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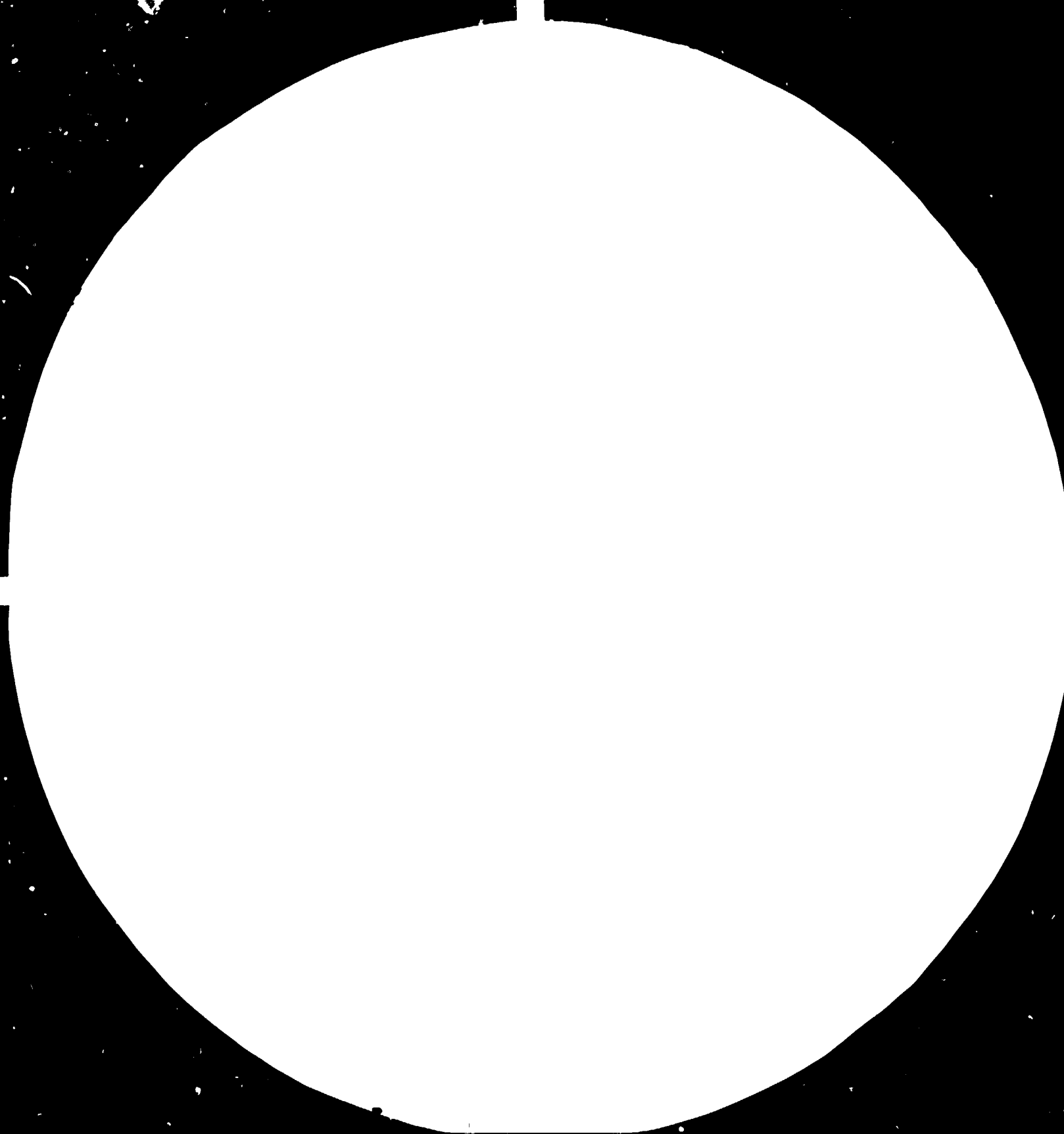

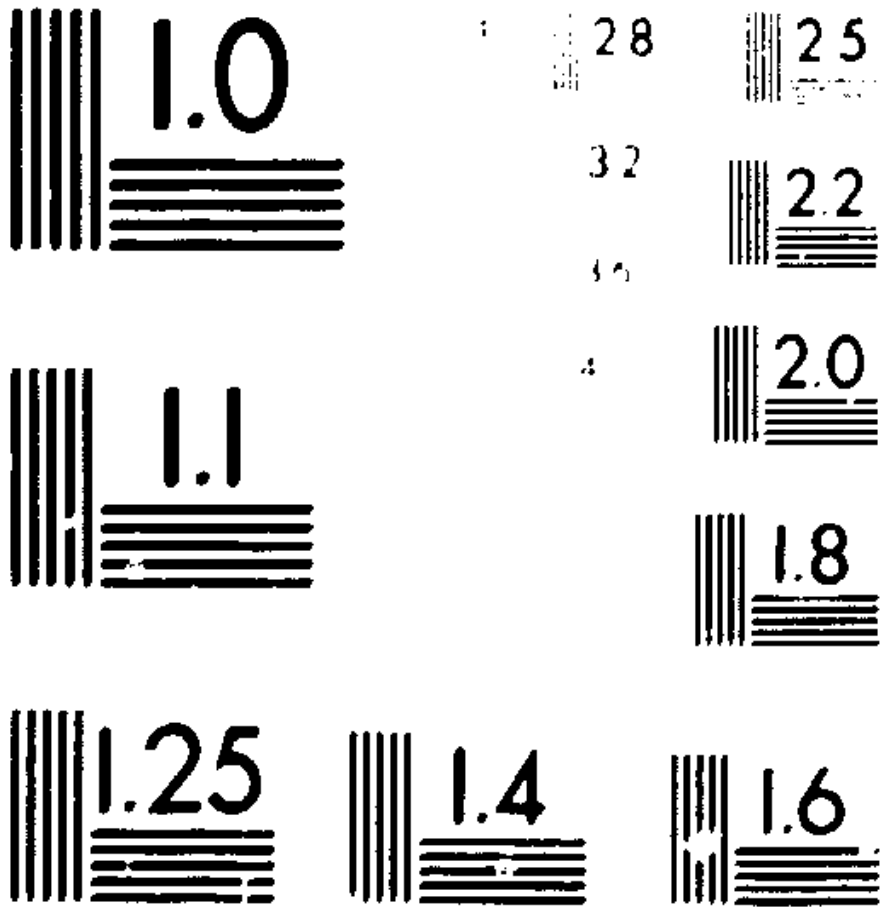

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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Zambia.

INDUSTRIAL DEVELOPMENT REVIEW SERIES

# THE REPUBLIC OF ZAMBIA

Prepared by the
Regional and Country Studies Branch
Division for Industrial Studies

V.85-23347

## Preface

Within the framework of UNIDO country surveys and studies, series of country industrial development reviews are prepared on developing countries by the Regional and Country Studies Branch of the Division for Industrial Studies.

The reviews aim at presenting a general survey and brief analysis of the country's industrial development, both as a service to those within UNIDO and other international agencies concerned with industrial policy, planning, project development and implementation, and as a ready source of information for governments. It is hoped that the reviews will prove useful as well to financial and industrial enterprises, both public and private, research institutes and to aid agencies in developed countries. The reviews also aim at providing a basis for undertaking in-depth studies of specific aspects of industrial policies, strategies and programmes in the developing countries and at providing a basis for informed discussion and analyses of industrial development trends and policies.

The industrial development review of Zambia has been prepared in late 1984 on the basis of information available at UNIDO Headquarters. It utilizes information provided by UNIDO data base, and material available from national and international statistical publications, and other sources. In the preparation of the review up-to-date national statistics have, however, not always been available in relation to all aspects of industrial development. The industrial development reviews will be updated periodically and efforts are being made to improve the data base and to monitor industrial progress and changes in industrial policy on a regular basis.

It should be noted that the reviews are not official statements of intentions or policies by governments or UNIDO, nor are they intended to represent an official assessment by UNIDO of industrial development in the countries concerned. Readers are invited to comment on the findings and analyses of the reviews and thereby assist UNIDO in improving and updating the reviews.

## EXPLANATORY NOTES

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 (1970/71) indicate a crop year or a financial year. Dates divided by a hyphen (1970-71) 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 (...) indicate that data are not available or are not separately reported;

A dash (-) indicates that the amount is nil or negligible;

A blank indicates that the item is not applicable;

One dot (.) indicates that there is insufficient data from which to calculate the figure.

The following abbreviations are used in this document:

| | |
|---|---|
| DBZ | Development Bank of Zambia |
| DMECs | Developed Market Economy Countries |
| EEC | European Economic Community |
| GDP | Gross Domestic Product |
| GNP | Gross National Product |
| IMF | International Monetary Fund |
| INDECO | Industrial Development Corporation |
| ISIC | International Standard Industrial Classification |
| K | Kwacha (national currency) |
| MVA | Manufacturing Value Added |
| NIEC | National Import and Export Corporation |
| PIC | Prices and Incomes Commission |
| SADCC | Southern African Development Co-ordination Committee |
| SDR | Special Drawing Rights |
| SITC | Standard International Trade Classification |
| ZCCM | Zambia Consolidated Copper Mines |
| ZIMCO | Zambia Industrial and Mining Corporation |
| ZSA | Zambian Standards Institute |

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| | | | |
|---|---|---|---|
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| Growth of real GDP: | | 1.9 per cent (1970-1981) | |
| Structure of production: | | 1960 | 1981 |
| | | Percentage of GDP | |
| | Agriculture: | 16.0 | 13.9 |
| | Manufacturing: | 6.3 | 16.9 |
| | Services: | 23.7 | 47.5 |
| Rate of inflation: | | 8.2 per cent (1970-1982) | |
| Exchange rate | | 1983 (average) = K1.25 = $1 | |
| | | 1984 June K1.73 = $1 | |
| Population: | Number: | 6.0 million (1982) | |
| | Growth rate: | 2.6 per cent (1960-1970) | |
| | | 3.1 per cent (1970-1982) | |
| | | 3.6 per cent (1980-2000) | |
| | Projected population: | 8 million (1990) | |
| | Labour force: | 3.1 million (1982) | |

## BASIC INDICATORS 2
### Resources and transport infrastructure

| | | |
|---|---|---|
| **Resources** | | |
| Cash crops<br>Leading products by value: | | maize, tobacco, groundnut, cotton, sunflower |
| Mining: | copper: | Estimated deposits 860 million tons<br>Production 529,600 tons (1982) |
| | zinc: | Production 52,500 tons (1982) |
| | lead: | production 14,000 tons (1982) |
| Energy: | | Electricity production 10,473 mn kwh (1982)<br>Exports 3,935 mn kwh (1982) |
| **Transport** | | |
| | Roads: | 4,948 km bituminised<br>7,670 km gravel |
| | Airport: | Lusaka |
| | Railways: | links with Zimbabwe and Tanzania |

BASIC INDICATORS 3
Foreign trade and balance of payments

| In 1982: | | |
|---|---|---|
| Exports | total value: | $1,059 million |
| | main goods: | copper, cobalt |
| | main destination: | EEC |
| Imports | total value: | $1,175 million |
| | main origins: | UK, South Africa, West Germany. USA |
| Balance of payments: | | Current account deficit = $600 million |
| Foreign debt (disbursed): | | $2.38 billion |
| Debt service ratio as per cent of exports: | | 17.4 per cent |
| as percent of GNP | | 5.9 per cent |
| Foreign currency reserves: | | $157 million |

BASIC INDICATORS 4
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| In 1981: | |
|---|---|
| Manufacturing value added: | $389.3 million |
| MVA per capita: | $67 |
| Employment in manufacturing: | 48,800 |
| as percentage of total labour force: | 13.6 per cent |
| Exports of manufactures (1979): | $10.11 million |
| Main goods: | non-metallic mineral, chemicals |
| Imports of manufactures (1979): | $531.2 million |
| Main imports: | non-electrical machinery, transport equipment, textiles, petroleum products |

# BASIC INDICATORS 5

## Inter-country comparison of selected indicators

| Indicator | Unit | Botswana | Lesotho | Malawi | Swaziland | Zambia | Zimbabwe |
|---|---|---|---|---|---|---|---|
| Population (mid-1982) | millions | 0.9 | 1.4 | 6.5 | 0.6 | 6.0 | 7.5 |
| Population growth (1970-82) | per cent per annum | 2.7 | 2.4 | 3.0 | 2.8 | 3.1 | 3.2 |
| Infant mortality (1982) | per thousand | ... | 94 | 137 | 157 | 105 | 83 |
| Area | thousands of sq.km. | 600 | 30 | 118 | 17 | 753 | 391 |
| Density (mid-1982) | persons per sq.km. | 2 | 46 | 52.8 | 35 | 8 | 19 |
| GDP (1981) | millions $ | 617 | 300 | 785 | 408 | 3,830 | 5,900 |
| GDP growth (1970-81) | per cent per annum | 10.2 | 6.6 | 5.1 | 9.4 | 0.9 | 2.2 |
| GDP per capita (1981) | $ | 740 | 214 | 120 | 680 | 334 | 788 |
| Agriculture(1981) | per cent of GDP | 14 | 23 | 47 | 22 | 14 | 15 |
| Industry (1981) | per cent of GDP | 44 | 22 | 18 | 38 | 36 | 35 |
| Manufacturing (1981) | per cent of GDP | 12 | 6 | 13 | 26 | 19 | 25 |
| Services (1981) | per cent of GDP | 42 | 55 | 35 | 40 | 50 | 50 |
| Exports of goods (1981) | per cent of GDP | 51 | 14 | 29 | 69 | 27 | 25 |
| Gross domestic investment (1981) | per cent of GDP | ... | 29 | 20 | ... | 17 | 27 |
| External public debt (1981) | per cent of GNP | ... | 20.4 | 48.8 | 37.9 | 66.3 | 19.1 |
| MVA (1981) | millions $ | 73.1 | 12.2 | 99 | 97.3 | 399 | 1020 |
| Share of world MVA (1981) | per cent | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.05 |
| Average annual growth of MVA (1970-81) | per cent | 17.5 | 13.4 | 5.4 | 13.4 | 1.4 | -4.1 |

## Executive Summary

The Zambian manufacturing sector has shown a weak growth performance in recent years. Its expansion has been acutely constrained by the foreign exchange shortage which is due to Zambia's rising debt burden. Zambia has concluded a series of rescheduling agreements with her donors and has signed a standby agreement with the IMF in 1983. The Consultative Conference in May 1984 approved aid worth $350 million for that year and more aid is expected for 1985 and 1986.

Zambia has responded to these agreements by instituting far reaching policy changes. These include a substantial devaluation of the Kwacha, liberalization of the trade system, decontrol of industrial prices and encouragement of the private sector. Zambia's donors have encouraged further liberalization and recommended a revision of the role of the public sector within the national economy. Such policy changes are likely to have important consequences for the manufacturing sector.

