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**INDUSTRIAL DEVELOPMENT REVIEW  
SERIES**

**UNITED REPUBLIC  
OF TANZANIA**

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

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## Preface

This series of industrial development reviews on developing countries is prepared within the framework of UNIDO country studies by the Regional and Country Studies Branch of the Division for Industrial Studies.

The reviews provide a survey and brief analyses of the respective country's industrial sector, as an information service to relevant sections within UNIDO and other international agencies as well as aid agencies in developed countries concerned with technical assistance to industry. It is expected that the reviews will prove a handy, useful information source also for policy-makers in the developing countries as well as for industrial entrepreneurs, financiers and economic researchers.

The reviews draw primarily on information provided by the UNIDO data base and material available at UNIDO headquarters from national and international statistical publications. Since up-to-date national statistical data usually are not complete, it is evident that the reviews will need to be updated and supplemented periodically. To supplement efforts under way at UNIDO to improve the data base and to monitor industrial progress and changes on a regular basis, it is hoped that the appropriate national authorities and institutions in the respective countries and other readers will provide UNIDO with relevant comments, suggestions and information. Such response will greatly assist UNIDO in updating the reviews.

The present Review was prepared on the basis of information available at UNIDO headquarters at the end of 1985. It is divided into two rather distinct parts. Chapters 1 and 2 are analytical in character, giving first a brief overview of the country's economy and its manufacturing sector and then a more detailed review of the structure and development of its manufacturing industries. Chapters 3 and 4 contain various kinds of reference material on national plans and policy statements relevant to industrial development, on the more important governmental and other institutions involved in industrial development and on the country's natural, human and financial resources for industrial development. The Review also contains relevant basic indicators and graphical presentation of manufacturing trends as well as statistical and other appendices.

It should be noted that the reviews are not official statements of intention or policy by Governments nor do they represent a comprehensive and in depth assessment of the industrial development process in the countries concerned.

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EXPLANATORY NOTES

Dates divided by a slash (1984/85) indicate a crop year or a financial year. Dates divided by a hyphen (1984-85) 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;

Totals may not add precisely because of rounding.

Basic indicators and graphical illustrations of manufacturing trends contained in this Review are based on data sourced from the UNIDO data base, international organizations and commercial sources.

The following abbreviations are used in this document:

BET	Board of External Trade
BRALUP	Bureau of Resources Assessment and Land Use Planning
cm	cubic metre
CPDC	Centrally Planned Developed Countries
FAO	Food and Agriculture Organization
GDP	gross domestic product
gwh	giga watt hours
GNP	gross national product
ICOR	incremental capital-output ratio
IMF	International Monetary Fund

IPI	Institute for Production Innovation
IPS	Industrial Promotion Services Tanzania Ltd.
MEIDA	Metals and Engineering Industrial Development Association
mt	metric tons
MVA	manufacturing value added
NBC	National Bank of Commerce
NIC	National Insurance Corporation
NIP	National Institute of Productivity
NPC	National Productivity Council
NPF	National Provident Fund
SAP	Structural Adjustment Programme
SIDO	Small Industries Development Organization
TAC	Tanzanian Audit Corporation
TAMTU	Tanzania Agricultural Machinery Testing Unit
TBS	Tanzania Bureau of Standards
TDFC	Tanzania Development Finance Co. Ltd.
THB	Tanzania Housing Bank
TIB	Tanzania Investment Bank
TIRDO	Tanzania Investment Research and Development Organization
TISCO	Tanzania Industrial Studies and Consulting Organization
TRDB	Tanzania Rural Development Bank
TShs.	Tanzanian Shillings
TWICO	Tanzania Wood Industries Company
UNDP	United Nations Development Programme

THE ANALYSIS CONTAIN IN THIS REVIEW IS BASED ON INFORMATION AVAILABLE AS AT  
THE END OF 1985.

BASIC INDICATORS 1  
The economy

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GDP:	\$5.33 billion (1985) <sup>a/</sup>					
Population:						
Total:	21.85 million (1985)					
Density:	17 inhabitants per sq. mile					
Growth rates: 1970-1983:	3.3 per cent					
1980-2000:	3.5 per cent, projected					
Projected population:	36.0 million (1990)					
Labour force:	10.1 million (1982)					
<u>GNP per capita:</u>	\$240 (1983)					
<u>Growth rate of GNP</u> <u>per capita (1970-1982):</u>	-1.8 per cent per annum					
Annual average growth rate of GDP: (per cent)	<u>1965-70</u>	<u>1970-75</u>	<u>1975-80</u>	<u>1981</u>	<u>1982</u>	
	5.4	4.8	4.1	-1.7	-3.3	
		<u>1983</u>	<u>1984</u>	<u>1985<sup>a/</sup></u>		
		-1.2	2.5	2.5		
Structure of GDP: (per cent)	<u>1965</u>	<u>1981</u>				
Agriculture	48.5	39.6				
Industry	10.7	6.2				
Manufacturing	8.5	5.8				
Service	36.7	48.5				
Annual rate of inflation: (per cent)	<u>1970-80</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	
	11.9	25.6	29.0	27.0	35.8	
Exchange rate: (Tanzanian shillings equivalents to \$1)	<u>1975</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
	7.41	8.25	8.20	8.28	9.28	11.14
		Nov.	Dec.	March		
		<u>1984</u>	<u>1985</u>	<u>1986</u>		
		15.29	16.38	16.30		

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<sup>a/</sup> Preliminary estimate.

