for potential expansion. Further, tinned and powdered milk could be an area of diversification, given the limited number of homes with electricity and refrigerators.

A number of other branches could also be developed. For example, irrigated orchards (mainly at the Hardap Dam and in the Otavi highlands, as well as specific areas in the far north) using imported fruit species such as oranges or indigenous species could provide inputs for small-scale jam and jelly production. Certain fruits, such as dates and apricots can be dried and packed, and made available for export. Other potential agricultural activities and products include forestry, herbs and roots, game, angora wool, tea, cotton, sisal and rice. Each of these can be the basis for labour-intensive industries. For example, cotton production could encourage a cottage cloth industry. A timber-based industry could include furniture making, building materials and small-scale crafts. The development of many of these activities has been limited by the war in the north, where most of this development is likely to occur, and the linkage with RSA has typically precluded local production.

Other potential agriculture-related projects include grain mills, fertilizer plants, timber plants, edible oil refineries, beverage plants, distilleries, food packaging, processing and canning factories and the production of basic agricultural tools. There is a wide range of industrial inputs to agriculture which are well suited to local small-scale production, including metal products (hand tools, wire), farm implements (hoes, axes) and small machines (animal-drawn ploughs, pumps).

Currently the country exports unprocessed karakul pelts for auction in London. The drop in world prices for karakul pelts has led to a strong reduction in karakul breeding. Some of the karakul earnings could possibly be

recouped if the pelts are to be exported as finished garments, and the potential for joint ventures in this industry could be explored. The new Government may also decide to gradually end exporting cattle on the hoof to the RSA. At present, nearly half of Namibian cattle marketed and two-thirds of small stock are sent to the RSA. If Namibia reduced this amount it could increase domestic processing - such as deboning or canning - and add to export potential. Namibia already exports 10,000 tons of chilled and frozen beef annually, and Botswana, in a similar position, has been able to diversify its foreign markets. Namibia is negotiating an EC beef quota of about 20,000 tonnes.

Namibian agro-industrial production will, at least for the medium term, remain constrained by the limits of local processing capacity. The ultimate contribution to employment of agro-based industrialization will remain modest. There are areas, however, where Namibia will be able to increase its exports, for example, with processed beef products, where it will have a comparative advantage over some of its neighbours (except Botswana).

In addition, there are a host of other small-scale industries Namibia could consider for the short and medium term. They include:

- soft drinks, including bottles, flavouring, etc.;
- veterinary products;
- packaging for imported items;
- textile and clothing products;
- educational materials such as textbooks, pencils, chalks, erasers and blackboards;
- household goods such as pots and pans;
- assembly of a number of consumer goods, potentially including bicycles and radios; and
- a variety of simple consumer goods.

5.2 Prospects for the fish processing industry

Namibia's fisheries and offshore resources show potential for increased contribution to the overall economy through processing. The Government will have to make several important changes in this sector, however. According to a study[1/] by the United Nations Institute for Namibia, the fisheries sector will need to:

- establish a national fishery administration;
- declare a 200-mile exclusive economic zone (EEZ);

1/ United Nations Institute for Namibia: Namibia: Perspectives for Material Reconstruction and Development, Lusaka, 1986.

- introduce and enforce strict resource management regulations;
- salvage remaining vessels, processing plants and equipment from damage through misuse;
- provide sufficient amounts of fish for food at low cost to the Namibian population;
- negotiate with foreign fishing companies preliminary and temporary agreements on fishing of surplus resources, and possibly on joint ventures in processing;
- train personnel for the whole fisheries sector; and
- start the preparatory phases of programmes to develop the national fisheries sector.

Fish products may be frozen, dried, salted, smoked, cured, canned or prepared in combination with other ingredients. Their final product range is also extensive: food for human consumption (frozen packs, dried and preserved, canned, ingredients in prepared foods, edible oil and derived products); food for animal consumption (fishmeal as stockfeed, canned pet food); and food as inputs to other manufacturing processes (fish flour as a protein supplement in manufactured foodstuffs, inedible oil in paints and other chemical products). Key elements of a fully developed fisheries sector in independent Namibia are shown in Annex Table A-15.

A potential problem for the industry is the development of markets for its fish products. Even if current consumption per head doubled over 20 years at a 3 per cent rate of population growth, only less than 10 per cent of white fish landed and canned would be consumed. Therefore, Namibia's fisheries industry will have to depend on export markets for the long term. Unfortunately, the foreign markets for four of the five major Namibian fisheries products - meal, oil, canned and frozen fish - are all highly competitive with considerable price fluctuations. Namibia's fifth product, rock lobster, finds a traditional stable luxury market. Moreover, canned pilchards and processed mackerel face export difficulties. Other near developing countries might become a market for cheap animal feed, but this is uncertain at best. Nevertheless, the gross value added in processing could approach 20 per cent of sales (in simple freezing blocks of fish) to two thirds of sales (in pilchard canning), averaging nearly 50 per cent for the sector as a whole. In addition to foreign exchange and income generation, large-scale fish processing would create at least as many jobs as the mining sector does, perhaps as many as 25,000. Of these, 60-70 per cent would be engaged in fish processing. If all intended measures are carried out successfully, potential earnings could reach R2,000 million by the late 1990s.

Namibia's fisheries sector has the potential for extensive linkages with specific subsectors. The industry would need tins for the canneries, packaging materials (synthetic wrapping, textiles, cardboard) and containers (cartons, boxes, drums, sacks). The modern fishing fleet would need supplies, equipment (such as spare parts or protective clothing, including gloves, aprons, boots) and repair facilities, much of which could be locally produced. There would also be the possibility of establishing a boat-building facility for small purse-seiners.

The fisheries industry could be promoted through joint enterprises between local and foreign private companies involving a complete package of management, financing, market access, technology and training. Besides the rock lobster industry in Lüderitz, most of the related fisheries processing capacity is found in Walvis Bay, posing a potential limiting factor for Namibia's industry until the sovereignty issue is settled.

5.3 Prospects for mineral-based processing

According to mining experts, the prospects for new mineral discoveries and expansion are not necessarily favourable, and there is only limited potential for increased local processing.

Currently, Namibia processes non-metallic minerals for the construction industry, but there is no local production of cement, current needs being supplied almost totally from the RSA. Inputs for cement, clay and gypsum, are however available and a local cement industry might be feasible. Downstream industries could include concrete block manufacturing. These blocks can be successfully produced on a small scale; they are labour-intensive and production can be adapted to specific area or project demands. Other potential uses for non-metallic minerals which could be more fully processed locally are ceramics (tableware, for example), handmade pottery and crushed stone for gravel.

There is also a potential for increased tin and zinc processing on site. This is currently being done in the RSA's Transvaal region. Virtually all of Namibia's copper and lead is refined at Tsumeb, and that facility has been running below capacity. Namibia would have the ability to process these minerals from neighbouring states. Unfortunately, such facilities are capital-intensive and expansion would create few jobs. Additionally, these jobs tend to be technology-intensive, requiring foreign trained managers and technicians. The quantities of other minerals produced in Namibia generally are too small to justify the investment of local processing facilities. Therefore, investment in additional processing will have to be carefully weighed by Namibia's new Government.

If Namibia does expand the areas where it has a natural advantage, it could develop important linkages subject to favorable feasibility studies. Examples would be copper (pipe and wire production), lead (battery-making) and tin (tin can manufacturing). Tin can manufacturing, in turn, could facilitate increased local processing of fish and meat products.

Namibia could capture additional value added in diamond production. During the past year, the De Beers subsidiary Consolidated Diamond Mines (CDM) has been sorting its diamonds in Windhoek. Diamond cutting, the next stage in the process, is more capital- and skill-intensive, but other countries, notably Botswana, have been successful in training indigenous workers in this field. Cutting could develop into a small cottage industry over the medium term.

6. INTERNATIONAL CO-OPERATION FOR INDUSTRIAL DEVELOPMENT

In endeavouring to achieve economic diversification through industrialization, international co-operation has become indispensable for Namibia. Such co-operation for industrial development has to address many constraints arising from the small domestic market, limited purchasing power of the people, scattered population, high internal transport costs, critical shortage of trained and experienced industrial manpower, etc. The most likely areas of industrial co-operation for which detailed programmes will have to be drawn up and implemented include, inter alia: formal and informal training of industrial manpower; preparation of pre- investment studies; mobilization of domestic and external finance for industry; adaptation and development of technology; industrial research; industrial joint ventures; provision of consultancy services; small-scale industrial projects; and assistance in the establishment of a sound institutional framework for industrial development.