Manufacturing accounted for about 16.9 per cent of GDP in 1981 and its share has risen only marginally since 1974. There has been relatively little structural change within this sector since 1974. The consumer goods industries remain predominant. Industrial efficiency was low during the late 1970s - but there has been a noticeable improvement since 1981. The export performance remains poor - less than one per cent of manufacturing output is currently exported.

The manufacturing sector has suffered from a paucity of investible resources and from unavailability of imported inputs. Devaluation of the Kwacha and a reduction in the size of the public sector is not likely to increase foreign or domestic resources available for industrial investment. Devaluation has increased the price of industrial inputs substantially and has not significantly improved export performance.

Revitalization of the manufacturing sector by economic liberalization requires in the medium run direct action to reduce the import requirements of industrial production and measures to increase specific manufacturing exports. Export potential exists in a wide range of manufacturing branches.

The domestic natural resource base is rich and provides a sound base for the reorientation of Zambia's manufacturing sector particularly through export substitution.

The need for a diversification of the economy calls for the systematic build-up of a viable industrial structure and simultaneous development of domestic skills and subdelivering industries. Given the limited size of the domestic market it is evident, however, that an international and above all regional division of labour is required for securing economies of scale in some industrial activities.

The question of increased industrial co-operation with the countries in the sub-region would need to be examined. Increasing the regional integration of investment plans may contribute to a more efficient use of natural resources and other inputs required by the manufacturing sector. In the long run, the pattern of industrialization may be attuned to efficient division of labour and selective specialization based on comparative cost advantage within the sub-region.

The Southern African Development Co-ordination Committee (SADCC) has in 1983 identified a series of projects within the context of a regional development plan. The Zambian based projects identified within this package involve relatively modest investment levels. Industrial recovery in Zambia may be enhanced through systematic identification and realization of projects for upgrading and increasing the productive capacity of the manufacturing sector particularly to projects which use domestic resources and earn much-needed foreign exchange. In the long run, the manufacturing sector in Zambia must be given high priority in view of the continuously falling levels of annual copper production and the likelihood that copper reserves will be exhausted over the next 20 years.

The relative high level of income repatriation which presently constitutes an amount equivalent to 10 per cent of GDP, is a major problem for the development process of the country. An increase in the role of the private sector must therefore be accompanied by measures to substantially increase investment opportunities in the Zambian economy and other measures so as to enable utilization of generated surpluses for the growth process.

## 1. THE ZAMBIAN ECONOMY

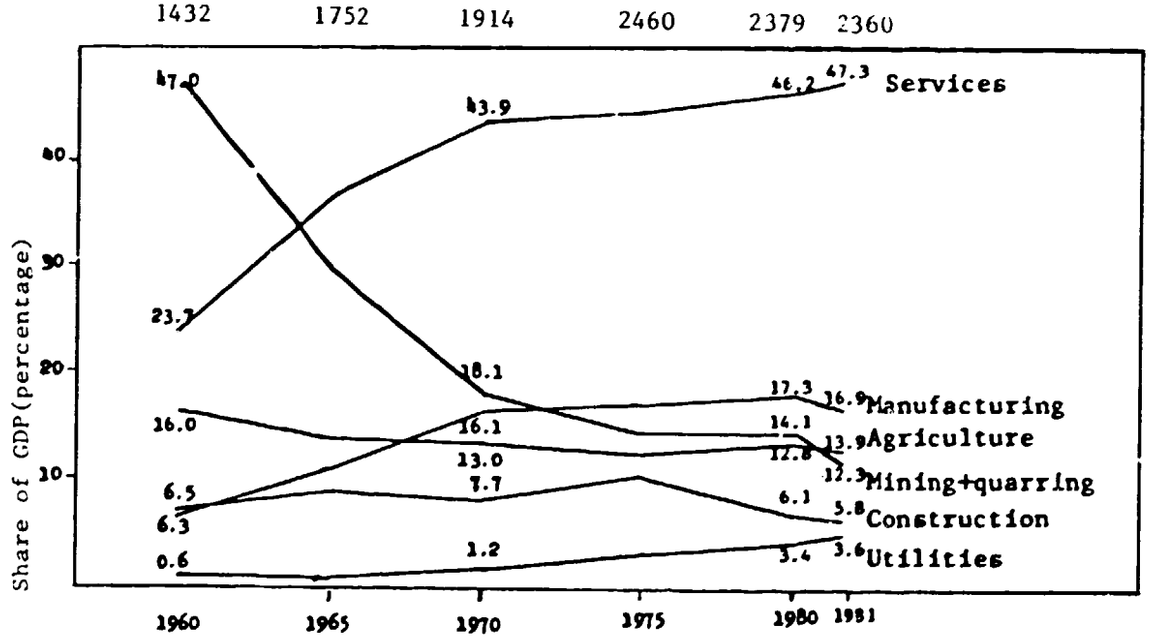
### 1.1 The economic structure

The Zambian economy has been in a state of relative contraction and the deceleration became evident since 1978. During the period 1978-82 GDP measured in constant (1970) prices has declined by 3.3 per cent. If terms of trade adjustments are taken into account the decline in real GDP is 8.9 per cent. GDP per capita in current prices was K 522 in 1981, 25 per cent lower than the real level attained in 1972.

Mining accounted for about 47 per cent of GDP in 1960 but its share had declined to 12.3 per cent in 1981 (Figure 1). The share of agriculture has also declined from 16 per cent to 13.9 per cent over this period. Manufacturing has increased its GDP contribution from 6.3 per cent in 1960 to 16.9 per cent in 1981. The manufacturing sector registered an average annual growth rate of -3.7 per cent (measured in constant 1970 prices) from 1981 to 1983.[1/]

Figure 1. Distribution of GDP by sectors of origin, 1960-1981

Total GDP (at factor cost)[a/]




Source: UNIDO, Statistical and Survey Unit. Based on data supplied by the UN Statistical Office, with estimates by the UNIDO Secretariat.

a/ Millions of dollars at constant 1975 prices.

1/ Bank of Zambia, Report and Statement of Accounts for the Year Ended 31st December, 1983, Table 2.3 (sourced from Central Statistical Office), page 12.

During 1978-1982 private and Government consumption rose by 1.3 per cent and 2.3 per cent respectively in real terms. Gross fixed capital formation declined by 1.2 per cent. A major problem arises from the fact that the level of repatriation of profits and salaries is so high that national disposable income is typically well below GDP in any given year.

Zambia remains dependent on copper mining. The performance of the Zambian economy can be related to changes in the international price of copper which has fluctuated widely in recent years. Annual production of copper has declined from 648,000 tons in 1978 to 529,600 tons in 1982. Coal production has declined from 615,100 tons to 552,300 tons over this period. Most copper mines are currently producing at a loss and copper deposits are expected to be exhausted over the next 20 years. The production of zinc has, however, risen and extensive exploration for uranium deposits are currently being undertaken.

Economic diversification remains of urgent importance to Zambia. The mining industry currently emp s 13 per cent of the labour force - it has the highest sectoral share of total employment. A contraction of the mining sector will have major implications for employment. Wage employment has fallen by 5 per cent over 1975-1982 and disguised unemployment remains high.

Contraction of mining will also have serious consequences as far as Zambia's international trade and payments are concerned. Currently Zambia relies for over 99 per cent of her export revenues on the mineral sector. The export performance of both agricultural and manufacturing sectors has been disappointing.

Since export earnings depend on widely fluctuating international metal prices, the foreign exchange revenue level also fluctuates widely. Moreover, even in the years when there is a balance of trade surplus, the current account usually registers a deficit due to very substantial remittances of profits, interest payments and expatriate salaries. Payments for services and income transfers increased from $431 million in 1977 to $711 million in 1981. Foreign reserves have increased slowly despite drawings on the IMF. They are now considerably lower than annual borrowings.

Zambia has experienced a rapid increase in the size of her foreign debt. Total disbursed debt at the end 1982 stood at $3,300 million - up from $1,404 million in 1977. Rescheduling agreements have postponed payments of interest and capital due over most of the next decade. However, prospects for a further lasting improvement in the foreign payments situation are not particularly good as fluctuating metal prices and a continuing devaluation of the Kwacha limits somewhat the prospects for export growth due to low supply elasticity of ma[illegible] export products.

## 1.2 Recent economic trends

In 1983 GDP rose by 1.7 per cent and manufacturing output by 6.6 per cent. Agricultural production declined. It is estimated that in 1984 no economic growth occurred in Zambia. Domestic prices and interest rates went up, agricultural output was affected by the continued drought in the southern province. Mineral production is unlikely to rise from the 1983 level due principally to the depressed state of the international metal markets. Copper production fell substantially during the first half of 1984. Manufacturing growth remains acutely constrained by the shortfall in essential inputs. The sanctioning of import licenses slowed down as foreign exchange became increasingly scarce. The 30 per cent devaluation of the kwacha over the period July 1983 - June 1984 sharply increased import prices. Foreign exchange availability is, however, expected to improve due to slightly better export performance and increased concessional assistance from the IMF and the World Bank. Latest figures available show that exports rose by 10.4 per cent in kwacha terms during 1983 and imports fell by 4.03 per cent. Invisible imports in 1983 were over K 507 million and the overall current account deficit was K 379 million as against K 549 million in 1982.

The 1984/85 budget contains a nominal increase of recurrent expenditure of 5 per cent. Capital expenditure is to be cut by almost 45 per cent. The budget deficit as a proportion of GDP is expected to decline from 7.3 per cent in 1983 to 5 per cent in 1984. In 1982, the budget deficit amounted to 21 per cent of GDP. The 1984/85 budget contained proposals for increasing incentives to non-traditional exporters. Copper exports during 1982 accounted for almost 90 per cent of total export receipts.

Since 1983 Zambia has been seeking a comprehensive rescheduling of all debt commitments up to the end of 1985. In the absence of rescheduling agreements, debt servicing costs are expected to reach 65 per cent of export earnings in 1984. Aid commitments have fallen by two-thirds during 1983 as compared to 1982.

The terms of agreement on rescheduling are somewhat unclear but substantial aid pledges were made in May 1984 and a facility for the import of oil has been renegotiated with a group of international banks - headed by the Bank of America. Zambia's creditors are insisting on further devaluation, larger increases in agricultural production prices and extensive liberalization of the trading system as precondition for comprehensive rescheduling.

Zambia has gone some way towards meeting these demands. Producer prices announced in May 1984 include a 16 per cent increase for maize, 28 per cent increase for groundnuts and a 44 per cent increase for sorghum. The Government has reduced subsidies on a number of consumer goods. Export incentives have also been announced and greater facilities for foreign investors are being planned. The Government has instituted a foreign exchange system which ensures a gradual devaluation of the Kwacha. It remains to be seen whether these measures suffice to correct the structural imbalances which constrain Zambian economic development.

## 1.3 Overview of the manufacturing sector

In an economy like Zambia's, the manufacturing sector can play two important roles: it can absorb a significant proportion of the labour force released from the contracting mining industry. Secondly, it can help in the diversification of the export portfolio.

The manufacturing sector grew rapidly after independence. During 1964 to 1975 it achieved an annual growth rate of about 15 per cent but stagnated thereafter. Growth was particularly impressive in the textile, food manufactures, tobacco and chemical branches. Employment also increased substantially over this period. Currently the manufacturing sector accounts for 11 per cent of total wage employment.

The main manufacturing activity consists of copper refining, production of alcoholic beverages, sugar, edible oils, and cigarettes. Textile factories, chemical plants, cement factories and glass producing units are also in existence. Zambia produces semi-manufactured copper products. A small engineering industry manufacturing and assembling radios, bicycles and automobiles has been established. Among major developments planned for the future are: the expansion of truck assembly plants, and the establishment of fertilizer producing units. A K 17.1 million ethanol distillery is also planned. A non-ferrous metal foundry is to be built at Ndola and the Development Bank of Zambia has also extended loans to ceramic and yarn producers. Money has also been raised for supporting the small-scale and agro-based industries.

The industrial growth that took place during the 1970s was of an import substituting character. Moreover, Zambia opted for "easy" import substitution. Capital- and import-intensive manufacturing plants were built for producing consumer goods. The result was that the growth of import substituting industrial output did not contribute to a reduction in the import needs of the country. As foreign exchange shortages started to develop, a lack of imported inputs became the most important constraint on Zambian industrial growth.

The Government is currently emphasizing the importance of foreign exchange savings. This has induced manufacturing firms to actively seek a substitution of domestic for imported raw materials and to explore export avenues. During 1984 a number of important export orders have been won within the Southern African region. Textile and bicycle manufacturers have had considerable successes. However, Zambian manufacturing has still a very long way to go in this respect; the share of manufactures in total Zambian exports and the share of exports in total manufacturing are both currently less than one per cent.

## 2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

### 2.1 Growth and structural change

MVA per capita declined from $73 to $67 (at constant 1975 prices) over the period 1970-1981 in Zambia. In Africa as a whole MVA per capita has risen from $35 to $46 over this period. The contrast becomes even more graphic when we compare the relevant growth rates. During 1970-81, whereas MVA per capita continued to grow at about 4 per cent in Africa, growth in Zambia was -1.8 per cent per annum, much of the deceleration coming after 1974. The growth of manufacturing output during 1970-81 in Zambia was only 1.25 per cent; in Africa as a whole it was over four times higher at 5.73 per cent.

Annex Table A.1 shows annual variations in the contribution of MVA to GDP ranging between 16 to 18.6 per cent with a mean of 17 per cent during 1970-1981. Each year during 1971-74 is marked by a marginal increase in the share of MVA in GDP. The share declined from 1975-1977, but rose during the 1978-1979 period and declined marginally thereafter. The negative growth rate registered by the manufacturing sector in 1981 is mirrored in its share of GDP which decreased from 17.3 per cent in 1980 to 16.9 per cent in 1981. There has been a regular decline in manufacturing production in Zambia since 1981 and the absolute values in terms of local currency at constant 1970 prices lend credence to this trend.[1/]

Table 1 shows that growth in manufacturing production has been sporadic. The index for manufacturing as a whole recorded a value of 110.6 in 1974 and then fell continuously up to 1977. There was a substantial increase in 1978 and 1981, but negative growth in 1979 and 1982. Figures for 1983 are available only for the first nine months and they indicate a fall in manufacturing production.

Large variations in growth rates characterize all the major manufacturing branches. Growth was most pronounced in the textile industry where the 1982 level of production was almost twice as high as that recorded in 1973. In all

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1/ Bank of Zambia, 1983, op.cit.