BASIC INDICATORS 2  
Resources and transport infrastructure

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Resources

Major agricultural commodities (1984): (production, '000 mt)	Cassava (5,600), maize (1,131), plantains (1,000), bananas (1,000), beans (220), coffee (55)
Main export crops (1983): (per cent)	coffee (37.9), cotton (13.9), cloves (10.2), cashews (10.5), sisal (5.1), tea (6.7), tobacco (4.2)
Livestock (1984): (in millions)	Cattle (14.5), sheep and goats (10.2) pigs (0.1)
Fishery production (1983): ('000 mt)	Freshwater and diadrom (237), marine fish (35)
Forestry production (1983): ('000 cm)	Fuelwood and charcoal (38,680), industrial roundwood (1,090), sawnwood and panels (41)
Mining (1982): (leading minerals by value) ('000)	Diamonds (47.3 grams), gold (11.4 grams), salt (29.2 tons), limestone (129,993 tons)
Energy resources (1984):	
Production of petroleum fuels ('000 tons)	510
Natural gas	42.89 bn m <sup>3</sup>
Coal	360 mn tons
Electricity	695 gwh

Transport

Roads:	9500 Km tarmac
Railways:	2580 Km
Ports:	Dar Es Salaam, Tanga, Matava (total freight capacity 2.32m tons)
International Airports:	Dar Es Salaam, Zanzibar, Kilimanjaro

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BASIC INDICATORS 3  
Foreign trade and balance of payments

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Exports	total value:	\$390 million (1985)
	main goods:	Coffee, cotton, cashew nuts, sisal
	main destinations:	India, U.K., F.R. Germany (1982)
Imports	total value:	\$930 million (1984/85)
	main goods:	Machinery, transport equipment, fuel and metals
	main origins:	U.K., Iran, F.R. Germany, India (1982)
	Balance of payments: (current account deficit)	\$540 million (1984/85)
	Foreign public debt: as per cent of GNP:	\$2.6 billion (1984) 30 per cent
	Debt service	
	as per cent of GNP:	1.5 per cent (mid-1983)
	of total exports:	5.1 per cent (mid-1983)
	Foreign currency reserves:	\$20.5 million (May 1985)

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BASIC INDICATORS 4  
The manufacturing sector

Manufacturing value added (MVA):	\$146 million (1983) <sup>a/</sup>		
MVA per capita:	\$9		
Employment in industry <sup>b/</sup> :			
total:	89,000 (1980)		
Percentage of total employment:	16 per cent		
Percentage of total labour force in industry:	6 per cent		
Annual growth rate of MVA:	<u>1966-73</u>	<u>1973-75</u>	<u>1975-80</u>
(per cent)	7.8	0.8	3.2
	<u>1981</u>	<u>1982</u>	<u>1983</u>
	-18.3	-27.9	-3.4
Composition of MVA:	<u>1975</u>	<u>1980</u>	
(percentage)			
Mainly consumer goods	53.2	58.3	
Mainly intermediate goods	32.8	27.5	
Mainly capital goods	14.0	14.2	
Export of manufactures:			
value:	\$58.8 million (1981) <sup>c/</sup>		
main goods:	\$552.7 million (1981) <sup>d/</sup>		
destinations:	Textiles, clothing, non-metallic mineral products EEC (39.4 per cent), developing countries (41 per cent)		
Import of manufactures:			
value:	\$524.6 million (1981) <sup>c/</sup>		
main goods:	\$867.3 million (1981) <sup>d/</sup>		
origins:	Machinery, transport equipment, iron, steel and metal manufactures EEC (53 per cent), developing countries (17 per cent), Japan (13 per cent)		
Share of manufactured exports in total exports: <sup>e/</sup>	10.6 per cent (1981)		
Share of manufactured imports in total imports: <sup>e/</sup>	60.4 per cent (1981)		

<sup>a/</sup> Preliminary estimate.

<sup>b/</sup> The estimates of total employment in manufacturing are derived from the Annual Economic Survey, Tanzania Statistical Bureau, which includes only numbers actually employed in 1980. The percentage of labour force in industry is provided by the World Bank, according to which labour force comprises all economically active persons, employed or unemployed and those self-employed in agriculture.

<sup>c/</sup> SITC 5-8 less 68.

<sup>d/</sup> Comprising a wide range of processing stages of manufactured goods in SITC 0 9.