6.1 Integrating Namibia in the regional and international economy

Namibia became Africa's 52nd independent state, the 160th member of the United Nations, the 51st member of the Organization of African Unity (OAU), the 10th member of SADCC, and was also admitted as the 50th member of the Commonwealth. Namibia has also applied for associate membership in the EC through the Lomé Convention. This agreement of co-operation between EC and ACP countries allows certain products to enter the EC on a duty-free basis. Namibia already trades with a number of EC members. The Federal Republic of Germany, Switzerland, France and the United Kingdom are among Namibia's major trade partners. The Convention would also provide opportunities for financial, technical and industrial co-operation. Namibia would be eligible for $40-45 million in grants during the first five years under the Lome Convention.

Namibia is likely to formalize its de facto membership of the Southern Africa Customs Union (SACU) which also includes the Republic of South Africa, Botswana, Swaziland and Lesotho. SACU entails preferential trade agreements and sharing of revenues. Further Namibia is likely to remain inside the Rand system for two years at least. Thus, the Republic of South Africa will retain a strong influence on the country's economic development in spite of withdrawal of budgetary aid which has usually been in the $160-$200 million range annually. In the post-Independent era Namibia will need to weigh the pros and cons of retaining certain links with South Africa to its advantage and favour a broader outlook for regional and international co-operation that augurs well for Namibia' medium- and long-term economic prospects. In terms of regional co-operation, the Preferential Trade Area (PTA) and SADCC are of the greatest immediate relevance to Namibia. PTA, of which most Eastern and Southern African countries are members, stimulates trade liberalization between its members. Joining PTA may help open up new markets for Namibian products.

The avenues for regional co-operation in Africa for industrialization could be through specialization in the form of industrial complementation schemes to avoid duplication of initiatives among States. SADCC is involved in the implementation of such schemes. Although trade in industrial products among SADCC members has increased, subregional industrialization in Southern Africa is so far marked by limited success. This is a consequence of the fact

that most member states share many of the same resource endowments, and of infrastructural constraints. SADCC, moreover, only has limited manpower and financial resources available for the planning and execution of subregional co-operation schemes.

6.2 The role of technical co-operation

Namibia will need strong support from the international community if its development efforts are to succeed. It is important and useful to outline the broad areas of technical assistance options the new government could eventually seek for industrial development. Such support can come from the United Nations family and from multinational and bilateral donors, particularly the EC. The UN will convene a donor's conference in Windhoek in June 1990 to discuss such support.

UNIDO could play a leading role in promoting the following areas of technical co-operation for industrial development:

1. Assistance to the new government in industrial planning, policy formulation, and preparation of an industrial survey.

2. Subsectoral analysis in order to identify prospects for enterprise development of fish processing, meat processing, agro-industry, can production, oil-seed crushing, mineral processing, and other priority industries.

3. Review of the existing business environment and advice on measures to improve investment climate through specialized international teams composed of industrial economists and experienced businessmen.

4. Assistance to policy-makers in the preparation of guidelines on enterprise development, an investment code and investment guide, and organizing training courses in various aspects of entrepreneur development and enterprise management.

5. Meetings of high level experts from a cross-section of countries for exchange of ideas and experience on mineral processing and its downstream activities.

6. Assistance to research and development on appropriate technologies for small-scale enterprises.

7. Assistance in establishing institutional framework for industrial development and "twinning" of specialized service institutions in developed and developing countries with their counterpart institutions in Namibia.

8. Assistance to industries to conduct feasibility studies and to present them to bilateral and multilateral agencies for financial and technical assistance.

9. Assistance to Namibian enterprises to draw upon a vast commercial and technical know-how possessed by their overseas counterparts, e.i., enterprises engaged in the same or complementary lines of business.

10. Examination of possibilities for establishing repair and maintenance facilities and the development of assembly and basic engineering industries.

11. Provision of appropriate technological inputs for energy generation and water supply for each firm. These essential ingredients may be ensured through solar-wind energy production and bore wells.

12. Identification of projects that suit industrial complementation in the subregion in general and the resource endowment of Namibia in particular.

13. Assistance to the transitional phase of Namibia's integration into SADCC and PTA for industrial and trade co-operation in the form of joint investment, planning, management, production, marketing and trade.

At the December 1989 Seminar on Technical Assistance for an Independent Namibia, a number of projects were suggested that were related to some of the technical co-operation areas outlined above. These projects included:

- a joint UNIDO/WHO programme for the production of medical supplies;

- assistance in industrial investment project identification, preparation and evaluation;

- assistance in the application of the Computer Model for Feasibility Analysis and Reporting (COMFAR);

- assistance in strengthening national capabilities in pre-investment studies and investment follow-up. This would include training programmes modelled on previous seminars organized by UNIDO for PTA and SADCC, and the exploration of subregional potential for co-operation.

A careful assessment of these options and the establishment of priorities are essential for dovetailing technical co-operation with Namibia's absorptive capacity for aid.

ANNEX

STATISTICAL TABLES

Annex Table A-1: Gross domestic product at factor cost, 1970-1987
(at current prices, R millions)

Year	Total	Agriculture and Fishing	Mining and Quarrying	Manufacturing	Electricity and water	Construction (Contractors)	Trade catering accommodation	Transport and communication	Financing real estate business services	Community social personal services	General Government	Other producers
1970	336.4	48.6	103.0	15.6	3.5	18.8	47.1	25.7	27.4	5.6	30.6	10.5
1971	341.9	54.4	84.1	14.0	4.3	22.6	47.9	29.5	31.0	6.2	35.9	12.0
1972	410.9	66.1	112.7	17.7	5.8	23.3	56.3	31.4	36.3	6.8	41.1	13.4
1973	534.2	76.5	186.4	25.8	6.6	23.7	69.4	32.9	42.6	7.5	47.0	15.8
1974	569.2	88.1	169.1	30.5	5.8	27.6	85.2	34.5	48.2	9.0	53.6	17.6
1975	644.7	112.9	174.2	32.6	7.8	33.4	101.2	38.0	55.6	10.1	58.1	20.8
1976	758.1	134.1	215.1	35.7	9.4	37.7	122.1	41.8	59.6	11.6	65.9	25.1
1977	951.9	112.9	388.8	40.3	15.1	42.1	118.9	51.6	67.4	13.3	74.5	27.0
1978	1,137.9	107.0	531.3	44.5	17.4	44.2	120.3	62.0	74.7	15.3	91.7	29.5
1979	1,274.0	112.6	584.3	53.9	21.3	48.9	149.1	71.8	79.6	16.5	103.2	32.8
1980	1,444.2	166.4	630.0	56.5	26.3	50.6	166.3	76.7	77.0	18.6	138.8	37.0
1981	1,506.0	217.2	454.4	67.2	36.4	67.3	204.9	78.3	88.2	24.1	227.1	40.9
1982	1,679.7	204.7	465.6	82.7	38.5	69.6	228.4	83.8	111.8	28.8	316.3	49.5
1983	1,779.0	166.5	473.3	93.5	52.1	64.5	234.9	107.6	127.5	36.0	366.8	56.3
1984	1,969.6	167.5	510.4	102.6	48.6	61.9	255.5	137.2	153.0	41.1	427.3	64.5
1985	2,551.0	195.6	908.1	113.2	49.5	71.1	282.8	155.3	176.2	46.2	480.0	73.0
1986	2,929.2	225.8	1,061.2	131.9	53.9	66.9	328.4	194.1	189.9	52.9	541.9	82.3
1987	3,130.6	376.6	778.7	157.4	53.2	75.8	384.5	230.3	235.7	63.9	680.3	94.2

Source: Statistical Economic Review, SWA/Namibia 1988.