Table 1. Index of industrial production, 1970-1982

(1973=100)

| Item | 1970 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980a/ | 1981a/ | 1982a/ |
|---|---|---|---|---|---|---|---|---|---|---|
| Manufacturing | 81.8 | 110.6 | 105.5 | 101.6 | 98.5 | 102.6 | 96.2 | 99.2 | 104.9 | 99.3 |
| Food beverages and tobacco | 89.8 | 106.3 | 104.0 | 101.5 | 98.1 | 99.3 | 91.2 | 95.0 | 100.4 | 95.6 |
| Textiles and clothing | 90.2 | 118.9 | 117.9 | 118.9 | 100.4 | 140.7 | 147.1 | 166.0 | 184.7 | 191.7 |
| Wood and wood products | 83.7 | 119.5 | 88.9 | 69.6 | 76.9 | 75.4 | 75.0 | 80.5 | 108.1 | 86.9 |
| Paper and paper products | 71.7 | 101.1 | 115.5 | 94.1 | 102.6 | 123.3 | 96.8 | 86.3 | 82.0 | 82.2 |
| Chemicals, rubber and plastic | 71.5 | 119.2 | 107.8 | 106.7 | 105.8 | 103.5 | 107.1 | 99.6 | 119.2 | 94.1 |
| Non-metallic mineral products | 95.1 | 110.2 | 114.4 | 102.7 | 134.5 | 132.7 | 121.5 | 83.8 | 95.8 | 90.4 |
| Basic metals industries | 103.6 | 131.6 | 98.0 | 100.5 | 109.8 | 121.0 | 114.8 | 114.2 | 98.9 | 92.4 |
| Metal products and ores | 69.9 | 103.6 | 97.1 | 95.0 | 81.9 | 73.8 | 59.1 | 77.2 | 62.8 | 63.3 |

Source: C.S.O. Monthly Digest of Statistics, 1982 and figures supplied by C.S.O.

a/ Provisional figures.

other branches production in 1982 was below the 1973 level - the shortfall being greatest in the metal products and the paper industry - production in the metal products industry has fallen every year since 1974 except for 1980. Overall manufacturing production in 1982 was marginally below the 1973 level.

An indication of the extent of structural change during the period can be obtained by looking at Table 2. The most important manufacturing branches in terms of value added contribution in 1970 were beverages, metal products, food manufactures, chemicals and textiles in this order. In 1983, the five leading sectors were beverages, textiles, metal products, chemicals and food manufacturing. Spearman's rank correlation coefficient between the two orderings is very high (0.99), indicating that structural change has been minimal. Zambian manufacturing remains dominated by the consumer goods branches - beverages, food products and textiles. The share of the two major non-consumer goods branches - metal products and chemicals - has gone down from 22.3 per cent in 1970 to 17.2 per cent in 1981. The share of the consumer goods branches among the top five has increased from 61.5 per cent in 1970 to 69.9 per cent in 1983.

Table 2 also presents evidence about growth in value added. Once again as in the case of manufacturing output growth has been highly sporadic. Value added in manufacturing in 1983 is only slightly higher than in 1974. The branches in which the growth of value added has been most pronounced are beverages and tobacco, textiles, non-metallic mineral products and chemicals. Value added has declined in wood products, metals and food manufacturing. A more detailed breakdown of value added growth rates within the manufacturing sector is presented in Table A.2. It shows that the real growth of value added over the period 1970-81 has been positive in most consumer and intermediate goods producing branches but significantly negative in all the capital goods industries. Tables 2 and A.2 are not directly comparable, however, due to differences in manufacturing classification and in the data used for the computation of real growth rates. Annex Table A.2 would indicate that growth in the intermediate goods industries has been more rapid than in the consumer goods producing branches. This would imply that the consumer goods branches have contracted since 1981 - this is broadly supported by the evidence presented in Table 2.

Table 2. Value added in manufacturing by subsector, 1970 - 1983

(in millions of kwacha at 1970 prices)

| | 1970 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Food manufacturing | 17.5 | 9.0 | 13.1 | 16.4 | 15.9 | 15.1 | 13.9 | 13.6 | 14.3 | 13.5 | 15.6 |
| Beverages and tobacco | 50.9 | 61.0 | 67.0 | 58.4 | 52.5 | 61.1 | 69.1 | 66.8 | 76.9 | 74.6 | 80.3 |
| Textiles and wearing apparel | 11.1 | 16.8 | 16.0 | 16.6 | 14.3 | 23.3 | 24.6 | 28.1 | 31.6 | 33.1 | 33.2 |
| Wood and wood products | 5.6 | 9.4 | 6.4 | 4.4 | 5.0 | 4.3 | 4.3 | 4.6 | 6.2 | 5.5 | 3.8 |
| Paper and paper products, printing and publishing | 5.6 | 5.2 | 5.7 | 4.6 | 5.1 | 5.7 | 4.4 | 4.0 | 3.8 | 3.8 | 6.5 |
| Chemicals, petroleum and plastic products | 11.2 | 25.3 | 24.5 | 25.1 | 25.9 | 20.3 | 20.1 | 18.0 | 20.7 | 15.7 | 15.6 |
| Non-metallic mineral products | 9.2 | 9.8 | 7.0 | 6.1 | 5.8 | 12.6 | 12.0 | 8.6 | 10.3 | 10.1 | 13.0 |
| Metals and fabricated metals, machinery and equipment | 17.7 | 31.1 | 23.2 | 19.7 | 16.3 | 16.8 | 14.2 | 18.8 | 15.8 | 16.4 | 16.2 |
| Other manufacturing | 0.3 | 0.7 | 0.7 | 0.6 | 0.6 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 |
| T O T A L | 129.2 | 178.9 | 157.6 | 151.9 | 141.4 | 159.6 | 163.0 | 162.0 | 180.0 | 173.0 | 184.5 |

Source: Monthly Digest of Statistics and figures supplied by C.S.O., 1982.

## 2.2 Performance and efficiency

An approximate estimation of the performance of the branches in the manufacturing sector can be obtained by calculating the relative degree of industrialization.[1/] This measure compares the growth pattern of individual manufacturing branches in Zambia with the growth pattern typically observed in a comparable group of developing countries. Table 3 shows that branches with a value of "relative degree of industrialization" significantly in excess of one are beverages, iron and steel, metal products and non-electrical machinery. These branches exhibited higher income growth elasticities in Zambia than in its comparable country group. The branches which lagged behind significantly were textiles, footwear, plastic products, pottery, glass and non-ferrous metals. The data in Table 3 are for the period 1970-1978 and there is some indication that growth elasticities may have altered during the early 1980s.

The growth of both public and private sector industries has been of an import-substituting character. Import substitution and the expansion of domestic demand accounted for 99 per cent of the growth in total manufacturing output during 1965-72 - the period of the most dynamic expansion of the manufacturing sector since Zambia's independence. It has been shown that the expansion of export demand played a more significant role in the growth of the manufacturing sectors of Tanzania and Kenya during this period.[2/] Much of this growth took the form of "easy" import substitution in the sense that it remained confined to the consumer good branches and did not lead to a contraction of the capital import needs. Despite the growth of the domestic component in the apparent consumption of some goods, the overall import dependence of the economy increased. This trend became particularly marked during the 1970s. The import substituting firms which grew behind high protectionist walls were selecting production technologies that were not fully suitable to local conditions. Industrial inefficiency increased and the shortage of imported inputs created a severe supply crisis for the

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1/ Described in UNIDO Handbook of Industrial Statistics, United Nations, New York, 1982, pp.52-53.

2/ R. Gulhati, Industrial Strategy for Late Starters: The Experience of Kenya, Tanzania and Zambia, World Bank Staff Working Paper No. 457, Washington, 1981, p.18.

Table 3. Relative degree of industrialization in the 1970s by industrial branch

| Branch (ISIC) | Zambia relative to: All developing countries | Comparable country group |
|---|---|---|
| Food products (311/2) | 1.17 | 0.90 |
| Beverages (313) | 2.72 | 1.76 |
| Tobacco (314) | 1.42 | 0.90 |
| Textiles (321) | 0.50 | 0.45 |
| Wearing apparel (322) | 1.79 | 1.09 |
| Leather and fur products (323) | 1.40 | 0.67 |
| Footwear (324) | 0.31 | 0.20 |
| Wood and cork products (331) | 1.06 | 1.03 |
| Furniture and fixtures excluding metal (332) | 1.25 | 0.90 |
| Paper (341) | 1.44 | 1.28 |
| Printing and publishing (342) | 1.20 | 1.10 |
| Industrial chemicals (351) | 2.32 | 0.86 |
| Other chemicals (362) | 2.23 | 1.09 |
| Petroleum refineries (353) | 0.68 | 0.63 |
| Misc. products of petroleum and coal (354) | 0.71 | 1.07 |
| Rubber products (355) | 4.75 | 1.25 |
| Plastic products (356) | 0.83 | 0.56 |
| Pottery, china and earthenware (361) | 0.38 | 0.35 |
| Glass (362) | 0.38 | 0.21 |
| Other non-metallic mineral products (369) | 0.98 | 0.79 |
| Iron and steel (371) | 1.42 | 1.51 |
| Non-ferrous metals (372) | 1.08 | 0.55 |
| Metal products, excluding machinery (381) | 2.25 | 1.34 |
| Non-electrical machinery (382) | 2.64 | 1.81 |
| Electrical machinery (383) | 2.30 | 1.27 |
| Transport equipment (384) | 1.96 | 0.70 |
| Professional and scientific equipment, photographic and optical goods (385) | 0.18 | 0.60 |
| Other manufactures (390) | 0.43 | 0.80 |
| Total manufacturing (300) | 1.50 | 0.87 |

Source: UNIDO Handbook of Industrial Statistics, United Nations, New York, 1982.

manufacturing sector. Zambia's large debt burden and the need to restrain import growth makes it essential that further industrial expansion be based principally on the country's own natural resources.

Aggregate growth trends of MVA per employee are presented in Table 4. Variations about the mean have been large. MVA per employee in 1983 is 7 per cent lower in real terms than the level achieved in 1974. The period 1974-1977 saw a rapid fall in MVA per employee - by 1977 MVA per employee was 24 per cent lower than in 1974. During the period 1977-83 MVA per employee has grown at an annual average rate of 3.65 per cent, but the standard deviation for this period is again very large - with substantial falls recorded in both 1980 and 1982.

Table 4. Value added per employee in Zambian manufacturing, 1970-1983

| Year | Value added (in K million, at 1970 prices) | Employment ('000) | Value added per employee (K million) | Annual growth rate (per cent) |
|---|---|---|---|---|
| 1970 | 129.2 | 38.2 | 3.38 | |
| 1974 | 178.9 | 44.1 | 4.06 | |
| 1975 | 157.6 | 44.3 | 3.55 | -12.56 |
| 1976 | 151.8 | 43.1 | 3.52 | -0.84 |
| 1977 | 141.4 | 45.8 | 3.09 | -12.21 |
| 1978 | 159.6 | 46.0 | 3.46 | +11.97 |
| 1979 | 163.0 | 45.0 | 3.62 | +4.62 |
| 1980 | 162.0 | 47.6 | 3.40 | -6.07 |
| 1981 | 180.0 | 47.9 | 3.75 | +10.29 |
| 1982 | 173.0 | 48.5 | 3.56 | -5.06 |
| 1983 | 184.5 | 48.8 | 3.78 | +6.17 |
| Average | | | 3.55 | -0.44 |
| Standard deviation | | | 0.26 | 9.24 |

Source: Central Statistical Office.

It is generally believed that industrial productivity and efficiency is relatively low in Zambia. A major problem is capacity underutilization. Annex Table A.3 presents production achieved by the companies within the main Government-owned industrial corporation (INDECO). It shows that capacity utilization rates range widely. In general, capacity utilization was about 50 per cent in 1981-82 and there was a modest improvement in the period April-September 1982 as compared to the same period in 1981. Capacity utilization rates are particularly low in food manufacturing and edible oil plants, factories producing wood products and manufacturing cables and copper products. The fertilizer and electrical machinery branches also suffer from low rates of capacity utilization. Capacity utilization rates compare favourably, however, with many other African countries such as Tanzania and Sudan.

Estimates of profitability are not available for the entire manufacturing sector. For the INDECO group of companies - which account for the bulk of public manufacturing investment - the average gross profit to net assets ratio was 12 per cent over the period 1969-70 to 1973-74. This declined subsequently and in the period 1979-81 the INDECO group made a loss. This induced the Government to adopt a series of rationalization measures. The gross profit to net assets increased to 3.5 per cent during 1981-1983. Despite this improvement in performance, manufacturing enterprises - in both the public and private sectors - remain crucially dependent on Government support. The continuing foreign exchange shortage has also severely affected the performance.

## 2.3 Exports and imports of manufactured goods

As noted in Section 1.3 manufactures represent a very small proportion of total Zambian exports. Manufactured exports (SITC 5-8 less 68) increased from $1.6 million in 1970 to $10.1 million in 1979, which meant an increase in per cent of total exports from 0.15 to 0.73 per cent over this period (Annex Table 4). The export of non-ferrous metals constituted 99.07 per cent of Zambian exports in 1979. Non-metallic mineral manufactures - mainly refined copper products - constitute the main manufactured export product. Sugar and some chemicals are also exported. It has been argued by Government economists

that potential for export growth also exists in the food manufacturing, textile, wood and metal product branches.

The share of manufactured imports in total imports has fallen from 76.5 per cent in 1970 to 70.8 per cent in 1974 - reflecting an increase in the import of raw materials and food. The main manufactured imports are non-electric machinery, transport equipment, textile yarn, iron and steel and petroleum products. Most manufactured imports constitute essential production inputs or are used for meeting shortfalls in essential consumer goods. There exists relatively little potential for a further immediate large-scale reduction in imports to deal with the problem of the rising debt burden.

Of Zambia's total manufactured imports the developed market economy countries (DMEC's) supply over 90 per cent (Annex Table 5). The EEC's share is over 50 per cent. The DMEC's absorb 82 per cent of all exports from Zambia. Of highly processed manufactured goods (SITC 5-8 less 68) the DMEC's share is only 8 per cent.

The share of developing countries in total Zambian exports is only 16 per cent, however, their share in Zambian exports of highly processed manufactures is 92 per cent (Annex Table 6). An expansion of manufactured exports from Zambia must depend upon the penetration of regional markets - this is the area in which many of the recent export orders have been won. Lowering protectionist barriers in the DMEC group would seem to have few implications for the expansion of manufactured exports from Zambia. However, the scope for export substitution - a higher degree of domestic processing of manufactured goods presently exported - could be explored as a new element of industrial strategy. To expand exports, new markets within the SADCC region need to be captured and a restructuring of investment patterns within the manufacturing sector would need to be pursued.