Annex Table A-2: Gross domestic product at factor cost, 1970-1987
(at constant 1980 prices, R millions)

Year	Total	Agriculture and Fishing	Mining and Quarrying	Manufacturing	Electricity and water	Construction (Contractors)	Trade catering accommodation	Transport and communication	Financing real estate business services	Community social personal services	General Government	Other producers
1970	1,217.9	164.6	532.8	52.3	9.1	63.9	125.6	64.5	66.7	13.9	98.8	25.7
1971	1,204.0	186.5	479.3	44.9	10.5	74.1	128.8	68.8	68.6	14.8	100.6	27.1
1972	1,207.1	167.3	464.4	54.0	12.1	73.3	139.7	71.9	73.8	15.2	107.9	27.5
1973	1,205.4	130.3	483.5	66.8	13.8	66.8	149.4	63.7	79.2	15.5	107.1	29.3
1974	1,248.5	150.4	487.0	67.5	15.9	65.6	164.5	64.5	77.0	17.3	109.0	29.8
1975	1,350.6	190.4	519.2	65.9	18.3	65.0	188.3	63.0	86.1	17.6	104.9	31.9
1976	1,366.7	197.2	509.0	65.0	21.0	62.5	206.4	62.2	85.3	17.7	106.0	34.4
1977	1,485.6	164.8	673.2	62.2	25.7	62.3	176.5	64.5	90.7	18.7	112.2	34.8
1978	1,479.3	144.0	679.0	61.5	23.3	59.5	165.6	73.2	93.1	19.0	124.8	36.3
1979	1,477.3	133.6	660.2	66.2	24.8	56.5	183.8	82.7	88.7	19.5	123.8	37.5
1980	1,444.2	166.4	630.0	56.5	26.3	50.6	166.3	76.7	77.0	18.6	138.8	37.0
1981	1,436.4	171.9	559.0	55.4	27.8	60.2	175.6	70.3	74.3	22.8	183.1	36.0
1982	1,399.5	145.5	508.8	61.2	29.2	53.0	180.8	65.8	75.7	23.8	218.6	37.1
1983	1,364.2	121.1	499.3	62.5	30.5	43.1	166.0	70.8	77.8	24.9	229.8	38.4
1984	1,346.6	107.2	483.2	62.1	31.5	38.2	165.6	77.6	79.6	26.1	235.7	39.9
1985	1,351.6	115.0	467.5	59.9	32.3	38.3	163.7	86.6	80.5	26.1	241.7	40.0
1986	1,393.4	115.4	499.7	60.5	32.9	31.1	167.6	88.7	83.1	26.2	247.9	40.3
1987	1,433.7	146.5	487.1	61.7	33.2	30.1	174.3	92.1	86.0	26.4	254.3	41.0

Source: Statistical Economic Review, SWA/Namibia 1988.

Annex Table A-3: Expenditure on gross domestic product, 1970-1987
(at current prices, R million)

Year	Private consumption expenditure	Consumption expenditure by general Government	Gross domestic fixed investment	Change in inventories	Gross domestic expenditure	Export of goods and non-factor services	Less import of goods and non-factor services	Expenditure on gross domestic product
1970	160.6	47.2	98.6	2.3	308.7	212.4	161.9	359.2
1971	184.4	51.2	132.2	-0.7	367.1	216.4	213.8	369.7
1972	205.6	58.9	136.6	-20.8	380.3	282.8	223.2	439.9
1973	241.7	72.7	146.0	-2.9	457.5	348.4	232.6	573.3
1974	291.1	84.2	204.7	57.4	637.4	348.4	376.1	609.7
1975	328.5	95.9	331.7	18.6	774.7	400.2	484.5	690.4
1976	391.2	108.2	333.8	63.8	897.0	471.5	543.1	825.4
1977	455.6	121.7	306.4	48.3	932.0	745.2	648.8	1,028.4
1978	491.4	147.6	305.2	-7.4	936.8	911.7	608.6	1,239.9
1979	563.9	182.9	340.8	26.2	1,113.8	1,022.2	745.1	1,390.9
1980	702.8	257.7	435.4	80.9	1,476.8	1,148.9	1,064.1	1,561.6
1981	1,003.6	404.7	432.1	59.1	1,899.5	983.8	1,273.7	1,609.6
1982	1,176.1	490.4	414.5	-5.7	2,075.3	1,061.9	1,342.9	1,794.3
1983	1,251.8	557.0	352.9	-27.3	2,134.4	979.5	1,234.9	1,879.0
1984	1,363.4	650.0	315.1	37.5	2,366.0	1,144.7	1,398.2	2,112.5
1985	1,518.5	770.3	357.8	5.4	2,652.0	1,620.9	1,520.8	2,752.1
1986	1,693.7	919.3	391.8	-16.7	2,988.1	2,007.4	1,807.0	3,188.5
1987	2,083.2	1,116.5	457.1	38.4	3,695.2	1,831.0	2,105.8	3,420.4

Source: Statistical Economic Review, SWA/Namibia 1988

Annex Table A-4: Gross domestic fixed investment by kind of economic activity, 1970-1987
(at current prices, R million)

Year	Total	Agriculture and Fishing	Mining and Quarrying	Manufacturing	Electricity and water	Construction (Contractors)	Trade catering accommodation	Transport and communication	Financing real estate business services	Community social personal services	General Government
1970	98.6	12.9	12.3	3.6	6.6	4.6	5.3	12.0	6.5	0.3	34.5
1971	132.2	12.4	6.0	3.6	20.6	6.7	5.4	14.0	6.3	0.4	56.8
1972	136.6	13.7	10.6	3.7	23.2	8.1	5.4	13.0	4.6	0.4	53.9
1973	146.0	16.3	18.3	3.7	18.2	7.1	4.4	13.1	5.2	1.7	58.0
1974	204.7	17.7	59.6	3.8	16.0	10.8	7.0	13.5	8.7	1.8	65.8
1975	331.7	18.0	121.2	4.2	32.7	13.4	15.5	18.3	7.9	1.9	98.6
1976	333.8	18.1	100.2	6.3	55.0	11.9	6.4	18.3	6.5	2.7	108.4
1977	306.4	19.3	78.8	7.1	46.0	7.9	4.1	20.0	5.2	1.1	116.9
1978	305.2	20.4	90.2	8.0	19.7	7.5	5.1	25.3	6.2	1.5	121.3
1979	340.8	21.5	52.2	8.8	14.7	11.3	9.5	26.6	7.8	2.4	185.7
1980	435.4	20.5	112.4	15.8	14.1	15.5	12.0	25.9	13.2	3.7	202.3
1981	432.1	19.1	74.6	23.0	36.8	13.4	17.2	32.2	12.8	8.2	194.8
1982	414.5	21.6	47.6	8.8	30.4	18.2	18.5	39.5	20.7	9.6	199.6
1983	352.9	22.0	40.8	9.9	21.4	10.0	12.0	37.3	25.7	5.4	168.4
1984	315.1	17.9	31.9	10.0	5.4	10.1	14.3	25.7	38.7	5.8	155.3
1985	357.8	15.8	31.9	9.5	6.9	6.3	13.7	35.8	32.8	8.0	197.1
1986	391.8	17.6	75.3	9.4	9.6	5.5	14.5	31.4	34.8	8.6	185.1
1987	457.1	20.4	94.5	8.4	6.1	7.5	14.7	38.9	53.7	9.3	203.6

Source: Statistical Economic Review, SWA/Namibia 1988.

Annex Table A-5: Gross domestic fixed investment by kind of economic activity, 1970-1987
(at constant 1980 prices, R million)

Year	Total	Agriculture and Fishing	Mining and Quarrying	Manufacturing	Electricity and water	Construction (Contractors)	Trade catering accommodation	Transport and communication	Financing real estate business services	Community social personal services	General Government
1970	330.8	41.6	41.5	11.6	22.7	14.0	16.9	40.5	21.8	0.9	119.3
1971	423.6	37.9	19.0	10.9	66.5	19.2	16.2	45.0	20.1	1.2	187.6
1972	398.4	38.4	30.3	10.1	67.1	21.2	14.9	38.2	13.5	1.1	163.6
1973	380.3	41.5	45.4	9.1	48.3	17.2	10.8	34.4	13.5	4.3	155.8
1974	461.9	39.5	131.1	8.2	37.4	23.1	15.5	30.8	19.7	4.0	152.6
1975	626.3	33.5	224.6	7.6	63.9	23.8	28.9	34.7	14.8	3.5	191.0
1976	541.4	29.0	157.4	9.6	91.9	18.0	10.1	29.9	10.4	4.3	180.8
1977	452.4	28.3	112.5	10.0	69.1	11.0	5.8	29.7	7.6	1.6	176.8
1978	404.3	26.8	116.3	10.2	27.7	8.3	6.6	33.5	8.1	1.9	164.9
1979	396.2	24.9	60.2	9.9	16.8	12.7	10.6	30.6	9.1	2.7	218.7
1980	435.4	20.5	112.4	15.8	14.1	15.5	12.0	25.9	13.2	3.7	202.3
1981	377.2	16.6	66.0	20.3	31.9	12.0	15.2	28.0	11.1	7.3	168.8
1982	309.8	16.1	36.4	6.7	22.6	14.1	14.0	29.3	15.3	7.4	147.9
1983	230.5	14.3	27.7	6.8	13.9	6.9	8.0	24.1	16.5	3.7	108.6
1984	188.3	10.6	19.7	6.4	3.2	6.5	9.1	15.1	22.7	3.7	91.3
1985	186.4	8.1	16.8	5.1	3.6	3.3	7.2	18.4	17.1	4.2	102.6
1986	170.6	7.5	31.7	3.9	4.3	2.2	6.0	12.8	15.5	3.7	83.0
1987	176.5	7.6	36.3	3.2	2.4	2.6	5.4	13.4	21.1	3.6	80.9

Source: Statistical Economic Review, SWA/Namibia 1988.

Annex Table A-6: Financing of gross domestic investment, 1970-1987
(at current prices, R millions)

Year	Gross domestic fixed investment	Change in inventories	Gross domestic investment	Personal saving	Corporate saving	Savings of general Government	Provision for depreciation	Gross domestic saving	Net foreign borrowing	Financing of gross domestic investment
1970	98.6	2.3	100.9	44.8	25.7	41.6	28.1	140.2	-39.3	100.9
1971	132.2	-0.7	131.5	48.2	-0.5	43.7	30.9	122.3	9.2	131.5
1972	136.6	-20.8	115.8	56.1	67.9	21.8	34.6	180.4	-64.6	115.8
1973	146.0	-2.9	143.1	56.2	123.6	48.2	38.4	266.4	-123.3	143.1
1974	204.7	57.4	262.1	54.0	51.6	72.7	44.0	222.3	39.8	262.1
1975	331.7	18.6	350.3	79.1	67.7	63.9	50.7	261.4	88.9	350.3
1976	333.8	63.8	397.6	85.5	60.7	82.3	60.6	289.1	108.5	397.6
1977	306.4	48.3	354.7	69.8	144.6	110.2	69.7	394.3	-39.6	354.7
1978	305.2	-7.4	397.8	65.1	152.2	231.3	77.7	526.3	-228.5	297.8
1979	340.8	26.2	367.0	78.2	179.4	184.2	86.9	528.7	-161.7	367.0
1980	435.4	80.9	516.3	86.2	207.0	130.9	95.4	519.5	-3.2	516.3
1981	432.1	59.1	491.2	77.3	178.9	77.9	107.1	441.2	50.0	491.2
1982	414.5	-5.7	408.8	69.9	143.8	130.9	116.9	461.5	-52.7	408.8
1983	352.9	-27.3	325.6	79.1	222.1	86.8	124.4	512.4	-186.8	325.6
1984	315.1	37.5	352.6	81.0	109.4	207.5	130.0	527.9	-175.3	352.6
1985	357.8	5.4	363.2	97.9	269.5	238.6	135.8	741.8	-378.6	363.2
1986	391.8	-16.7	375.1	82.7	254.8	537.3	143.1	1,017.9	-642.8	375.1
1987	457.1	38.4	495.5	127.4	117.2	254.3	152.7	651.6	-156.1	495.5

Source: Statistical Economic Review, SWA/Namibia 1988.

Annex Table A-7: Merchandise imports and exports, 1970-1987
(selected years)

Year	Merchandise exports (R million)	Merchandise imports (R million)	Merchandise exports (% of GDP)	Merchandise imports (% of GDP)
1970	196.8	-131.4	58.3	39.0
1980	1,138.0	-888.4	78.8	61.5
1981	946.7	-1,066.6	62.8	70.8
1982	1,009.2	-1,108.3	60.0	66.0
1983	941.3	-1,007.7	52.9	56.6
1984	1,101.1	-1,157.7	55.9	58.8
1985	1,593.5	-1,238.4	62.4	48.5
1986	1,993.1	-1,446.9	68.0	49.4
1987	1,809.8	-1,712.9	57.8	54.7

Source: Adapted from Department of Finance. Statistical/Economic Review 1988, Windhoek, 1989.

Annex Table A-8: Partial list of principal factories and workshops, early 1980s

ISIC category	Company name[6]	Ownership	Factory location	Main products	Main markets	Intake capacity	Fixed capital (Rm)	Employment[2] W	B	T
3111	SWA Meat[1]	ENOK (SA govt.)	Wk	fresh meat	Nam	600 cattle/day	8 (new)	50	500	550
3111		Agra (SA govt/ farmers)		frozen cuts	SA, S.Eur.					
3111				canned beef	SA, UK					
3122		KMP (SA)		by-products	Nam, SA					
3111	SWA Meat[1]	same	Gob	same	-	400 cattle/day	16	50	350	400
3111	SWA Meat[1]	same	Oka	same	same	400 cattle/day	5 (new)	65	350	415
3111	SWA Meat[1]	same	Ot	same	same	250 cattle/day	3 (new)	50	350	400
3111	SWA Meat[1]	same	Osh	canned beef	UK	130 cattle/day	2	15	150	165
3122				byproducts	Nam, SA					
3111	SWA Meat[1]	same	all			1780 cattle/day	65	230	1700	1930
3111	Rundu butchery	ENOK (SA govt.)	Ru	fresh meat	SA army	20 cattle/day	0.3	3	27	30
3111				prepared meat	SA army					
3111				frozen cuts	Osh.cannery					
3111	Erundu butchery	ENOK (SA govt.)	Osh	fresh	local/SA army		0.1	3	32	35
3111	Cloewa	proprietor	Oka	biltong	2/3 Nam, 1/3 SA	14 t/month		3	37	40
3111	Hartlief Continental Meat Products	proprietor	Wk	fresh meat	local		4 (new)			240
3111				prepared specialities	Nam,SA,Eur					
3122				pet food	Nam					
3111	Windhoek Schlechterei	Ohlthaver + List (Nam)	Wk	fresh meat	local					(150)
3111				processed meat	local					
3111	Windhoek Wild	ENOK (SA govt)	Wk	venison cuts	Eur	5000 t/year	2		..	(50)
3111			total				(80)	(280)	(2220)	2500
3112	Kroonster Dairy	Milcor (ENOK)	Wk	fresh milk+juice	local	0.5m litres/year				
3112				cheese, yoghurt	local					
3560				plastic bottles, film	own use		4	(20)	(180)	(200)
3114	General Development	Kaap-Kunene (SA)	WB	fish canning		1200 ctons/hour				450
3115				fish meal + oil		55 t/hour				40
3114	Breemond	United Fishing Enterprises (SA)	WB	fish canning		1750 ctons/hour				600
3115				fishmeal + oil		40-5 t/hour				30
3114	Walvis Bay Fish Processors	United Fishing Enterprises (SA)	WB	fish canning		(1700 ctons/hour)				600
				fishmeal + oil		(40 t/hour)				30
3116	Tunacor	Marine Products(SA)	WB	fish canning		1650 ctons/hour				600
3115				fishmeal + oil		80-90 t/hour				50
3115	Southern Cross	Ovenstone (SA)	WB	fishmeal + oil		30 t/hour				25
3115	Consortium	Ohlthaver + List (Nam)	WB	fishmeal + oil		50 t/hour				40
3114				white fish[4]		(30 t/day)				100
3115	Table Top	FEDFOOD	WB	fishmeal + oil		(40 t/hour)				30
3114				white fish[4]		(100 t/day)	5			250
3114	Kuiseb	Irvin+Johnson (SA)	WB	white fish[4]		140-60 t/day				250
3114	Freddie Visserye	proprietor (SA)	WB	white fish[4]		20 t/day				70
3114	Blue Angra	Kaap-Kunene (SA)	Lud	lobster/crab						300
3114				white fish[4]		(10 t/day)				30
3115				fishmeal + oil		(40 t/hour)				30
3114	Lüderitz Bay Canning Co.	Sea Products (SA)	Lud	lobster						300
3114		Swafil (SA)		white fish[4]		(10 t/day)				25
3114			all	canning	SA, UK	6300 ctons/hour				2250
3115				meal + oil	SA, Eur	375-90 t/hour				275
3114				white fish[4]	SA	310-30 t/day				725
3114				lobster/crab	US, Jap					600
				total			100	(150)	(3600)	3700
				without canning[5]			70	(100)	(1500)	1600
mainly 3111-5	main factories		total	meat,dairy,fish[5]			185	450	6000	6450
							155	400	3900	4300
3115	Namsva Oil	ENOK (SA govt)	Oma	vegetable oil	Nam	25 t/day	3	10	60	70
3115		Täuber+Corssen (Unilever)		oilcake	Nam	(oilseeds)				
3116	Namib Mill	...	Wk	maize flour	Nam	35000 t/year	0.5	(20)	(100)	120
3117	Oryx Bakery	...	Wk	bread etc.	local	2200 loaves/hour		(25)	(115)	140
3117				cakes, spec.	Nam					
3117	Oshakati Bakery	ENOK (SA govt.)	Osh	bread etc.	local/SA army		0.2	2	43	45
3117	Rundu Bakery	ENOK (SA govt.)	Ru	bread etc.	"	1330 loaves/hour	1.4	(3)	(37)	(40)
3119	Springer Schokoladenfabrik	...	Wk	chocolates, sweetments	Nam, SA					
3132	Distillers	Stellenbosch Farmers Winery (SA)	WB	bottled wines + spirits	Nam		0.75			
3133	Hansa Brauerei	Ohlthaver + List (Nam)	Swa	beer	Nam					
3133	SW Breweries	Ohlthaver + List (Nam)	Wk	beer	Nam, SA		25			
3134				soft drinks	Nam					
3134	Ovamboland Soft Drinks Factory	ENOK (SA govt)	Osh	soft drinks	local		0.2	3	27	30