## 2.4 Ownership and investment patterns

The share of the public sector in manufacturing output increased from about 10 per cent in 1968 to about 60 per cent in 1982. The share of the industrial sector in total Government expenditure on directly productive sectors over the period 1974-1984 averaged 14.3 per cent. Variation about this mean was again high with large increases in industry's share being

generally associated with overall expenditure levels. Years in which Government expenditure is curtailed also see a reduction in the share of manufacturing. Manufacturing investment thus tends to fluctuate with changes in levels of Government expenditure which is itself largely influenced by resource availabilities - i.e. movements in international copper prices on the one hand and disbursement of concessional assistance on the other.

The share of capital expenditure in total expenditure financed by the Government also fluctuates widely. Over the period 1975-1984 it averaged 86 per cent - ranging from 94 per cent in 1980 and 95 per cent in 1982 to only 2 per cent in 1984. The drastic reduction during 1983 and 1984 reflects the Government's strategy on curbing new investment and concentrating on increasing capacity utilization rates in existing units.

The Zambian parastatals dominate the "commanding heights of the economy" - in the words of the Third National Development Plan.[1/] The INDECO group

Table 5. Share of the industrial sector in annual Government expenditure, 1970-1984

("Expenditure on directly productive sector" in million kwacha)

| Year | Expenditure on industry a/ | Expenditure on directly productive sector | Share of industry |
|---|---|---|---|
| 1970 | 10.4 | 75.1 | 13.8 |
| 1974 | 7.1 | 51.5 | 13.8 |
| 1975 | 14.2 (12.6) | 67.9 | 20.9 |
| 1976 | 1.7 ( 0.5) | 48.8 | 3.4 |
| 1977 | 7.2 ( 5.9) | 57.2 | 12.5 |
| 1978 | 10.7 ( 9.4) | 76.2 | 14.0 |
| 1979 | 20.5 (18.9) | 100.9 | 20.3 |
| 1980 | 31.7 (30.0) | 114.8 | 27.6 |
| 1981 | 6.1 ( 4.2) | 77.6 | 7.8 |
| 1982 | 54.2 (51.5) | 182.6 | 29.6 |
| 1983 | 5.4 ( 0.9) | 134.7 | 4.0 |
| 1984 | 5.0 ( 0.1) | 150.0 | 3.3 |
| Mean | | | 14.2 |
| Standard deviation | | | 9.3 |

Source: Central Statistical Office.

a/ Figures in brackets are capital expenditures.

1/ Zambia, Third National Development Plan, 1979-83, Lusaka, 1979, p. 433.

of companies produce cement, lime products, intravenous fluid, textiles, explosives, glass, automobiles, batteries, fertilizers, beer, food manufactures, bricks, cables etc. The private sector is also present in some of these branches. In the late 1970s it accounted for over 60 per cent of manufacturing employment. Private sector firms are relatively large. Most operate on a modern factory basis. The foreign corporate sector has traditionally been important in the fields of food manufacturing, automobile assembling and oil distribution. Its importance is likely to be enhanced if current plans for liberalization are actively pursued. The last (Third) Five-Year Plan identified the following sectors as priority areas for private sector growth.

(i) Small maize mills and hammer mills;

(ii) Vegetable oil crushing;

(iii) Stockfeed mixing plants (using such ingredients as cassava, lucerne soyabeans, oil cakes, maize offals, molasses, blood meal and bone meal, kapenta and fish (where these can be found in sufficient quantities);

(iv) Cassava processing in starch and pellets (for stockfeed);

(v) Honey and bees-wax;

(vi) Candlemaking;

(vii) Pectin and papain and food chemicals (pectin derived from various fruits and papain derived from papaya, used in fruit preservation);

(viii) Fruit and vegetable processing: fruit juices, tomato juice, squashes, crushes, syrups, jams, marmalades, fruit preserves, baked beans and other canned vegetables, tomato puree, ketchup, chutney, etc.;

(ix) Meat processing (sausages, salami, ham, bacon, canned meat and cured and smoked meat);

(x) Bone meal and blood meal for stockfeed made at or adjacent to slaughter slaughter houses;

(xi) Brushes and brooms;

(xii) Soap making - particularly from tallow;

(xiii) Basketmaking;

(xiv) Sawmills;

(xv) Hardwood veneer slicing;

(xvi) Joinery products;

(xvii) Woodwork workshops;

(xviii) Safety matches (using wood and bamboo);

(xix) Extraction of gum oleoresins, tannins and essential oils; and

(xx) Traditional crafts, wood carving, ivory carving and basketmaking.

An investment of K 30 million in the manufacturing sector during the Third Plan was expected to be made by the private sector. It was to be directed to medium- and small-scale and village industries. Most private sector projects are expected to be labour intensive and, as a consequence, the total impact of this investment on industrial development and employment generation was expected to be substantial.

In addition, in response to the Industrial Development Act and other incentives under the Third Plan, private foreign investors were expected to participate through equity participation and loan assistance in priority industries. Joint ventures with parastatals or with local private entrepreneurs, involving private-owned or foreign Government-backed capital or technical service in support of a given project was also encouraged.

Public and private sector manufacturing firms in Zambia share a number of common characteristics. They are regionally concentrated: More than half of manufacturing employment - and a large proportion of the total number of manufacturing firms - are concentrated in the Copper Belt.

## 3. INDUSTRIAL STRATEGIES, POLICIES, PLANS AND INSTITUTIONS

### 3.1 Goals of industrial policy

Planning began in 1966 with the launching of the First National Development Plan (1966-70), which aimed at diversifying the economy to depart from a single resource-based development pattern, encouraging agriculture and industry, extending the educational system, creating infrastructural facilities - transport in particular,and at raising rural incomes to urban levels. A GDP growth rate of 10.6 per cent was achieved largely on account of the booming copper prices of 1969-70. Some envisaged production targets were not achieved. Though the industrial sector achieved its targets, the important copper mining and agricultural sectors fell short of expectations.

The Second Plan, 1972-77, was more modest and stressed greater emphasis on productive investment projects. It forecast a GDP growth rate of 6.8 per cent, with the highest growth anticipated in the manufacturing sector (15 per cent per annum). However, the dislocation of Zambia's main foreign trade routes and falling world copper prices in the mid 1970s painted a gloomy picture of economic activity; GDP had fallen to 5.3 per cent per annum between 1971 and 1976, and the manufacturing sector grew at only 3.1 per cent, compared with 5.4 per cent in agriculture and 5.9 per cent in the mining and quarry sector.

The latest Plan - the Third National Development Plan (1979-1983), published in 1979, envisaged less ambitious targets, with annual GDP growth set at 4.8 per cent between 1979 and 1983. The manufacturing, agricultural and mining sectors were forecast to grow at 8.0, 5.5 and 1.0 per cent per annum respectively. Total investment during the Third Plan was set at K 3,354 mn, of which K 1,439 mn was to be from the Government budget. Gross investment was projected at 29 per cent of GDP during the Plan period, Government consumption at 20 per cent, and private consumption at 51 per cent. The shortage of foreign exchange during the Plan period, compounded by the failure of the 1982 and 1983 crops, have ensured that many of the targets set by the Plan remained unachieved.

Priority industries identified in the Third Plan were milling, vegetable oils and fats, sugar, stockfeed, copper- based semi-manufactured products,

agricultural equipment, fertilizers and textiles. A total of K 45.0 million was to be invested in the manufacturing sector over the period 1978-83 representing 13.4 per cent of the total Plan outlay. Public investment was to constitute K 300 million (K 240 million from the parastatals and K 60 million from the budget). External financing was to equal K 120 million (22 per cent of the total) and the domestic private sector was expected to invest K 30 million in the manufacturing sector. The Annual Plan for 1984 attempted to raise capacity utilization by the existing industries. The standby facility for 1984, negotiated with the IMF, and the Paris Club agreement were expected to relieve foreign exchange constraint considerably and ease the balance of payments position in order to admit some increase in real imports for raising capacity utilization.

## 3.2 Recent changes in industrial policy

There has been continuous pressure on Zambia to revamp her industrial policy. The Government recognises the need to reduce import dependence and the capital intensity of the manufacturing sector in the light of the continuing scarcity of foreign exchange. There is also a need to accelerate the growth of export oriented enterprises in order to make the manufacturing sector a significant net earner of foreign exchange. Finally, there is also an increased awareness of the problems associated with industrial inefficiency and the Government has during 1983 and 1984 reduced controls on a wide range of locally produced industrial goods with a view to enhancing industrial profitability. The continued devaluation of the Kwacha is also justified by the Government in terms of its expected impact on export revenue. The Government is also contemplating a comprehensive overhauling of the tariff structure with a view to increasing the uniformity of the effective protection system that exists in Zambia.

Over the past two years the Government has been moving away from the system of direct control. This is evident in the decisions regarding the decontrol of industrial prices, devaluation, provision of incentives for agricultural producers and the substantial increases in agricultural producer prices announced after the budget for 1984. Institutional reforms for facilitating a gradual switch over from a system of direct to indirect control

have also been made. The most important of these include the establishment of a high level Special Economic Unit and changes in budget administration procedures.

Other important institutional reforms concern the parastatal sector. In the past four years, the Government has improved the efficiency of enterprises in the Zambia Industrial and Mining Corporation Ltd. (ZIMCO) Group by severing the direct links between company management and the Government ministries previously responsible for operating decisions. The establishment of a new Board of Directors and an executive management group at ZIMCO Headquarters responsible for group policies, financial and corporate planning, conditions of service and investment decisions served the same purpose. These measures aim at increasing the autonomy and commercial orientation of the enterprises. In the near future, ZIMCO will establish a greater capacity for economic analysis, and plans to incorporate such analysis into its procedures for project and performance evaluation in order to avoid future uneconomic investments.

Further reforms currently being implemented are improvements in foreign exchange allocations and debt management, and the establishment of the Prices and Incomes Commission (PIC). Currently, the Government is developing procedures for better forecasting and budgeting foreign exchange, and representatives of the private sector are being involved in the allocation process. In view of Zambia's debt problems, improvements in debt management are urgently needed. With the help of technical assistance, better systems and procedures are being developed in the Bank of Zambia and the Ministry of Finance.

The semi-autonomous Prices and Incomes Commission was formally established in May 1981. So far its main function has been to monitor implementation of the Government's wage guidelines, and to amend collectively negotiated agreements if necessary. In the future, its role is intended to be expanded to include advice to the Government on wage policy.

Many of these measures were taken in response to the explicit and implicit conditions attached to the 1983 IMF standby agreement for SDR 211.5 million (plus an SDR 97 million drawing under the Compensatory Financing

Scheme). The donors meeting organized by the World Bank during May 1984 which pledged a sum of $350 million for 1984, welcomed the changes in Government economic policy. The donors are recommending a series of measures which may have far reaching implications. At the May meeting the Zambian Government presented new policy objectives and the criteria for public investments and expenditures that the Government will follow for the next three years. These are:

- to complete economically viable on-going projects;

- to rehabilitate and properly maintain the mining industry to increase its efficiency and competitiveness;

- to rehabilitate and increase capacity utilization in productive sectors of the economy, particularly industry and agriculture;

- to promote non-traditional exports;

- to rehabilitate the existing infrastructure and to expand infrastructural facilities for the successful and efficient operation of the production sectors; and

- to expand social services, particularly in education and health.

The objective in the industrial sector is to increase capacity utilization and the efficiency of existing industries rather than to create additional capacity.

Further measures being recommended by influential donor groups include:

- The commissioning of a comprehensive effective protection study to suggest measures for reducing the level and variance of effective protection;

- Abolishing zero duty import categories;

- A gradual dismantling of quantitative import restrictions;

- Reduction of transport costs, preferential access to import licences, relief from income tax and duties on imported inputs to major export producers;

- Establishment of an export development fund, and export credit insurance and payment guarantees and increasing the scope of the Export Promotion Board (established with the help of the EEC) within the Ministry of Commerce and Industry;

- The early introduction of a new Industrial Development Act to replace the Act of 1977;

- A redefinition of the role of the public sector within the Zambian economy. This would involve extending the autonomy of public enterprise managers to include investment, production and trade decisions;

- Seriously considering the possibility of limiting the Government's direct investment involvement to strategic industries such as petrochemicals and fertilizers.

At the end of the consultative meeting in May a joint co-ordination committee was established in Lusaka to monitor the progress of the Government's recovery and stabilization programme. It was also agreed that new pledges of aid will be made in 1985 and 1986. Institutional and policy changes in Zambia during 1984 are likely to be closely scrutinized.

## 3.3 Institutional framework for industry

Since far reaching institutional changes are anticipated over the next year, the existing institutional structure is only briefly summarized.

### The Ministry of Commerce and Industry

The Ministry of Industry, which was established in 1977 and merged into the Ministry of Industry, Commerce and Foreign Trade in 1979, is involved in the formulation of national industrial plans, policies and strategies, as well as for ensuring that they are executed effectively to achieve the overall

national objectives. To this end, it submits policy proposals and specific industrial projects to the National Commission for Development Planning for inclusion in the overall National Development Plan.

Zambia Industrial and Mining Corporation Ltd. (ZIMCO)

ZIMCO was established under the Companies Act as a holding company, whose total shares are held by the state, through the Minister of Finance. It has wide powers under the Memorandum and Articles of Association, to engage in a variety of economic activities. Thus, one of its functions is to mobilize and invest funds into new industrial enterprises and other sectors. At the beginning of 1979, President Kaunda initiated a far-reaching re-organization of ZIMCO. All sub-holding companies were dissolved, with the exception of INDECO and NIEC (National Import and Export Corporation).

Industrial Development Corporation (INDECO)

INDECO is a state-owned holding corporation, which is one of the sub-holding companies under the control of ZIMCO. Through its many specialized subsidiaries, INDECO performs various functions. These include: equity participation in industrial enterprises, promotion of small-scale enterprises, industrial training and manpower development, provision of managerial personnel to its subsidiaries, mobilization of financial resources through borrowing or invitation of equity participation by foreign and Zambian investors.

INDECO and its subsidiaries, and the Ministry of Industry are the institutional machineries through which the function of promoting specific industrial projects is performed. This function entails the identification, formulation and appraisal of specific projects as well as finding prospective financiers or investors, local and foreign. Some financial institutions, particularly the Development Bank of Zambia and the National Commission for Development Planning, are also involved in the exercise.

INDECO also makes arrangements for providing training in the fields of management, accountancy and engineering.

Zambian Standards Institute (ZSI)

The Institute provides industry with technological data and information; sets standards regarding quality; composition, specifications and sizes in the production of various goods. The Institute has special technical committees consisting of such interested bodies as: manufacturers, industrial and mining organizations, experts and professionals in various fields, scientific research and academic organizations, Government departments, local and municipal bodies, consumers, etc.