Annex Table A-8 (cont'd)

ISIC-category	Company name[6]	Ownership	factory location	Main products	Main markets	Intake capacity	Fixed capital	Employment W	M	T
3214	Ibenstein Carpets	proprietor (Nam)	Wk	karakul wool carpets	export (50%)			(2)	(28)	(30)
3220	SWA Cloth Factory	company (Nam)	Wk	linen, clothing	Nam			(10)	(190)	200
3214	Sievers Bau- and	proprietor (Nam)	Wk	karakul wool carpets	export					
3319	Möbeltischlerei			looms, spin. wheels	export (80%)					
3320				furniture, fittings	local					
3320	Okatana Furniture Factory	ENOK (SA govt)	Osh	furniture	local		1.5	3	97	100
3311				building materials	local					
3311	Bavaria		Wk	prefab.buildings etc.	Nam					
3311	Building Systems SWA		Wk	" " "	Nam					
3620				glass fibre	Nam					
3412	Walvis Bay Containers	Reed Internat.(UK)	WB	cartons	Nam			(10)	(90)	(100)
3420	John Meinert	Company (Nam)	Wk	printers	Nam					
3420	Suidwes Drukkery		Wk	printers	Nam					
3511	Afrox	BOC (UK via SA)	Wk	bottled gas	Nam			(5)	(25)	(30)
3521	Sonnex	Barlow Rand (SA)	Wk	paints etc.	Nam					
3523	Allied Chemical Manufacturers		Wk	cleaning agents	Nam					
3560	Isowall	...	Wk	polystyrene panels	Nam					
3560	Okahandja Plastiek	Anglo-American(SA)	Oka	polythene pipes	Nam					
3620	Beka Engineering	Bekaert SV (Bel)	Wk	fibreglass tanks etc	Nam					
3620	Fibreglass Manufacturing	proprietor (Nam)	Wk	fibreglass products	Nam					
3699	Southern Pipes	two companies(Fr)	Oka	concrete pipes	Nam					
3720	Rössing Uranium	RTZ (UK)	Ros	uranium oxide	Eur, Jap					
3720	Tsumeb Corporation	Anglo-American(SA)	Ts	smelted base min.	Eur, US					
3812	MKU Enterprises	proprietor (Nam)	Oka	steel furniture	Nam					200
3560				foam, foam prod.	Nam					
3320				wooden furniture	Nam					
3812	Ovamboland Steel-works	ENOK (SA govt)	Osh	metal furniture, parts	local			2	28	30
3813				building components	local					
3813	Aluminiumbau SW		Oka	building components	Nam					
3813	William Bain	company (foreign)	Wk	sheds, barns	Nam					
3819				fencing, rail track equipment	Nam					
3813	Ernst Lerch		Wk	building components	Nam					
3813	Otjiwarongo Bau-		Otj	building components	Nam					
3843	Maschinenschlosserei			vehicle body-build., trailers	Nam					
3813	Sweiskor	company (Nam)	Wk	building components	Nam					20
3824				crushing units	Nam					
3813	SWE Stahlbau	SW Engineering (Nam)	Oka	steel pipes	Nam					80
3819				steel products	Nam					
3813	Trossbach Stahlbau		Wk	building components	Nam					
3819				steel products	Nam					
3813	Windhoeker Maschinenfabrik	...	Wk	vehicle bodies, trailers	Nam					
3823				machinery	Nam					
3819	Engineering + Electroplating Works	proprietors(Nam)	Wk	earth-moving machinery parts	Nam					
3819	Swachrome	...	Wk	plating, welding	Nam					
3819	Wellmax Hardchrome Plating	company (foreign)	Wk	cylinders	Nam					
3824				earth-moving machinery parts	Nam					
3819	Eberhard Schmidt Maschinenbau		Wk	feeding troughs etc.	Nam					
3824	Crush + Utility	proprietors (Nam)	Wk	crushing plant	Nam					
3819	Spares Plant			structural steel	Nam					
3831	Rolf Rohe	proprietors (Nam)	Wk	rewinding,engineering	Nam					
3841	Nieswandt Boatyard	Ohlthaver + List (Nam)	WB	wooden boats, ship repairs	Nam, SA					
3824				fish machin. repair	Nam					
3819				steel products	Nam					
3311				joinery, building materials	Nam					
3841	Gearing Ship-wrights	Anglo-Vaal (SA)	WB	ship repairs, non-ferrous casting	Nam					
3823				machine parts	Nam					
3831				rewinding	Nam					

Notes to Annex Table A-8

1) A joint management venture of the three owners, reportedly to operate from November 1983. The factories themselves are individually owned.

2) Near or at full production (80-100% of capacity). Figures estimated from different sources, hence approximate, especially those in brackets. It must be stressed that the factories listed may not currently be operating at full installed capacity. This applies with especial force to fish processing, where most plant is either under-used or in mothballs. W - White; B - Black; T - Total.

3) Includes collecting points and a couple of small processing plants, and controls all Namibian-produced milk except in the northern bantustans (ENOK).

4) Capacity stated in tonnes of fish frozen per day.

5) Two separate totals have been given in each case because canning may be banned after independence to allow the pilchard to recover.

6) English translations have been used here wherever the context permits in the case of Afrikaans titles.

General note:

This is a provisional and incomplete list, the details of which have in a number of cases not been cross-checked and often cannot be verified because of the nature of the available sources. It is not of equivalent status to an industrial census or locally researched inventory of capital stock. Ownership indicates the type, name and location of the principal owner where known. All numerical data is approximate, those in brackets more so than the rest.

Locations:

Wk	- Windhoek	Osh	- Oshakati
Oka	- Okahandja	Ru	- Rundu
Go	- Gobabis	WB	- Walvis Bay
Ot	- Otavi	Swa	- Swakopmund
Otj	- Otjiwarango	Lud	- Lüderitz
Ts	- Tsumeb	Ros	- Rössing

Main sources:

Schneider-Barthold 1979; Windhoek press 1981-3; local telephone and trade directories; Moorsom 1982, 1984a, 1984b; SWAPO 1982.

Annex Table A-9: Namibia's manufacturing firms by category and location, 1987/1988

Category and no. of firms City or town	33113	31110	31111	31120	31122	31160	31170	31220	31222
Tsumeb	2	1	1				1		
Otavi		1				2	1		
Grootfontein	2	1	1				2		
Otjiwarongo		1	4				1		
Outjo	1	1	1				1		1
Okakarara									
Khorixas			1				1		
Omaruru	1	1				1	1	1	
Swakopmund	6	1					1		
Usakos	1	1	1						
Karibib							1		
Okahandja	2	1	2				2		
Windhoek	24	1	3	2	1	2	7	1	1
Gobabis		1					1	1	1
Rehoboth	3	1					3		
Mariental		1					1		
Keetmanshoop		1					2		
Karasburg		1					1		
Lüderitz Bay	1						2		
Gibeon									
Other	7	1	1			1	4		

Note: This survey listed no firms in Oshakati, although there are firms which should have been listed. Firms in Walvis Bay are excluded.

33113 = sawmilling and carpentry
31110 = slaughtering, preserving meat
31111 = canned and prepared meats
31120 = dairy products
31160 = grain mill products
31170 = bakery products; bread, cakes
31220 = prepared animal feeds
31222 = bone meal

Source: First National Development Corporation, Windhoek, 1989.