Development Bank of Zambia (DBZ)

The main tool for financing industrial and agricultural investment is the Development Bank of Zambia. It gives loans to both parastatals and private companies for expansion or for new projects. Due to financial support by multilateral and bilateral aid, the DBZ is able to provide foreign exchange for the purchase of machines and equipment. It also prepares feasibility studies, in line with the objectives of the National Development Plan, either on behalf of its clients or on its own initiative. It also promotes identified viable projects among prospective investors.

## 4. RESOURCES FOR INDUSTRIAL DEVELOPMENT

### 4.1 Mining

The Copper Belt which straddles the Zambian-Zaire border constitutes the fifth largest copper producing region in the world. Declared reserves of copper in 1975 were 860 mn tons of ore at around 3 per cent purity. Nchanga, Mufulira, Rokana, and Luanshya, are the four largest mines, all capable of producing over 100,000 tons of copper per annum. Important newer mines that have been established since the 1950s include the Konkola, Chibuluma and Chambishi mines. Future mining development appears to be centred upon the present four main mines. In the longer term, large-scale mining of lower quality ore bodies in the little developed North Western province seems likely to be a major source of expansion in copper output. The Zamefa plant in Luanshya now fabricates copper wire rod, as well as wire and tube, out of locally mined copper but, as yet, only a small proportion of Zambia's copper output is processed into industrial products in Zambia. Lead and zinc are mined at Kabwe by Zambian Broken Hill. Gold, silver and selenium are also produced as by products of base metal mining. Very large emerald deposits exist on the Copper Belt. Limestone and manganese are among other minerals worked. There are many unworked deposits, including iron ore, particularly in the north west, which was considered for mining in the context of an iron and steel plant in that part of the country. Large scale exploration for uranium is now under way in several areas.

As Table 6 shows, the annual production of copper and coal has gone down over 1978-82. Zinc and lead production levels have fluctuated widely. Cobalt production and processing has expanded in response to large increase in the price for this commodity during the late 1970s.

The fall in the production of copper is likely to have continued during 1984. Zambia Consolidated Copper Mines (ZCCM) was facing serious difficulties in 1984 due to shortages in foreign exchange for the import of essential production equipment. Most copper deposits are currently expected to be exhausted over a 20-year period. However, the Government is going ahead with a major rehabilitation programme and international finance has been obtained for this purpose.

Table 6. Mineral production in Zambia, 1978-1982
('000 tons)

| | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|
| Copper | 643.0 | 588.3 | 595.8 | 587.4 | 529.6 |
| of which: | | | | | |
| electrolytic | 627.7 | 563.6 | 607.1 | 564.0 | 587.0 |
| blister | 15.3 | 24.7 | 3.8 | 7.6 | 0.0 |
| Zinc | 50.5 | 53.7 | 42.9 | 39.7 | 52.5 |
| Lead | 12.9 | 12.8 | 10.0 | 9.9 | 14.6 |
| Cobalt | 1.6 | 3.3 | 3.3 | 2.5 | 2.7[a/] |
| Coal | 615.1 | 598.5 | 579.1 | 587.0 | 552.3[a/] |

Sources: World Bureau of Metal Statistics; Monthly Digest of Statistics.

a/ Year ending March 1983.

## 4.2 Raw material resources

Main agricultural products include wheat, maize, cotton, tobacco, groundnuts, oilseeds, beef, pork and milk. Marketable surplus tends to fluctuate widely due to the fact that about 50 per cent of the total labour force is employed in essentially subsistence agriculture producing maize, millet and cassava. However, large scale European and other private plantation farmers are important commercial producers. In recent years, the Government has tried to attract foreign investors to establish very large farms in each province. The main cash crop has long been maize, of which approximately two thirds of marketed output comes from large commercial farms. Tobacco is the second most important cash crop, but production has been allowed to contract dramatically in recent years. Cattle sales are undertaken by both large estates and small-scale peasant farmers. Groundnuts have always been an entirely peasant crop, and the valuable export grade confectionery nuts are grown only in the Eastern province. The most important new crops to have been promoted in recent years have been cotton, rice, poultry, wheat, sugar and oilseeds, such as sunflower and soya bean. Cotton, poultry and, to a lesser extent, rice have proved to be very successful in encouraging large numbers of African farmers to embark upon commercial

agricultural production. Sugar, wheat and oilseeds, on the other hand, have been successful crops for large-scale, essentially European-owned plantation farms.

Table 7 shows that during the period 1978-83 major gains were made in the production of cotton, sunflower, wheat, rice and soya bean. As against this, the 1983 output of tobacco and groundnuts was below the 1978 level. For most crops the level of production in 1983 was above that in 1982, but 1984 is expected to have been a bad year for the agricultural sector due to a severe drought in the southern provinces. Agricultural output may not perform well in the 1980s as growth is being hampered by insufficient inputs, credit shortage and prolonged drought.

Table 7. Marketed agricultural output, 1978-1982
(tons)

| | 1978 | 1979 | 1980 | 1981 | 1982 | 1983[a/] |
|---|---|---|---|---|---|---|
| Maize | 576,000 | 333,000 | 378,000 | 693,341 | 508,328 | 630,622 |
| Virginia tobacco | 3,700 | 4,591 | 4,128 | 2,984 | 2,565 | 2,811 |
| Burley tobacco | 264 | 381 | 554 | | | |
| Groundnuts | 6,024 | 2,736 | 2,000 | 1,320 | 810 | 987 |
| Cotton | 8,400 | 15,000 | 19,900 | 17,177 | 13,171 | 32,019 |
| Sunflower | 7,550 | 11,910 | 23,590 | 19,223 | 20,362 | 31,400 |
| Soya bean | 1,180 | 1,300 | 1,800 | 3,673 | 5,140 | 6,968 |
| Paddy rice | 1,956 | 1,850 | 3,176 | 2,673 | 2,826 | 5,862 |
| Wheat | 4,541 | 6,528 | 7,560 | 11,478 | 12,510 | 10,010 |
| Cattle (head) | ... | 84,000 | ... | 100,052 | 105,000 | 110,000 |

Source: Zambia, Economic Report, April 1984, and Central Statistical Office.
a/ Estimate.

Zambian agricultural resources also include fish. The annual catch during 1982 was 76,000 tons - more than twice as much as during the previous year.

Zambia's forestry resources include teak grown in the Western Province for use by Zambezi Sawmills Ltd., a subsidiary of INDECO (the state industrial holding company). The company produces railway sleepers and flooring, much of it for export.

## 4.3 Energy resources

Zambia is well endowed with energy resources. Since independence the country has become self-sufficient in the production of both coal and electricity. Exports of electricity have risen. Until 1974 Zambia was a net importer of electricity but after the construction of the Kariba North Bank station production of electricity increased and electricity exports have increased from 1,757 mn kwh in 1978 to 3,935 mn kwh in 1982. Petroleum imports represent about 18 per cent of total import expenditure. Table 8

Table 8. Commercial primary energy balance, 1981
('000 tons coal equivalent)

| | | | |
|---|---|---|---|
| Production | | Apparent consumption | |
| Solid fuels | 426 | Solid fuels b/ | 426 |
| Hydroelectricity a/ | 3,952 | Liquid fuels c/ | 1,059 |
| Total production | 4,378 | Hydroelectricity a/ | 3,952 |
| | | Less net exports of electricity | 1,309 |
| | | Total consumption | 4,128 |
| Imports | | Exports | |
| Crude petroleum | 872 | Petroleum products | 73 |
| Petroleum products | 34 | Electricity a/ | 1,315 |
| Electricity a/ | 7 | Total exports | 1,388 |
| Total imports | 913 | | |
| Imports | | Exports | |
| Drawdown of crude stocks | 214 | Bunkers | 52 |
| Drawdown of petroleum product stocks | 73 | Balancing item d/ | 10 |
| Total supply | 5,578 | Total demand | 5,578 |

Source: UN Yearbook of World Energy Statistics, 1981.

a/ The UN converts primary and internationally traded electricity on an output basis, showing the amount of energy a thermal power station of average (28 per cent) efficiency would require to produce the same amount of electricity.

b/ Assuming nil change in stocks.

c/ Including refinery consumption.

d/ Comprises output of 7,000 of non-energy petroleum products (e.g. naptha, lubricants), unidentified changes in crude stocks and statistical discrepancy.

2resents the commercial primary energy balance for 1981. The importance of primary oil imports is likely to increase if manufacturing production picks up. Despite relatively slow industrial growth during 1974-1982, the demand for liquid fuel (primarily oil) grew by about 18 per cent.

## 4.4 Manpower resources

Zambia has a population of about 6.2 million. About 50 per cent of the population is of working age. Wage employment in 1982 was estimated at 360,000 (including 17,000 expatriates). Wage employment has been falling since 1975 when it was 408,800. The fall has become most pronounced since 1980. Over the period 1980 to 1983 wage employment fell by 5 per cent. Since 1978 the consumer price index has increased at a faster rate than the average earning of Zambian workers indicating a decline in real wages. The average earnings of the expatriate labour force was about four times as high as that of Zambian workers in 1982.

The bulk of the jobs in the formal sector are offered by Government services. Their share currently stands at about 40 per cent. Manufacturing employed 11.25 per cent of the total labour force in 1982. Mining and commerce also have larger shares. Agriculture's share in the formal sector is small but it absorbs the bulk of the 50 per cent of the Zambian labour force which is occupied in subsistence farming. A sectoral breakdown of employment is given in Table A.8.

The Government has been conscious of the need to expand training facilities for the development of industrial skills. The objectives of the Department of Technical Education and Vocational Training are as follows:

(i) To continue to provide high quality pre-employment certificate and diploma training programmes to meet the manpower requirements of the Zambian economy for technicians, technologists, and business, commercial and industrial personnel;

(ii) To identify manpower needs and to design new training programmes, at certificate and diploma levels in both business and engineering fields relevant to the needs of rural, industrial and commercial development;

(iii) To make qualitative and quantitative improvements in the Department's training programmes;

(iv) To increase the supply of technical, vocational and commercial teachers, in order to accelerate the Zambianisation of staff in colleges;

(v) To expand the use of the Department's facilities for extension studies (continuing education for workers) and provide professional assistance to other agencies involved in skills training; and

(vi) To redress imbalances in the physical resources in the Department's institutions to make the best use of the facilities in which investment has been made.

The Third National Development Plan proposed an increase in the enrolment capacity of the Department's institutions from 5,940 students in 1978 to 7,060 students in 1983. The details are shown in Table 9. Industry has also benefitted from the operation of maintenance production units run by educational institutions.

Table 9. Projected enrolment in Department of Technical Education and vocational training institutions, 1978-83

| | Hostel capacity | | Enrolment | |
|---|---|---|---|---|
| | 1978 | 1983 | 1978 | 1983 |
| Zambia Institute of Technology[a/] | 1,960 | 1,960 | 1,250 | 1,300 |
| Evelyn Hone College | 600 | 850 | 1,220 | 1,200 |
| Northern Technical College | 700 | 700 | 560 | 700 |
| Technical and Vocational Teachers | 300 | 300 | 190 | 300 |
| Zambia Air Services Training Institute | 120 | 200 | 260 | 250 |
| Choma Trades Training Institute | 180 | 190 | 150 | 190 |
| Kabwe Trades Training Institute | 480 | 480 | 520 | 520 |
| Livingstone Trades Training Institute | 440 | 440 | 500 | 500 |
| Kasiya Secretarial College | 120 | 120 | 110 | 120 |
| Luanshya Trades Training Institute | 300 | 300 | 130 | 300 |
| Lukashya Trades Training Institute | 500 | 500 | 350 | 500 |
| Lusaka Trade Training Institute | 250 | 250 | 260 | 250 |
| Mansa Trades Training Institute | 180 | 250 | 60 | 250 |
| Nkumbi International College | 380 | 380 | 380 | 380 |
| New Eastern Province T.T.I. [b/] | - | 300 | - | 100 |
| New North-Western Province T.T.I. [b/] | - | 300 | - | 100 |
| New Western Province T.T.I. [b/] | - | 300 | - | 100 |
| TOTAL | 6,510 | 7,820 | 5,940 | 7,060 |

a/ Resident student enrolment, excluding enrolled students who are out of the institutions on industrial break. Riverside Campus 1,800 plus City Campus 160.

b/ Trades Training Institute.

## 4.5 Financial resources

The lack of financial resources represents a serious constraint on Zambian manufacturing expansion. Over the period 1975-1983 the ratio of national disposable income to gross domestic product was only 0.88. This represents a relatively large annual transfer of profits, interest, dividends and expatriate wages. Domestic saving has been negative in seven of the past ten years (1974 - 1983) and gross domestic investment has fallen by an average rate of 10.5 per cent over the period 1970-82 - the major shortfalls being concentrated after 1978.

As noted in Section 2.2, the self-financing capacity of public sector manufacturing enterprises deteriorated during the late 1970s. There has been a noticeable improvement since 1981 - with 1982 being an exceptionally good year. The INDECO group recorded a profit of K 32.5 million during 1981-82 and a before tax profit of K 32.2 million in 1982-83. During this period employment levels have stabilized while productivity has risen. Value added for this group of companies during 1982-83 was K 295.78 million which is an increase of 20 per cent compared to the previous year. Contribution to the Government by way of taxes and levies rose by K 20.34 million to K 152.41 million. Of the 34 companies of the group, 21 companies returned profits as against 17 in the previous year. Improvements in the results of the group came about largely through adoption of the strategies and policies streamlining the operations of the group, organizational changes affecting senior and middle level management, and placing greater emphasis on productivity, cost control and cost saving measures.

Private and foreign investment within the manufacturing sector and new joint ventures with foreign firms are being actively sought. Whether this will lead to a long-term increase in financial resources available for industrial investment in Zambia depends both on the profitability of manufacturing enterprises and on the effectiveness of the measures taken to reduce the large volume of capital transfers that currently occur on a regular basis. The nationalization measures of the 1970s have not led to a substantial reduction in capital transfers. They have led to a substitution of profit remittances by interest payments and have thus increased the debt burden of the Zambian economy.

## 4.6 The role of multilateral technical assistance[1/]

The Government of Zambia recognizes that the manufacturing sector must play a significantly larger role within the national economy in the future. This is essential because copper deposits are likely to be exhausted in about 20 years time and there is general awareness of the need for rapid economic diversification.

The manufacturing sector needs to be fundamentally restructured. This would entail that import dependence be reduced and the expansion of the sector be based on an increasing processing of natural resources. Technical assistance may be required for studying the feasibility of substituting domestic for foreign industrial inputs in specific projects and for increasing capacity utilization. A number of industrial establishments - including Bata shoe manufacturers and Kabwe producers of industrial fabrics - have already moved in this direction. Reducing wastage of agricultural products - in particular hides and skins - can contribute to industrial growth as well as saving precious foreign exchange.

Earning foreign exchange is another important target for Zambian manufacturing. As Section 2.3 has shown, the export markets for Zambia's manufacturers are likely to be in neighbouring Africa - not in Europe. The promotion of regional integrative manufacturing projects, producing for a wider sub-regional rather than national markets, is the most effective way for expanding trade. In this context the Southern African Development Co-ordination Committee (SADCC) in January 1983 sought support for a number of regional industrial projects within the context of a regional plan for industrial co-operation. Assistance is sought for undertaking feasibility studies as well as for financing, training of project personnel and marketing arrangements.

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1/ A list of ongoing technical assistance projects is presented in Annex B.

As far as Zambia is concerned, the following projects[1/] have been identified:

1. Knitting Project (Cost $8.5 million);

2. Power Loom Project (Cost $3.5 million);

3. Extension of the Polyester Blend Integrated Weaving Plant at Katue (Cost $10 million);

4. Textile processing chemicals plant (Cost $1.0 million);

5. Expansion of the two existing pesticide formulation plants (Cost $102,000);

6. Expansion of existing farm implements factories (Cost $2 million); and

7. Establishment of agricultural implements unit (Cost $1 million).

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1/ Detailed project proposals are presented in the four volume study Industry, Southern African Development Co-ordination Committee, Lesotho, 27/28 January 1983. Proposals for further study are also indicated in this document.

# Annex A: STATISTICAL TABLES

Table A.1: The share of manufacturing in GDP, 1970-1981
(in million $ at 1975 prices)

| Year | Manufacturing | GDP | Manufacturing share (per cent) |
|---|---|---|---|
| 1970 | 308 | 1,914 | 16.1 |
| 1971 | 334 | 1,914 | 17.4 |
| 1972 | 383 | 2,101 | 18.2 |
| 1973 | 401 | 2,161 | 18.5 |
| 1974 | 437 | 2,342 | 18.6 |
| 1975 | 409 | 2,460 | 16.6 |
| 1976 | 389 | 2,483 | 15.6 |
| 1977 | 347 | 2,272 | 15.3 |
| 1978 | 405 | 2,521 | 16.0 |
| 1979 | 356 | 2,033 | 17.5 |
| 1980 | 412 | 2,379 | 17.3 |
| 1981 | 399 | 2,360 | 16.9 |
| Mean | | | 17.00 |
| Standard deviation | | | 1.08 |

Source: UN, Handbook of World Development Statistics, New York, 1983.

Table A.2: Growth of MVA by branches, 1970-1981

| Description (ISIC) | Growth of value added at 1975 prices | |
|---|---|---|
| | 1970-1981 | |
| TOTAL MANUFACTURING(300) | 0.36 | |
| Food products(311) | 0.03 | |
| Beverages(313) | 0.03 | |
| Tobacco(314) | 0.03 | |
| Textiles(321) | 6.48 | |
| Wearing apparel,except footwear(322) | 6.48 | |
| Leather products(323) | 7.15 | a/ |
| Footwear,except rubber or plastic(324) | 5.93 | a/ |
| Wood products,except furniture(331) | -2.37 | |
| Furniture,except metal(332) | 10.23 | a/ |
| Paper and products(341) | 1.94 | |
| Printing and publishing(342) | 9.06 | a/ |
| Industrial chemicals(351) | 3.36 | |
| Other chemicals(352) | 3.36 | |
| Petroleum refineries(353) | 20.14 | |
| Misc. petroleum and coal products(354) | 3.36 | |
| Rubber products(355) | 3.36 | |
| Plastic products(356) | 3.36 | |
| Pottery,china,earthenware(361) | 1.93 | |
| Glass and products(362) | 1.93 | |
| Other non-metallic mineral prod.(369) | -2.29 | |
| Iron and steel(371) | 0.82 | |
| Non-ferrous metals(372) | -7.65 | |
| Fabricated metal products(381) | -2.43 | |
| Machinery,except electrical(382) | -2.43 | |
| Machinery electric(383) | -2.43 | |
| Transport equipment(384) | -2.43 | |
| Professional & scientific equipm.(385) | -2.43 | |
| Other manufactured products(390) | -2.43 | |

Source: Statistics and Survey Unit, UNIDO. Based on data supplied by the UN Statistical Office, with estimates by the UNIDO secretariat.

Note: Total manufacturing is the sum of the reported ISICs and does not necessarily correspond to ISIC 300 total.

Footnote: a/ 1970-1975.

Table A.3: Production performance of INDECO group of companies, 1981-1982

| Company | Product | Unit | Production 1981-82 | Apr-Sept 1981 | Apr-Sept 1982 | Annual rated capacity | Capacity utilization |
|---|---|---|---|---|---|---|---|
| Chilange cement | Cement | tonnes | 316,199 | 154,529 | 157,574 | 460,000 | 68 |
| Crushed stone sales | Stones | tonnes | 122,000 | 74,000 | 42,961 | 204,000 | 59 |
| | Lime & lime products | - do - | 17,000 | 7,000 | 6,034 | 21,600 | 78 |
| Consolidated tyres | Retreades | nos. | 31,410 | 20,505 | 15,673 | 151,440 | 20.7 |
| Chome milling | Maize | tonnes | 39,129 | 15,240 | 23,116 | 86,400 | 45 |
| INDECO milling | Maize | tonnes | 113,985 | 47,078 | 53,104 | 209,160 | 54 |
| | Stockfeed | tonnes | 16,071 | 7,513 | 8,866 | 33,600 | 47 |
| General pharm. | Intravenous fluids | bags | 692,952 | 296,000 | 370,000 | 1,000,000 | 69 |
| Kabwe ind. fab. | Polypropylene bags | bags | 1,447 | 694 | 599 | 2,640 | 53 |
| Kafue textiles | Cloth | '000 mtr. | 13,918 | 6,933 | 6,671 | 18,000 | 77 |
| Kafironda | NG based explosives | tonnes | 12,257 | 5,600 | 5,634 | 18,300 | 66 |
| | Anfex | tonnes | 14,068 | 6,900 | 6,858 | 18,300 | 76 |
| Kapri glass | Glass | tonnes | 11,316 | 6,708 | 7,861 | 35,776 | 31 |
| Lusaka eng. company (LENCO) | Windows, | '000 | | | | | |
| | Door frames | nos. | 84 | 38 | 47 | 135 | 62 |

Table A.3: Production performance of INDECO group of companies, 1981-1982 (continued)

| Company | Product | Unit | Production 1981-82 | Apr-Sept 1981 | Apr-Sept 1982 | Annual rated capacity | Capacity utilization |
|---|---|---|---|---|---|---|---|
| Livinstone motors | Cars | nos. | 263 | 228 | 367 | 4,500 | 61 |
| Mansa batteries | Batteries | '000 nos. | 9,174 | 4,202 | 7,038 | 44,216 | 20 |
| Monarch | Door frames | nos | 67,947 | 20,787 | 26,312 | 132,000 | 51 |
| | Water heaters | nos | 3,541 | 1,553 | 2,063 | 4,000 | 87 |
| | Cans | '000 nos | 935 | 229 | 658 | 5,040 | 31 |
| National breweries | Opaque beer (Chibuku) | 000 hl | 2,209 | 1,084 | 1,104 | 4,465 | 50 |
| National milling | Maize | tonnes | 87,014 | 42,672 | 40,307 | 172,140 | 50 |
| | Wheat | - do - | 89,876 | 43,003 | 48,562 | 122,976 | 73 |
| | Stockfeeds | - do - | 71,438 | 37,672 | 38,257 | 124,800 | 57 |
| Nitrogen chemicals | Fertilizer AN | tonnes | 12,198 | 9,060 | 15,953 | 92,000 | 13 |
| | Explosives AN | tonnes | 21,246 | 10,217 | 11,400 | 22,000 | 96 |
| | Fertilizer compound | - do - | - | - | 29,391 | 141,000 | - |
| Norgroup plastics | Containers & crates etc | '000 | 2,041 | 1,372 | 1,008 | - | |
| ROP (1975) Ltd | Edible oils and fats | tonnes | 12,933 | 6,009 | 10,069 | 52,200 | 23 |

Table A.3: Production performance of INDECO group of companies, (1981-1982) (continued)

| Company | Product | Unit | Production 1981-82 | Apr-Sept 1981 | Apr-Sept 1982 | Annual rated capacity | Capacity utilization |
|---|---|---|---|---|---|---|---|
| | Soap & nonsoap detergents | - do - | 8,974 | 4,305 | 4,004 | 33,500 | 26 |
| | Oil seed cakes and hulls | - do - | 10,421 | 6,178 | 8,012 | - | |
| | Toothpast & shampoo | - do - | 72 | 18 | 36 | 360 | 20 |
| Rucom industries | Pineapple products | cases of 24 cans | 11,423 | 2,012 | 2,855 | 24,000 | 47 |
| | Gusvas | | | | | | |
| | Coffee | kg | 40,526 | 26,589 | 37,482 | 200,000 | 20 |
| | Crates | units | 28,374 | 14,414 | 4,626 | 50,000 | 96 |
| Sups baking | Buns | 000 units | 4,571 | 1,994 | 2,093 | 5,784 | 79 |
| | Super white bread | - do - | 3,932 | 2,358 | 1,690 | 4,828 | 81 |
| | Cup cakes | - do - | 1,431 | 240 | 388 | 5,784 | 24 |
| | Cream dough-nuts | - do - | | 311 | 230 | - | - |
| Zambia breweries | Lager beer | '000 hl | 1,101 | 544 | 537 | 1,450 | 78 |
| Zambia sugar | Raw sugar | tonnes | 102,318 | 93,854 | 94,766 | 150,000 | 80 |
| | Refined sugar | - do - | 95,144 | 65,709 | 57,387 | 124,000 | 76 |

Table A.3: Production performance of INDECO group of companies, 1981-1982 (continued)

| Company | Product | Unit | Production 1981-82 | Apr-Sept 1981 | Apr-Sept 1982 | Annual rated capacity | Capacity utilization |
|---|---|---|---|---|---|---|---|
| Zambia clay | Bricks | '000 t. | - | - | - | - | - |
| Zambia sawmills | Sleepers | nos | 49,242 | 15,944 | 9,706 | 114,000 | 43 |
| | Sawn timber | $m^3$ | 2,663 | 1,680 | 1,082 | 8,400 | 31 |
| Zomefa | Cables | tonnes | 903 | 430 | 457 | 2,064 | 45 |
| | Other copper products | - do - | 1,069 | 160 | 199 | 4,056 | 29 |
| Zamox | Oxygen | '000 $m^3$ | 1,667 | 807 | 859 | 2,460 | 66 |
| | Acetylene | - do - | 262 | 141 | 132 | 480 | 52 |
| Z.S.B.S. | Block board, plywood | '000 sheets | 93 | 24 | 48 | 175 | 53 |
| | Doors | '000 nos | 62 | 35 | 43 | 136 | 45 |
| | Perquent titles | $m^2$ | 8 | 3 | 22 | 92 | 8 |

Table A.4: Product mix of traded manufactured goods, 1970 and 1979 */

| SITC | DESCRIPTION OF TRADE GOODS | EXPORTS 1970 PERCENT IN TOTAL MANUFACTURES | EXPORTS 1979 PERCENT IN TOTAL MANUFACTURES | EXPORTS PERCENT (1000 US $) | | IMPORTS 1970 PERCENT IN TOTAL MANUFACTURES | IMPORTS 1979 PERCENT IN TOTAL MANUFACTURES | IMPORTS PERCENT (1000 US $) | |
|---|---|---|---|---|---|---|---|---|---|
| 01 | Meat and meat preparations | 0.000 | 0.002 | ... | ... | 1.467 | 0.043 | ... | ... |
| 02 | Dairy products and eggs | 0.001 | 0.000 | ... | ... | 1.182 | 1.055 | ... | ... |
| 032 | Fish n.e.s. and fish preparations | ... | ... | ... | ... | 0.182 | 0.022 | ... | ... |
| 0422 | Rice,glazed or polished not otherwise worked | ... | ... | ... | ... | 0.237 | ... | ... | ... |
| 046 | Meal and flour of wheat or of meslin | ... | ... | ... | ... | 0.001 | 0.000 | ... | ... |
| 047 | Meal and flour of cereals,except above | 0.000 | 0.000 | ... | ... | 0.007 | 0.007 | ... | ... |
| 048 | Cereals preparat. & starch of fruits & vegetab. | 0.000 | 0.000 | ... | ... | 0.780 | 1.466 | ... | ... |
| 052 | Dried fruit | ... | ... | ... | ... | 0.014 | 0.001 | ... | ... |
| 053 | Fruit,preserved and fruit preparations | ... | 0.000 | ... | ... | 0.158 | 0.007 | ... | ... |
| 055 | Vegetables,roots & tubers,preserved or prepared | 0.000 | 0.000 | ... | ... | 0.169 | 0.035 | ... | ... |
| 06 | Sugar,sugar preparations and honey | 0.000 | 0.064 | ... | ... | 0.724 | 0.130 | ... | ... |
| 0713 | Coffee extracts,essences,concentrates & similar | ... | ... | ... | ... | 0.068 | 0.012 | ... | ... |
| 0722 | Cocoa powder,unsweetened | ... | ... | ... | ... | 0.032 | 0.045 | ... | ... |
| 073 | Chocolate and related food preparations | 0.000 | ... | ... | ... | 0.082 | 0.009 | ... | ... |
| 074 | Tea and mate | ... | ... | ... | ... | 0.147 | 0.128 | ... | ... |
| 081 | Feeding-stuff for animals | 0.024 | 0.000 | ... | ... | 0.406 | 0.488 | ... | ... |
| 09 | Miscellaneous food preparations | 0.000 | 0.000 | ... | ... | 0.813 | 0.323 | ... | ... |
| 11 | Beverages | 0.000 | ... | ... | ... | 0.339 | 0.270 | ... | ... |
| 122 | Tobacco manufactures | 0.000 | ... | ... | ... | 0.045 | 0.004 | ... | ... |
| 2219 | Flour and meal of oil seeds,nuts,kernels | ... | ... | ... | ... | 0.004 | 0.305 | ... | ... |
| 231 | Crude rubber,synth. & reclaimed(excl.SITC 2311) | ... | ... | ... | ... | 0.093 | 0.224 | ... | ... |
| 243 | Wood,shaped or simply worked | 0.071 | 0.001 | ... | ... | 0.659 | 0.237 | ... | ... |
| 251 | Pulp and waste paper | 0.000 | ... | ... | ... | 0.001 | 0.003 | ... | ... |
| 2626 | Wool shoddy | ... | ... | ... | ... | ... | 0.001 | ... | ... |
| 2627 | Wool or other animal hair,carded or combed | ... | ... | ... | ... | 0.004 | 0.001 | ... | ... |
| 2629 | Waste of wool and other animal hair n.e.s. | ... | ... | ... | ... | 0.000 | ... | ... | ... |
| 263 | Cotton | ... | 0.042 | ... | ... | 0.019 | 0.010 | ... | ... |
| 266 | Synthetic and regenerated(artificial) fibres | 0.001 | ... | ... | ... | 0.001 | 0.029 | ... | ... |
| 267 | Waste materials from textile fabrics(incl.rags) | ... | ... | ... | ... | 0.019 | 0.014 | ... | ... |
| 332 | Petroleum products | ... | 0.068 | ... | ... | 4.870 | 3.303 | ... | ... |
| 4 | Animal and vegetable oils and fats | 0.003 | ... | ... | ... | 1.457 | 2.104 | ... | ... |
| 411 | Animal oils and fats | ... | ... | ... | ... | 0.279 | 0.389 | ... | ... |
| 421 | Fixed vegetable oils,soft(incl.SITC 422) | ... | ... | ... | ... | 1.138 | 1.616 | ... | ... |
| 431 | Animal and vegetable oils and fats processed | 0.003 | ... | ... | ... | 0.040 | 0.099 | ... | ... |