Annex Table A-9 (cont'd)

Category and no. of firms City or town	31340	32140	32203	33204	32205	32310	31140	32330	32339
Tsumeb									
Otavi									
Grootfontein	1								
Otjiwarongo									
Outjo									1
Okakarara									
Khorixas									
Omaruru									
Swakopmund	1	1	1			1	1		1
Usakos									
Karibib									
Okahandja									
Windhoek	2	1	7	2	3	2		1	
Gobabis									
Rehoboth									
Mariental									
Keetmanshoop									
Karasburg									
Lüderitz Bay							4		
Gibeon		1							
Other	1	2	3						

Note: This survey listed no firms in Oshakati, although there are other firms which should have been listed. Firms in Walvis Bay are excluded.

31340 = softdrinks and carbonated water
32140 = rugs and carpets
32203 = tailoring
33204 = wood products and furniture
32205 = furriers
32310 = tanneries and leather finishing
31140 = fish canning and fish oil
32330 = leather, not footwear
32339 = small leather goods and leather substitutes

Source: First National Development Corporation, Windhoek, 1989.

Annex Table A-9 (cont'd)

Category and no. of firms City or town	32400	33192	33200	34200	35119	35210	35230	35231	35600
Tsumeb			2						
Otavi									
Grootfontein									
Otjiwarongo									
Outjo	1								
Okakarara									
Khorixas									
Omaruru									
Swakopmund	1	1		1					
Usakos									
Karibib			1						
Okahandja									1
Windhoek		2	6	11	2	3	4	1	4
Gobabis									
Rehoboth	1								
Mariental			1						
Keetmanshoop			2						
Karasburg									
Lüderitz Bay									
Gibeon									
Other			1	1					

Note: This survey listed no firms in Oshakati, although there are other firms which should have been listed. Firms in Walvis Bay are excluded.

32400 = footwear
33192 = cork products
33200 = leather products
34200 = printing, publishing and allied products
35119 = basic industrial chemicals
35210 = chemical products; paints, varnishes, lacquers
35230 = soap, perfumes, cosmetics, toilet preparation
35231 = perfumes, cosmetics and other toilet preparations
35600 = plastic products

Source: First National Development Corporation, Windhoek, 1989.

Annex Table A-9 (cont'd)

Category and no. of firms City or town	36910	36990	36991	36992	38120	38130	38131	38134	38191
Tsumeb	1								
Otavi									
Grootfontein									
Otjiwarongo									
Outjo	1								
Okakarara									
Khorixas									
Omaruru									
Swakopmund							1		
Usakos									
Karibib				1					
Okahandja		1			1	1	1	1	1
Windhoek	3	1	5			2	7	5	1
Gobabis				1			1		
Rehoboth									
Mariental									
Keetmanshoop	1								
Karasburg									
Lüderitz Bay									
Gibeon									
Other									

Note: This survey listed no firms in Oshakati, although there are other firms which should have been listed. Firms in Walvis Bay are excluded.

36910 = structural clay products; clay and tile
36990 = non-metallic mineral products; plaster and cement
36991 = cement products
36992 = stone products
38120 = furniture and metal fixtures
38130 = structural metal products; building hardware
38131 = structural steel work
38134 = sheet metal products
38191 = cables, wires and gates

Source: First National Development Corporation, Windhoek, 1989.

Annex Table A-9 (cont'd)

Category and no. of firms City or town	38194	38240	38310	38399	38401	38402	38409	39010	39019
Tsumeb									
Otavi									
Grootfontein	2								
Otjiwarongo	2						1		
Outjo									
Okakarara									
Khorixas									
Omaruru	1								
Swakopmund	2							2	2
Usakos									
Karibib									1
Okahandja	1	1							
Windhoek	23		6	2	2	2	3	10	4
Gobabis	1			1					
Rehoboth									
Mariental									
Keetmanshoop	1						1		
Karasburg									
Lüderitz Bay		1							
Gibeon									
Other	5								

Note: This survey listed no firms in Oshakati, although there are other firms which should have been listed. Firms in Walvis Bay are excluded.

38194 = welding, fitting and turning
38240 = alteration and repair of special industrial machinery
38310 = repair and renovation of electrical industrial machinery
38399 = other electrical products
38401 = caravans, trailers and vehicle bodies
38402 = radiators
38409 = specialized autmotive engineering workshops
39010 = jewellery and related articles composed of precious metals and stones
39019 = other precious and semi-precious stone cutting and polishing

Source: First National Development Corporation, Windhoek, 1989.

Annex Table A-10: Current income of general Government, 1970-1987
(at current prices, R millions)

Year	Income from property	Indirect taxes	Direct taxes	Current transfers rcvd from households	Current transfers rcvd from incorporated enterprises	Transfers rcvd from the rest of the world	Current income
1970	-0.1	28.7	54.1	0.7	0.2	18.6	102.2
1971	-0.7	33.9	54.9	0.8	0.2	20.6	109.7
1972	-1.3	35.9	35.6	0.8	0.2	24.5	95.7
1973	-1.6	46.2	62.2	1.0	0.3	31.9	140.0
1974	-5.5	46.0	103.0	1.1	0.3	26.0	170.9
1975	-7.6	50.1	90.9	1.1	0.3	39.1	173.9
1976	-2.2	73.6	86.4	1.4	0.3	48.8	208.3
1977	-2.3	81.9	113.5	1.4	0.3	55.0	249.8
1978	2.3	119.6	196.6	1.4	0.4	91.9	412.2
1979	-6.4	136.4	223.3	1.5	0.4	52.2	407.4
1980	-13.9	137.5	236.9	1.6	0.4	72.0	434.5
1981	-30.0	145.4	109.1	1.5	0.4	343.4	569.8
1982	-22.8	172.4	119.5	1.7	4.7	469.6	745.1
1983	3.2	183.7	127.8	2.1	1.5	519.4	837.7
1984	35.5	209.8	239.2	2.7	0.7	542.0	1,029.9
1985	104.3	279.3	312.0	2.3	0.8	578.6	1,277.3
1986	106.5	343.8	510.4	3.2	0.8	763.6	1,728.3
1987	113.6	365.2	564.6	3.0	1.0	620.6	1,668.0

Source: Statistical Economic Review, SWA/Namibia 1988.

Annex Table A-11: Value of Namibia's mineral exports, 1980-1988
(Rand million, at current prices)

	1980	1981	1982	1983	1984	1985	1986	1987	1988
Diamond exports	446.7	231.0	217.9	234.7	231.6	409.0	615.5	431.2	653.5
Other mineral exports	461.6	452.0	537.2	480.3	619.5	875.8	1029.8	890.7	889.1
Total mineral exports	908.3	657.0	755.1	715.0	851.1	1284.8	1645.3	1321.9	1542.6
exports	1138.0	946.7	1009.2	941.3	1101.1	1593.4	1994.0	1811.4	2125.6
als as % of l exports	79.8	69.4	74.8	75.9	77.3	80.6	82.5	73.0	72.6

Source: Adapted from Namibia/SWA Statistical and Economic Review, 1989.

Annex Table A-12: Taxes paid by Namibian mining companies, 1976-1986

Year	Total public revenue collected (rand million)	Taxes paid by mining companies (rand million)	Mining taxes as a percentage of total (per cent)
1976	139.1	52.8	38.0
1977	169.9	63.4	37.3
1978	217.3	108.3	49.8
1979	330.5	200.2	60.6
1980	337.8	182.9	54.1
1981	291.8	151.1	51.8
1982	436.0	55.0	12.6
1983	453.9	48.3	10.6
1984	520.5	110.2	21.2
1985	651.1	133.9	20.6
1986	879.1	421.8	27.5

Source: Chamber of Mines, Windhoek, 1988.

Annex Table A-13: Average value of crop sales, 1980
(Rand '000, 1980)

Maize	506
Wheat	80
Sorghum	555
Hay	181
Potatoes	213
Vegetables	810
Fruit	252
Nuts and seeds	36
Beans and peas	57
Cotton	279

Source: United Nations Industrial Development Organization, UNIDO. Industrial Development Programme for Independent Namibia. Vienna: Regional and Country Studies Branch, 1984 (draft) and Department of Statistics, Windhoek, 1988.

Annex Table A-14: Estimated irrigation in Namibia

Site	Hectares irrigated	Annual water consumption (million m/3)	Source
Orange River	1,000	15	River
Hardap	1,500	30	Dam on Fish River
ENOK schemes			
Musese	400		Okavango
Vungu-Vungu	60		Okavango
Shitemo	320	22	Okavango
Shadikongo	280		Okavango
Katima Mulilo	50		Zambezi
Auob-Nossob basin	300	7	Artesian groundwater
Other major sites	200	6	Spring, river beds
Other minor sites	3,000	10	Spring, river beds
Mahanene	unknown	0.1	Kunene
TOTAL	7,000+	90	

Source: UNIN: Namibia - Perspectives for National Reconstruction and Development, Lusaka, 1986.

Annex Table A-15: Elements of a fully developed fisheries sector, 1986 (1983 prices)

	Production capital needed	Fixed capital (total investment US$ 000)	Employment potential	Gross earnings (US$ 000)
Fishing industry				
Pelagic sector	35 simple purse seiners 25 RSW/CSW purse seiners	85,000	650	57,000
Demersal sector	15 trawlers (small inshore) 65 stern trawlers 130 pair trawlers	270,000	2,950	80,000
Snoek	15-20 hand liners		300	
Rock lobster	40 lobster vessels	4,000	900	
Total fleet		359,000	4,800	137,000
Processing industry	Capacity	Annual production		
Canning	10,000 cartons/ hour	10 million (cart.)	5,000	100,000
Reduction	3,000 tons/day (180,000 t)	40,000	500	65,000
White fish	700 tons/day (130,000 t)	30,000	6,000	200,000
Lobster	Adequate existing capacity		750	7,500
Total processing		95,000	12,250	387,500

Source: United Nations Institute for Namibia. Namibia: Perspectives for National Reconstruction and Development. Lusaka: UNIN, 1986.

Annex Table A-16: Namibia's energy use, 1980[a/]

Energy use by sector/fuel type	Barrels of oil equivalent/day	Per cent
Transport	6,860	21
Mining industry	17,966	55
Agriculture, fisheries, domestic use	7,840	24
TOTAL	32,666	100
Liquid fuels	10,127	31
Coal	3,920	12
Electricity	12,086	37
Charcoal/wood	6,533	20
TOTAL	32,666	100

Source: United Nations Industrial Development Organization. Industrial Development Programme for Independent Namibia, Vienna: UNIDO, 1984, adapted from Turner, Terisa, Namibian Independence and the Oil Embargo Against South Africa, paper presented to the International Conference in Support of the Struggle of the Namibian People, Paris, April 1983.

a/ Estimate.

Annex Table A-17: Industrial management and skilled labour needs after independence

Managerial/Professional			800
General Managers			200
Plant Managers			50
Production managers			25
Sales and Purchase Managers			25
Finance Managers			50
Other (including Personnel Development) Managers			50
Engineers (Degree-Diploma)			200
Mechanical		(10-75)	
Electrical		(10-25)	
Chemical		(5-35)	
Food		(10-35)	
Refrigeration		(5-10)	
Other		(10-20)	
Technicians (e.g. master printers, brewers, millers)			50
Accountants			50
Other (including Personnel Development, Draughtsmen, Designers)			50

Skilled	800	Semi Skilled	3500
Meat Processing Skills	100		500
Fish Processing Skills	75		250
Light engineering Skills	150		300
Other Food Processing	50		100
Beverages	25		100
Building Materials	25		200
Printing and Publishing	75		225
Textiles and Garments	25		225
Miscellaneous	50		200
Bookkeeping	75		200
Stock/Record/Despatch Clerks	40		250
Warehouse/Stock Superintendents	60	Foremen/ Senior Hands	250
Other Clerical/ Secretarial	25		300
Personnel Development/ Training	25		-
Drivers	-		400

Source: R.H. Green: Personnel, Employment and Economic Transition: Namibia 1989-1990, Paper presented at the Seminar on Contingency Planning for Technical Assistance to Namibia during the Transition to Independence, Vienna, 24-28 July 1989.

SELECTED REFERENCES

Abdallah, Ahmed and Berthoud, Paul, Report of the Reconnaissance Mission to Namibia, (New York, UNDP, 1989)

Asombang, W., Trade Policy Options for Independent Namibia, United Nations Institute for Namibia, (Lusaka, 1982)

Aulakh, H.S. and Asombang, W., Mineral Development Strategy Options for Independent Namibia, United Nations Institute for Namibia, (Lusaka, 1982)

Africa Today., "Namibia and the West: Multinational corporations and international law", University of Denver, (Denver, 1983), 123 pp.

African-American Scholars Council, Inc., Zimbabwe, Namibia. Anticipation of Economic and Humanitarian Needs: Transition Problems in Developing Nations in Southern Africa, (USAID, Washington, D.C., 1977)

Aulakh, H.S. and Asombank, W.W., Economic Development Strategies for Independent Namibia, United Nations Institute for Namibia, (Lusaka, 1985)

Business International Conference, "Southern Africa: What Namibian Independence Will Mean for Business: Summary of Proceedings and Conclusions", (London, April 1989)

Catholic Institute for International Relations, South African Occupation and the Namibian Economy, CIIR, (London, 1984), 11 pp.

Collett, Sue., "Small- and medium-sized enterprises in Southwest Africa/ Namibia", The South African Journal of Economics, Volume 48, No. 3, (1980), pp. 276-287

Commission of Enquiry into Alleged Irregularities and Misapplication of Property in Representative Authorities and the Central Authority of South West Africa, Control by the State over the Prospecting and Mining for Disposing of Minerals in South West Africa (Eighth Interim Report), (The Thirion Report)

Dugard, John., "Legal Aspects of Investment in Namibia", in Dugard, The Role of Foreign Firms in Namibia, Study Project on External Investment in South Africa and Namibia, (London, 1974), pp. 183-216

Economic Commission for Africa, Transport Survey for Namibia: Report of a Multidisciplinary Team of Experts, (Addis Ababa)

ENOK/First National Development Corporation, Information for Investors, (Windhoek, 1984), 24 pp.

Financial Mail, "Namibia: A Survey", (A Supplement to the Financial Mail) (Johannesburg, 2 July 1983) 1984, 40 pp.

Food and Agriculture Organization of the United Nations, Namibia: Prospects for Future Development, (Rome, 1977)

German Development Institute, Perspectives of Independent Development in Southern Africa: The Cases of Zimbabwe and Namibia, (Berlin, 1980), 183 pp.

Gervais, Sean, "The South West African Economy", in Segal, R. and First, R. (eds). South West Africa: A Travesty of Trust, (London, 1967), pp. 128-150.

Green, R.H., Namibia: A Political Economic Survey, University of Sussex, (Sussex, 1979), 123 pp. (IDS Discussion Paper No. 144)

Green, R.H., Kiljunen, M. and Kiljunen, K. (eds), Namibia: The Last Colony, Longman, (London, 1981), 310 pp.

Green, R.H., From Sudwestafrika to Namibia. The Political Economy of Transition, Scandanavian Institute of African Studies, (Uppsala, 1981)

Green, R.H., "One Namibia, One Nation: The Political Economy of Transition" in Green, R.H, Changing Realities in Southern Africa, Institute of International Studies, (Berkeley, 1982), pp. 92-122

Green, R.H., "The unforgiving hand: basis for a post-independence liberation programme in Namibia", in IDS Bulletin, Volume II, (Sussex, 1980), pp. 70-76

Green, R.H., "Transition to what? some issues of freedom and necessity in Namibia", in Development and Change, Volume II, No. 3, (July 1980), pp. 419-453

Hartman, P.W., "SWA/Namibia: some economic problems and prospects", in Bulletin of the Africa Institute of South Africa, Volume 24, No. 5, (1984), pp. 51-53

Leistner, G.M.E., "Is South Africa exploiting SWA/Namibia economically?", in Africa Insight, Volume II, No. 1, (1981), pp. 23-24

Leistner, G.M.E., "Public Finance in South West Africa 1945/6 to 1969/70", in the South African Journal of Economics, No. 1, (1972), pp. 1-32

Leistner, G.M.E., "SWA/Namibia's economic problems viewed in an African context", Africa Institute of South Africa Bulletin, Volume 21, No. 11-12, (1981), pp. 81-86

Leistner, G.M.E., Esterhuysen, P. and Malan, T., Namibia/SWA Prospectus. Africa Institute of South Africa, (Pretoria, 1980)

Loomis-Prive, Lynne, Education for Namibians: A Workshop Report, Institute of International Education, (New York, 1989)

Mensah, J.H., Review of the Economic Conditions in Namibia and South Africa: Part I: Namibia, UNCTAD, (Geneva, 1981), 49 pp.

Moorsom, Richard, "Namibia in the Frontline: The Political Economy of Decolonisation in South Africa's Colony", Review of African Political Economy, (17 November 1980), pp. 71-82

Moorsom, Richard, Walvis Bay: Namibia's Port, International Defense and Aid Fund for Southern Africa, (London, 1984), 93 pp.