Table A.4: Product mix of traded manufactured goods, 1970 and 1979 1/ (continued)

| SITC | DESCRIPTION OF TRADE GOODS | EXPORTS 1970 PERCENT IN TOTAL MANUFACTURES | EXPORTS 1979 PERCENT IN TOTAL MANUFACTURES | EXPORTS 1970 (1000 US $) | EXPORTS 1979 (1000 US $) | IMPORTS 1970 PERCENT IN TOTAL MANUFACTURES | IMPORTS 1979 PERCENT IN TOTAL MANUFACTURES | IMPORTS 1970 (1000 US $) | IMPORTS 1979 (1000 US $) |
|---|---|---|---|---|---|---|---|---|---|
| 5 | Chemicals | 0.014 | 0.155 | ... | ... | 8.512 | 16.764 | ... | ... |
| 51 | Chemicals elements and compounds | 0.010 | 0.062 | ... | ... | 1.658 | 3.723 | ... | ... |
| 52 | Tar and chemicals from coal,petroleum,nat. gas | ... | ... | ... | ... | 0.026 | 0.055 | ... | ... |
| 53 | Dyeing,tanning and colouring materials | 0.000 | 0.000 | ... | ... | 0.252 | 0.556 | ... | ... |
| 54 | Medicinal and pharmaceutical products | 0.001 | 0.030 | ... | ... | 1.636 | 3.102 | ... | ... |
| 55 | Essential oils and perfume materials | 0.002 | 0.000 | ... | ... | 0.619 | 0.822 | ... | ... |
| 56 | Fertilizers,manufactured | ... | 0.012 | ... | ... | 0.679 | 2.765 | ... | ... |
| 57 | Explosives and pyrotechnic products | ... | 0.051 | ... | ... | 1.678 | 0.352 | ... | ... |
| 58 | Plastic materials,regenerated cellul. & resins | ... | 0.000 | ... | ... | 0.825 | 2.528 | ... | ... |
| 59 | Chemical materials and products n.e.s. | 0.001 | 0.000 | ... | ... | 1.139 | 2.861 | ... | ... |
| 6 | Manufactured goods classified by material | 99.869 | 99.558 | ... | ... | 24.456 | 25.569 | ... | ... |
| 61 | Leather manufactured n.e.s. & dressed fur skins | 0.003 | 0.000 | ... | ... | 0.099 | 0.107 | ... | ... |
| 62 | Rubber manufactures n.e.s. | 0.009 | 0.077 | ... | ... | 1.857 | 1.700 | ... | ... |
| 63 | Wood and cork manufactures(excl.furniture) | 0.000 | 0.002 | ... | ... | 0.698 | 0.224 | ... | ... |
| 64 | Paper,paper board and manufactures thereof | 0.000 | 0.008 | ... | ... | 2.372 | 2.778 | ... | ... |
| 65 | Textile yarn,fabrics,made-up articles | 0.025 | 0.001 | ... | ... | 6.823 | 6.928 | ... | ... |
| 66 | Non-metallic mineral manufactures,n.e.s. | 0.080 | 0.385 | ... | ... | 1.917 | 2.044 | ... | ... |
| 67 | Iron and steel | 0.000 | 0.005 | ... | ... | 4.283 | 5.581 | ... | ... |
| 68 | Non-ferrous metals | 99.737 | 99.069 | ... | ... | 0.846 | 1.192 | ... | ... |
| 69 | Manufactures of metal,n.e.s. | 0.015 | 0.012 | ... | ... | 5.560 | 5.015 | ... | ... |
| 7 | Machinery and transport equipment | 0.007 | 0.087 | ... | ... | 43.071 | 42.412 | ... | ... |
| 71 | Machinery,other than electric | 0.004 | 0.029 | ... | ... | 21.199 | 20.462 | ... | ... |
| 72 | Electrical machinery,apparatus and appliances | 0.002 | 0.038 | ... | ... | 7.861 | 7.470 | ... | ... |
| 73 | Transport equipment | 0.000 | 0.020 | ... | ... | 14.011 | 14.480 | ... | ... |
| 8 | Miscellaneous manufactured articles | 0.010 | 0.022 | ... | ... | 9.983 | 4.979 | ... | ... |
| 81 | Sanitary,plumbing,heating & lightning fixtures | 0.000 | 0.000 | ... | ... | 0.333 | 0.263 | ... | ... |
| 82 | Furniture | 0.000 | 0.000 | ... | ... | 0.275 | 0.052 | ... | ... |
| 83 | Travel goods,handbags and similar articles | 0.000 | ... | ... | ... | 0.179 | 0.037 | ... | ... |
| 84 | Clothing | 0.004 | 0.002 | ... | ... | 3.318 | 0.632 | ... | ... |
| 85 | Footwear | 0.002 | 0.000 | ... | ... | 1.495 | 0.542 | ... | ... |
| 86 | Professional,scient. & controll. instruments | 0.000 | 0.001 | ... | ... | 1.585 | 1.857 | ... | ... |
| 89 | Miscellaneous manufactured articles,n.e.s. | 0.004 | 0.018 | ... | ... | 2.799 | 1.596 | ... | ... |
| | | 1970 | | 1979 | | 1970 | | 1979 | |
| | TOTAL MANUFACTURES | 983761 | | 1343264 | ... | 428131 | | 600124 | ... |
| | TOTAL: SITC 5-8 LESS 68 a/ | 1599 | | 10115 | ... | 364663 | | 531302 | ... |
| | TOTAL TRADED GOODS: SITC 0-9 | 994543 | | 1372019 | ... | 476992 | | 750239 | ... |

Note:Data and SITC descriptions refer to SITC revision 1

1/ This table is based on the definition of trade in manufactures covering a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods.

a/ Definition of trade in manufactures SITC 5-8 less 68 is one of the most often found. It covers only items recognized as exclusively manufactured goods,i.e. with a high level of manufacturing content.

Source: UNIDO data base;Information supplied by the United Nations Statistical Office.

Table A.5: Origin of imports of manufactures by branches, 1979*/

| SITC | DESCRIPTION OF TRADE GOODS | WORLD TOTAL (1000 US$) | DEVELOPING COUNTRIES (PERCENT) | DEVELOPED MARKET ECONOMIES TOTAL (PERCENT) | USA (PERCENT) | EEC (PERCENT) | JAPAN (PERCENT) | CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT) |
|---|---|---|---|---|---|---|---|---|
| 01 | Meat and meat preparations | 258 | 80.83 | 19.17 | 0.00 | 2.99 | 0.00 | 0.00 |
| 02 | Dairy products and eggs | 6329 | 15.86 | 81.80 | 0.19 | 53.46 | 0.00 | 2.32 |
| 032 | Fish n.e.s. and fish preparations | 131 | 0.00 | 99.99 | 0.01 | 98.04 | 0.00 | 0.01 |
| 046 | Meal and flour of wheat or of meslin | 0 | 0.00 | 100.00 | 0.00 | 69.13 | 0.00 | 0.00 |
| 047 | Meal and flour of cereals,except above | 40 | 1.59 | 98.41 | 0.00 | 98.34 | 0.00 | 0.00 |
| 048 | Cereals preparat. & starch of fruits & vegetab. | 8799 | 1.43 | 98.57 | 52.17 | 37.34 | 0.00 | 0.00 |
| 052 | Dried fruit | 7 | 0.00 | 100.00 | 0.29 | 99.41 | 0.00 | 0.00 |
| 053 | Fruit,preserved and fruit preparations | 42 | 5.97 | 94.03 | 0.00 | 79.26 | 0.00 | 0.00 |
| 055 | Vegetables,roots & tubers,preserved or prepared | 207 | 39.24 | 46.83 | 0.00 | 46.48 | 0.00 | 13.93 |
| 06 | Sugar,sugar preparations and honey | 780 | 2.93 | 97.07 | 0.00 | 23.96 | 0.00 | 0.00 |
| 0713 | Coffee extracts,essences,concentrates & similar | 72 | 0.00 | 100.00 | 0.00 | 0.09 | 0.00 | 0.00 |
| 0722 | Cocoa powder,unsweetened | 273 | 0.00 | 100.00 | 0.00 | 89.58 | 0.00 | 0.00 |
| 073 | Chocolate and related food preparations | 53 | 0.00 | 100.00 | 0.00 | 96.14 | 0.00 | 0.00 |
| 074 | Tea and mate | 769 | 63.07 | 36.93 | 0.00 | 1.77 | 0.00 | 0.00 |
| 081 | Feeding-stuff for animals | 2929 | 12.05 | 87.95 | 4.45 | 22.76 | 0.00 | 0.00 |
| 09 | Miscellaneous food preparations | 1936 | 9.32 | 90.68 | 0.00 | 31.22 | 0.04 | 0.00 |
| 11 | Beverages | 1619 | 0.39 | 99.10 | 0.75 | 52.78 | 0.00 | 0.51 |
| 122 | Tobacco manufactures | 23 | 6.08 | 93.92 | 0.00 | 56.14 | 0.00 | 0.00 |
| 2219 | Flour and meal of oil seeds,nuts,kernels | 1832 | 0.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 231 | Crude rubber,synth. & reclaimed(excl.SITC 2311) | 1342 | 5.28 | 94.72 | 1.96 | 63.43 | 0.00 | 0.00 |
| 243 | Wood,shaped or simply worked | 1424 | 30.89 | 69.11 | 0.00 | 1.65 | 0.00 | 0.00 |
| 251 | Pulp and waste paper | 16 | 0.00 | 100.00 | 100.00 | 0.00 | 0.00 | 0.00 |
| 2626 | Wool shoddy | 9 | 0.00 | 100.00 | 0.00 | 100.00 | 0.00 | 0.00 |
| 2627 | Wool or other animal hair,carded or combed | 8 | 0.00 | 100.00 | 0.00 | 100.00 | 0.00 | 0.00 |
| 263 | Cotton | 59 | 0.00 | 100.00 | 0.00 | 27.01 | 51.97 | 0.00 |
| 266 | Synthetic and regenerated(artificial) fibres | 177 | 0.00 | 100.00 | 55.40 | 44.60 | 0.00 | 0.00 |
| 267 | Waste materials from textile fabrics(incl.rags) | 82 | 0.00 | 96.97 | 3.51 | 44.65 | 43.38 | 3.03 |
| 332 | Petroleum products | 19825 | 27.25 | 72.75 | 0.21 | 38.55 | 0.00 | 0.00 |
| 4 | Animal and vegetable oils and fats | 12628 | 8.33 | 91.67 | 33.09 | 25.38 | 0.00 | 0.00 |
| 411 | Animal oils and fats | 2334 | 0.00 | 100.00 | 0.00 | 52.53 | 0.00 | 0.00 |
| 421 | Fixed vegetable oils,soft(incl.SITC 422) | 9698 | 10.27 | 89.73 | 43.09 | 18.66 | 0.00 | 0.00 |
| 431 | Animal and vegetable oils and fats processed | 596 | 9.30 | 90.70 | 0.00 | 28.38 | 0.00 | 0.00 |

Table A.5: Origin of imports of manufactures by branches, 1979*/ (continued)

| SITC | DESCRIPTION OF TRADE GOODS | WORLD TOTAL (1000 US$) | DEVELOPING COUNTRIES (PERCENT) | DEVELOPED MARKET ECONOMIES TOTAL (PERCENT) | USA (PERCENT) | EEC (PERCENT) | JAPAN (PERCENT) | CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT) |
|---|---|---|---|---|---|---|---|---|
| 5 | Chemicals | 100603 | 6.50 | 92.98 | 11.71 | 56.16 | 5.69 | 0.40 |
| 51 | Chemicals elements and compounds | 22341 | 6.83 | 92.54 | 3.77 | 58.27 | 4.21 | 0.63 |
| 52 | Tar and chemicals from coal,petroleum,nat. gas | 332 | 0.00 | 100.00 | 0.00 | 100.00 | 0.00 | 0.00 |
| 53 | Dyeing,tanning and colouring materials | 3338 | 1.66 | 98.34 | 0.48 | 63.28 | 0.02 | 0.00 |
| 54 | Medicinal and pharmaceutical products | 18615 | 13.42 | 86.53 | 1.63 | 68.84 | 0.01 | 0.05 |
| 55 | Essential oils and perfume materials | 4931 | 25.15 | 69.72 | 1.48 | 35.58 | 0.15 | 5.13 |
| 56 | Fertilizers,manufactured | 16592 | 2.57 | 97.43 | 53.17 | 15.48 | 26.01 | 0.00 |
| 57 | Explosives and pyrotechnic products | 2112 | 0.95 | 99.05 | 1.34 | 11.53 | 0.00 | 0.00 |
| 58 | Plastic materials,regenerated cellul. & resins | 15170 | 1.65 | 97.53 | 1.87 | 76.00 | 2.13 | 0.00 |
| 59 | Chemical materials and products n.e.s. | 17172 | 3.04 | 96.96 | 8.24 | 70.61 | 0.81 | 0.00 |
| 6 | Manufactured goods classified by material | 153449 | 10.71 | 86.74 | 2.80 | 47.06 | 5.05 | 1.48 |
| 61 | Leather manufactured n.e.s. & dressed fur skins | 644 | 24.14 | 75.86 | 1.43 | 72.10 | 0.00 | 0.00 |
| 62 | Rubber manufactures n.e.s. | 10200 | 3.03 | 96.94 | 3.49 | 60.86 | 10.54 | 0.04 |
| 63 | Wood and cork manufactures(excl.furniture) | 1343 | 17.61 | 67.99 | 0.00 | 35.26 | 0.00 | 0.00 |
| 64 | Paper,paper board and manufactures thereof | 16674 | 5.57 | 93.45 | 1.65 | 27.81 | 0.23 | 0.91 |
| 65 | Textile yarn,fabrics,made-up articles | 41575 | 19.53 | 73.85 | 2.02 | 56.63 | 6.62 | 3.50 |
| 66 | Non-metallic mineral manufactures,n.e.s. | 12267 | 7.86 | 92.06 | 2.41 | 46.35 | 1.22 | 0.09 |
| 67 | Iron and steel | 33496 | 3.65 | 94.76 | 2.09 | 35.38 | 10.52 | 1.59 |
| 68 | Non-ferrous metals | 7154 | 31.97 | 68.03 | 0.38 | 58.77 | 0.02 | 0.00 |
| 69 | Manufactures of metal,n.e.s. | 30097 | 7.35 | 91.81 | 5.94 | 50.32 | 0.70 | 0.41 |
| 7 | Machinery and transport equipment | 254525 | 3.43 | 95.94 | 13.32 | 55.44 | 6.22 | 0.60 |
| 71 | Machinery,other than electric | 122798 | 3.49 | 95.81 | 16.03 | 55.49 | 2.42 | 0.66 |
| 72 | Electrical machinery,apparatus and appliances | 44831 | 3.00 | 96.76 | 10.08 | 49.00 | 12.22 | 0.19 |
| 73 | Transport equipment | 86896 | 3.58 | 95.69 | 10.92 | 58.68 | 8.49 | 0.74 |
| 8 | Miscellaneous manufactured articles | 29880 | 12.34 | 85.07 | 2.98 | 62.53 | 4.64 | 2.45 |
| 81 | Sanitary,plumbing,heating & lightning fixtures | 1576 | 12.31 | 87.69 | 0.49 | 66.91 | 0.00 | 0.00 |
| 82 | Furniture | 314 | 2.29 | 97.65 | 0.45 | 19.93 | 0.00 | 0.06 |
| 83 | Travel goods,handbags and similar articles | 220 | 43.44 | 56.56 | 5.85 | 39.15 | 3.46 | 0.00 |
| 84 | Clothing | 3793 | 34.98 | 64.87 | 0.82 | 37.54 | 1.66 | 0.01 |
| 85 | Footwear | 3256 | 12.76 | 74.05 | 0.04 | 59.54 | 0.07 | 13.19 |
| 86 | Professional,scient. & controll. instruments | 11141 | 0.47 | 99.22 | 5.64 | 75.37 | 8.31 | 0.13 |
| 89 | Miscellaneous manufactured articles,n.e.s. | 9581 | 16.65 | 80.17 | 2.17 | 59.71 | 4.06 | 3.01 |
| | TOTAL manufactures | 600124 | 7.47 | 91.36 | 10.30 | 51.65 | 5.13 | 0.86 |
| | TOTAL: SITC 5-8 LESS 68 a/ | 531302 | 6.23 | 92.48 | 9.57 | 53.51 | 5.78 | 0.93 |
| | TOTAL traded goods: SITC 0-9 | 750239 | 22.21 | 76.85 | 9.32 | 41.93 | 4.12 | 0.68 |

Note:Data and SITC descriptions refer to SITC revision 1

*/ This table is based on the definition of trade in manufactures covering a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods.

a/ Definition of trade in manufactures SITC 5-8 less 68 is one of the most often found. It covers only items recognized as exclusively manufactured goods,i.e. with a high level of manufacturing content.

Source: UNIDO data base;Information supplied by the United Nations Statistical Office.

Note: Percentages may not add to 100.0 due to the fact that countries report trade to/from "unspecified areas".

Table A.6: Destination of exports of manufactures by branches, 1979*/

| SITC | DESCRIPTION OF TRADE GOODS | WORLD TOTAL (1000 US$) | DEVELOPING COUNTRIES (PERCENT) | DEVELOPED MARKET ECONOMIES TOTAL (PERCENT) | USA (PERCENT) | EEC (PERCENT) | JAPAN (PERCENT) | CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT) |
|---|---|---|---|---|---|---|---|---|
| 01 | Meat and meat preparations | 25 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 02 | Dairy products and eggs | 1 | 100.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 047 | Meal and flour of cereals,except above | 0 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 048 | Cereals preparat. & starch of fruits & vegetab. | 2 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 053 | Fruit,preserved and fruit preparations | 0 | 69.88 | 30.12 | 12.05 | 0.00 | 0.00 | 0.00 |
| 055 | Vegetables,roots & tubers,preserved or prepared | 1 | 0.00 | 100.00 | 29.52 | 67.71 | 0.00 | 0.00 |
| 06 | Sugar,sugar preparations and honey | 863 | 66.60 | 33.40 | 0.00 | 33.40 | 0.00 | 0.00 |
| 081 | Feeding-stuff for animals | 0 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 09 | Miscellaneous food preparations | 2 | 86.30 | 13.71 | 6.37 | 7.34 | 0.00 | 0.00 |
| 243 | Wood,shaped or simply worked | 17 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 263 | Cotton | 567 | 0.00 | 100.00 | 0.00 | 100.00 | 0.00 | 0.00 |
| 332 | Petroleum products | 915 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | Chemicals | 2081 | 78.80 | 21.20 | 0.00 | 19.24 | 0.00 | 0.00 |
| 51 | Chemicals elements and compounds | 829 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53 | Dyeing,tanning and colouring materials | 1 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54 | Medicinal and pharmaceutical products | 401 | 0.05 | 99.95 | 0.00 | 99.95 | 0.00 | 0.00 |
| 55 | Essential oils and perfume materials | 0 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56 | Fertilizers,manufactured | 159 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57 | Explosives and pyrotechnic products | 690 | 94.08 | 5.92 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58 | Plastic materials,regenerated cellul. & resins | 1 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59 | Chemical materials and products n.e.s. | 0 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | Manufactured goods classified by material | 1337328 | 15.39 | 83.73 | 10.46 | 45.34 | 18.91 | 0.88 |
| 61 | Leather manufactured n.e.s. & dressed fur skins | 4 | 97.33 | 2.67 | 0.00 | 2.67 | 0.00 | 0.00 |
| 62 | Rubber manufactures n.e.s. | 1030 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63 | Wood and cork manufactures(excl.furniture) | 21 | 1.47 | 98.53 | 0.00 | 1.65 | 0.00 | 0.00 |
| 64 | Paper,paper board and manufactures thereof | 107 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65 | Textile yarn,fabrics,made-up articles | 8 | 96.47 | 3.53 | 0.00 | 3.53 | 0.00 | 0.00 |
| 66 | Non-metallic mineral manufactures,n.e.s. | 5178 | 99.58 | 0.42 | 0.00 | 0.42 | 0.00 | 0.00 |
| 67 | Iron and steel | 62 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68 | Non-ferrous metals | 1330756 | 14.98 | 84.14 | 10.51 | 45.56 | 19.00 | 0.88 |
| 69 | Manufactures of metal,n.e.s. | 164 | 79.50 | 20.50 | 0.03 | 5.79 | 0.35 | 0.00 |
| 7 | Machinery and transport equipment | 1167 | 87.70 | 12.30 | 0.03 | 4.33 | 0.02 | 0.00 |
| 71 | Machinery,other than electric | 385 | 87.29 | 12.71 | 0.10 | 0.80 | 0.00 | 0.00 |
| 72 | Electrical machinery,apparatus and appliances | 511 | 91.07 | 8.93 | 0.00 | 8.75 | 0.00 | 0.00 |
| 73 | Transport equipment | 271 | 81.92 | 18.08 | 0.00 | 1.01 | 0.07 | 0.00 |
| 8 | Miscellaneous manufactured articles | 295 | 51.51 | 48.40 | 3.47 | 26.50 | 0.13 | 0.09 |
| 81 | Sanitary,plumbing,heating & lightning fixtures | 0 | 68.97 | 31.04 | 0.00 | 0.00 | 0.00 | 0.00 |
| 82 | Furniture | 3 | 98.51 | 1.49 | 0.00 | 1.49 | 0.00 | 0.00 |
| 84 | Clothing | 33 | 99.84 | 0.16 | 0.16 | 0.00 | 0.00 | 0.00 |
| 85 | Footwear | 0 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 86 | Professional,scient. & controll. instruments | 15 | 96.55 | 3.46 | 0.00 | 0.37 | 0.00 | 0.00 |
| 89 | Miscellaneous manufactured articles,n.e.s. | 244 | 41.65 | 58.25 | 4.17 | 32.00 | 0.16 | 0.10 |
| | TOTAL manufactures | 1343264 | 15.65 | 83.48 | 10.42 | 45.24 | 18.82 | 0.87 |
| | TOTAL: SITC 5-8 LESS 68 a/ | 10115 | 92.05 | 7.95 | 0.11 | 5.55 | 0.01 | 0.00 |
| | TOTAL traded goods: SITC 0-9 | 1372019 | 16.40 | 82.75 | 10.20 | 45.08 | 18.52 | 0.86 |

Note:Data and SITC descriptions refer to SITC revision 1

*/ This table is based on the definition of trade in manufactures covering a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods.

a/ Definition of trade in manufactures SITC 5-8 less 68 is one of the most often found. It covers only items recognized as exclusively manufactured goods,i.e. with a high level of manufacturing content.

Source: UNIDO data base;Information supplied by the United Nations Statistical Office.

Note. Percentages may not add to 100.0 due to the fact that countries report trade to/from "unspecified areas".

Table A.7: Shares of exports and imports according to level of processing, 1970 and 1979 and trend growth rates, 1970-1975 and 1975-1979

| CLASSES | EXPORTS | | | | IMPORTS | | | |
|---|---|---|---|---|---|---|---|---|
| | CLASS SHARE OF TOTAL (PERCENTAGE) | | CLASS GROWTH RATE (PERCENTAGE) | | CLASS SHARE OF TOTAL (PERCENTAGE) | | CLASS GROWTH RATE (PERCENTAGE) | |
| | 1970 | 1979 | 1970-1975 | 1975-1979 | 1970 | 1979 | 1970-1975 | 1975-1979 |
| A : Non-processed goods for further processing | 1.14 | 1.00 | 20.20 | -8.54 | 2.79 | 19.49 | 52.79 | 1.82 |
| B : Processed goods for further processing | 84.42 | 94.69 | 6.51 | 8.45 | 10.14 | 14.36 | 23.37 | -1.50 |
| C : Non-processed goods for final use | 0.00 | 0.01 | 47.73 | 11.20 | 3.60 | 0.41 | -16.03 | -9.11 |
| D : Processed goods for final use | 14.43 | 4.30 | -30.21 | 91.00 | 83.46 | 65.74 | 9.38 | -6.67 |
| Sum of classes: A+B+C+D in 1000 current US$ | | 1970 994543 | | 1979 1372019 | | 1970 472304 | | 1979 750177 |
| Total trade SITC 0-9 in 1000 current US$ | | 994543 | | 1372019 | | 476992 | | 750239 |

SOURCE: UNIDO data base; Information supplied by the United Nations Statistical Office, with estimates by the UNIDO Secretariat.

Note: Calculations are based on current us dollar prices.
Sum of classes and Total trade figures should be identical. Discrepancies or zero values are due to lack of countrys" trade reporting in general, but especially at the 3-, 4- and 5-digit SITC level.

Table A.8: Employees by economic sector, 1978-1982
('000)

| | 1978 | 1979 | 1980 | 1981 | 1982 |
|---|---|---|---|---|---|
| Zambian | | | | | |
| Agriculture | 30.3 | 32.6 | 31.5 | 33.2 | 33.2 |
| Mining | 54.8 | 52.9 | 56.9 | 55.6 | 55.3 |
| Manufacturing | 43.5 | 48.0 | 45.0 | 46.6 | 46.4 |
| Construction | 42.7 | 37.8 | 40.5 | 43.0 | 40.1 |
| Electricity and water | 6.7 | 7.5 | 7.6 | 7.8 | 7.8 |
| Commerce | 31.3 | 31.7 | 44.3 | 44.1 | 46.4 |
| Transport and communications | 21.1 | 20.8 | 23.7 | 21.8 | 24.4 |
| Services[a/] | 149.1 | 151.1 | 152.5 | 154.1 | 158.9 |
| Total | 379.5 | 382.4 | 402.0 | 406.3 | 412.4 |
| of which: | | | | | |
| public sector | 127.6 | ... | ... | ... | ... |
| private sector[b/] | 251.9 | ... | ... | ... | ... |
| Non-Zambian | | | | | |
| Mining | 7.8 | 6.4 | 6.4 | 5.7 | 5.0 |
| Other | 17.0 | 18.2 | 15.6 | 14.9 | 13.8 |
| Total | 24.8 | 24.6 | 22.0 | 20.6 | 18.8 |
| fo which: | | | | | |
| public sector | 6.6 | ... | ... | ... | ... |
| private sector[b/] | 18.2 | ... | ... | ... | ... |

a/ Including 35,000 domestic servants.
b/ The private sector includes parastatal sector.

Annex B

The Approved and/or Operational Technical Co-operation Projects of UNIDO

REPUBLIC OF ZAMBIA

| Backstopping Responsibility (Spec.Act.Code) | Project Number | Project Title |
|---|---|---|
| IO/INFR (31.3.K) | DP/ZAM/82/022 | Assistance to the Institute of Standardization |
| IO/INFR (31.3.L) | DP/ZAM/82/018* | Assistance to the Small Industry Development Organization (SIDO) |
| IO/INFR (31.3.L) | DP/ZAM/82/019* | Assistance to the village industry service |
| IO/INFR (31.3.L) | TF/ZAM/84/001 | Associate expert (multifund to DP/ZAM/82/018) |
| IO/FCTY (31.4.B) | DP/ZAM/82/011* | Assistance to the Ministry of Commerce, Industry and Foreign Trade (Department of Industry) |
| IO/TRNG (31.5.B) | RP/ZAM/84/001 | TCDC Zambia/Brazil - training in standarization and metrology |
| IO/FEAS (31.6.A) | DP/ZAM/82/014* | Identification of industries in provinces (continuation of DP/ZAM/78/006) |
| IO/CHEM (32.1.B) | SI/ZAM/84/801 | Assistance to Kapiri Glass Products Ltd |
| IO/CHEM (32.1/D) | US/ZAM/82/137 | Production of oral rehydration salts |
| IO/CHEM (32.1.F) | DP/ZAM/82/025 | Assistance to Nitrogen Chemicals of Zambia Limited. |

* Large-scale project (= total allotment $150,000 or above)

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|---|---|---|
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| Paraguay | UNIDO/IS.461 | 1984 |
| Uruguay | UNIDO/IS.462 | 1984 |
| Bangladesh | UNIDO/IS.510 | 1985 |
| Swaziland | UNIDO/IS.516 | 1985 |