Murray, Roger, The Mineral Industry of Namibia: Perspectives for Independence, Commonwealth Secretariat, (London, 1978)

Murray, Roger, The Role of Foreign Firms in Namibia: Studies on External Investment and Black Workers' Conditions in Namibia,Study Project on External Investment in South Africa and Namibia, (London, 1974), 220 pp.

Kok, Leon, "The Namibian Economy", in Rossing, (February 1979), pp. 12-15

Van Rensburg, South West Africa/Namibia: Post Independence Economic Implications for South Africa, (1989)

Republic of South Africa, Industrial Strategy for SWA/Namibia, (Windhoek, 1987)

Republic of South Africa, The National Development Strategy of South West Africa, Department of Governmental Affairs, (Windhoek, 1987)

Rogers, Barbara, Foreign Investment in Namibia, UN Council for Namibia, (New York, 1975), 134 pp.

Rotberg, Robert I. (ed), Namibia: Political and Economic Prospects. Lexington Books, (Lexington, 1983), 133 pp.

Savosnick, K, Economics of the Namibian Diamond Industry, UNCTAD, (Geneva, 1978)

Schneider-Barthold, W, Namibia's Economic Potential and Existing Ties with the Republic of South Africa, German Development Institute, (Berlin, 1977), 93 pp.

Schneider-Barthold, W, "The phenomenon of external and internal dependence in Namibian manufacturing industry and prospects of overcoming it", in Brandt, H. (et al), Perspectives of Independent Development in Southern Africa, German Development Institute, (Berlin, 1980), pp. 100-127

Southern African Development Co-ordination Conference, Namibia, SADCC Secretariat, (Arusha, 1979), 41 pp.

South West Africa Administration, The Economy of SWA/Namibia: Problems, Future Prospects and Required Policy Measures, Department of Finance, (Windhoek, 1978), 64 pp.

Sparks, Donald L., "Namibia's coastal and marine resources potential" in African Affairs, The Journal of the Royal African Society, (January 1985), pp. 477-496

Sparks, Donald L. and Murray, R., Namibia's Future: The Economy at Independence, (EIU Special Report No. 197), The Economist Intelligence Unit, (London, 1985), 95 pp.

Sparks, Donald L., "Namibia's future: prospects for the economy and foreign involvement", in Multinational Business, The Economist Intelligence Unit, No. 1, (London, 1983), pp. 11-21

Sparks, Donald L., "Walvis Bay, plumpudding and penguin islands: their history and economic importance to Namibia", paper presented to the 22nd annual meeting of the African Studies Association, (1979), 22 pp.

Thomas, W.H., Economic Development in Namibia: Toward Acceptable Development Strategies for an Independent Namibia, Kaiser, (Munich, 1978), 369 pp.

Thomas, W.H., Employment Generation in the Context of a Basic Needs Oriented Development Strategy for Namibia, Private Sector Foundation, (Windhoek, 1982), 23 pp.

Thomas, W.H., "The economy in transition to independence", in Rotberg, R.I. Namibia: Political and Economic Prospects, DC Heath & Co., (London, 1983), pp. 41-91

Tostensen, Arne, "Independent Namibia in the Southern African Region", paper presented to the "Conference on Research Priorities in Namibia", Institute of Commonwealth Studies, University of London, (London, 1984), 28 pp.

United Nations Centre on Transnational Corporations, Role of Transnational Corporations in Namibia, UNCTC, (New York, 1982), (draft).

United Nations Council for Namibia, "Activities of foreign economic interests operating in Namibia", paper presented to the International Conference in Support for the Struggle of the Namibian People for Independence, (Paris, 1983)

United Nations Institute for Namibia, "Planning for Namibian independence: manpower development strategies", UN, (New York, 1983)

United Nations Institute for Namibia, Namibia: Perspectives for National Reconstruction and Development, UNIN, (Lusaka, 1986)

United Nations Institute for Namibia, "Brainstorming Meeting on the Comprehensive Study, Namibia: Perspectives for National Reconstruction and Development", (Lusaka, 1986)

United Nations Industrial Development Organization, Guidelines for the Establishment of Industrial Estates in Developing Countries, (Vienna, 1984)

United Nations Industrial Development Organization, The Effectiveness of Industrial Estates in Developing Countries, (Vienna, 1984)

United Nations Industrial Development Organization, Industrial Development Programme for Independent Namibia, (Vienna, 1984), Regional and Country Studies Branch, 278 pp. (Restricted)

United States Agency for International Development, A Report to the Congress on Development Needs and Opportunities for Co-operation in Southern Africa. Annex A: Namibia, (Washington, D.C., 1979)

University of Stellenbosch Transport Research Centre, Report on an Investigation Into the Potential Development at Walvis Bay, (Stellenbosch, 1977), 148 pp.

Van der Merwe, J.H., (ed), National Atlas of South West Africa, University of Stellenbosch, (Stellenbosch, 1983)

Zorn, S., The Mineral Sector in Namibia and Strategic Options for an Independent Government, Office of Technical Co-operation, (New York, 1978)

Industrial Development Review Series:
issued since 1986 as

Non-sales publications

Sri Lanka	UNIDO.IS.613	1986
Cuba	UNIDO/IS.615	1986
Tanzania	UNIDO/IS.628	1986
Egypt	UNIDO/IS.637	1986
Mali*	UNIDO/IS.640	1986
Zaire*	UNIDO/IS.644	1986
Pacific Island States: Papua New Guinea, Fiji, Solomon Islands, Western Samoa, Vanuatu, Tonga, Kiribati, The Federated States of Micronesia and Micro States	UNIDO/IS.645	1986
Côte d'Ivoire*	PPD.6	1986
Saudi Arabia	PPD.7	1986
Congo*	PPD.10	1986
Central African Republic*	PPD.11	1986
Colombia	PPD.16	1986
Ghana	PPD.18	1986
The Republic of Korea	PPD.29	1987
Botswana	PPD.37	1987
The Caribbean Region: Jamaica, Trinidad and Tobago, Guyana, Barbados, The Netherlands Antilles, The Bahamas, Belize, Bermuda, St. Lucia, St. Vincent & The Grenadines, Grenada, Antigua and Barbuda, Dominica, St. Christopher-Nevis, Cayman Islands, British Virgin Islands, Montserrat, Turks and Caicos Islands, and Anguilla	PPD.51	1987
Malawi	PPD.58	1987
Indonesia: "Changing Industrial Priorities"	PPD.60	1987
Zimbabwe	PPD.63	1987
Burma: "Transition to agro-based industrial economy"	PPD.65	1987
Jordan: "Stimulating manufacturing employment and exports"	PPD.67	1987
Liberia: "Resource-based industrialization and rehabilitation"	PPD.74	1988
Qatar: "Towards industrial diversification of an oil-based economy"	PPD.75	1988
Nepal: "Industrialization, international linkages and basic needs"	PPD.79	1988

(continued)

Industrial Development Review Series:
issued since 1986 as

Non-sales publications
(continued)

Kenya:	"Sustaining industrial growth through restructuring and integration"	PPD.85	1988
Angola:	"Stimulating industrial recovery"	PPD/R.15**	1988
Somalia:	"Industrial revitalization through privatization"	PPD.91	1988
The Philippines:	"Sustaining industrial recovery through privatization and foreign investment"	PPD.92/Rev.1	1988
Nigeria:	"Industrial restructuring through policy reform"	PPD.100	1988
Djibouti:	"Economic diversification through industrialization"	PPD.111	1989
Bangladesh:	"Strengthening the indigenous base for industrial growth"	PPD.114	1989
Mauritania:	"Industrial reorientation and rejuvenation"	PPD.115	1989
People's Democratic Republic of Yemen:	"Enhancing industrial productive capacity"	PPD.122	1989
Yemen Arab Republic:	"Diversifying the industrial base"	PPD.130/Rev.1	1989
The Sudan:	"Towards industrial revitalization"	PPD.132	1989
Cameroon:	"Coping with reduced oil revenue"	PPD.146(SPEC)	1990

---

* Also available in French.
** Restricted.

Non-sales publications are only available from:

Industrial Development Review Unit
Regional and Country Studies Branch
United Nations Industrial Development Organization
P.O. Box 300
A-1400 Vienna
AUSTRIA

Telephone: (0222) 21131-3650
FAX: (0222) 232156

Industrial Development Review Series:
issued since 1990 as

Sales publications

India:	"New dimensions of industrial growth"	May 1990

Sales Publications are **only available directly from:**

Basil Blackwell
108 Cowley Road
Oxford OX4 1JF
UNITED KINGDOM

Telephone: (0865) 791100
FAX: (0865) 791347