BASIC INDICATORS 5  
Trade in manufactured goods

In 1981

MANUFACTURED EXPORTS		total value: \$552.7 million <sup>a/</sup> \$ 58.8 million <sup>b/</sup>				
Principal manufactured exports (million \$)		Destination (in per cent)				
		Developing Countries	Developed Market Countries			Centrally Planned Developed Countries
			USA	EEC	Japan	
Processed cotton	77.41	60.03	0	11.5	0.9	2.3
Non-metallic mineral manufacture	31.44	1.97	0.02	97.8	0.1	0.0
Tea	19.80	27.3	7.9	56.5	0.05	0.0
Textile	13.64	27.8	5.7	51.4	6.3	0.96
Animal food	12.25	0.02	1.26	97.3	0	0.96
MANUFACTURED IMPORTS		total value: \$867.3 million <sup>a/</sup> \$524.6 million <sup>b/</sup>				
Principal manufactured imports (million \$)		Origin (in per cent)				
		Developing Countries	Developed Market Countries			Centrally Planned Developed Countries
			USA	EEC	Japan	
Non-electric machinery	139.4	7.39	3.60	58.67	17.91	3.30
Transport equipment	123.9	4.48	2.78	50.86	20.67	0.43
Petroleum products	112.1	66.40	0.19	28.42	0.05	0.02
Electrical machinery	40.3	7.04	0.94	46.05	17.79	0.35
Pharmaceuticals	11.3	11.30	2.15	69.36	0.21	1.44

<sup>a/</sup> The broad definition of trade in manufactured goods covers a list of 148 specifically identified SITC 3-digit or 4-digit codes comprising a wide range of processing stages of manufactured goods in SITC 0-9.

<sup>b/</sup> The narrow definition of trade in manufactures (SITC 5-8 less 68) is one of the most often found.

BASIC INDICATORS 6  
Inter-country comparison of selected indicators

Indicator	Unit	Ethiopia	Kenya	Mali	Sudan	Tanzania	Zaire	Zambia
<u>I. Demographic indicators</u>								
Population (mid-1983)	millions	40.9	18.9	7.2	20.8	<u>20.8</u>	29.7	6.3
Population growth (1970-83)	per cent per annum	2.7	4.0	2.5	3.2	<u>3.3</u>	2.5	3.2
Infant mortality (1983)	per 1000	...	14	31	19	<u>18</u>	20	19
Area	'000 km <sup>2</sup>	1,222	583	1,240	2,506	<u>945</u>	2,345	753
Density (1983)	persons/km <sup>2</sup>	35	33	6	9	<u>22</u>	13	9
<u>II. Economic indicators</u>								
GDP (1983)	\$ billion	4.27	4.94	0.98	6.85	<u>4.55</u>	5.4	3.35
GMP per capita (1983)	\$	120	340	160	400	<u>240</u>	170	580
GDP growth (1973-83)	per cent/annum	2.3	4.6	4.1	6.3	<u>3.6</u>	-1.0	0.2
Agriculture (1983)	per cent of GDP	48	33	46	36	<u>39.6<sup>a/</sup></u>	36	14
Industry (1983)	per cent of GDP	16	20	11	14	<u>6.2<sup>a/</sup></u>	20	38
Manufacturing (1983)	per cent of GDP	11	12	...	7	<u>5.8<sup>a/</sup></u>	2	19
Services (1983)	per cent of GDP	36	46	43	50	<u>48.5<sup>a/</sup></u>	44	48
Exports of goods and non-factor services (1983)	per cent of GDP	12	25	23	11	<u>11</u>	33	31
Gross domestic investment (1983)	per cent of GDP	11	21	17	15	<u>20</u>	24	15
External public debt (1983)	per cent of GNP	25.9	43.1	89.3	77.8	<u>58.9</u>	91.5	83.9
<u>III. Industrial indicators</u>								
MVA (1982)	millions of constant 1975 dollars	361	536	57	433	<u>151</u>	253	427
Growth of MVA (1973-83) (per cent)	average annual	3.5	6.3	...	...	<u>-3.8</u>	...	...
Share in world MVA (1981)	per cent	0.02	0.03	...	0.02	<u>0.01</u>	0.01	0.02
Share of manufactured exports in total exports (1982) <sup>b/</sup>	per cent	0.73	11.58 <sup>c/</sup>	23.3 <sup>d/</sup>	0.19 <sup>e/</sup>	<u>10.6<sup>e/</sup></u>	3.2 <sup>d/</sup>	0.73 <sup>d/</sup>

a/ 1981.  
b/ SITC 5-8 less (67 + 68).  
c/ 1980.  
d/ 1979.  
e/ 1981.



Executive Summary

The period 1978-83 has been an extremely difficult one for the Tanzanian economy. Since 1984 there has been a slight improvement in macroeconomic performance due to increased agricultural production. Positive GNP growth has been registered in 1984 and 1985 and the economic outlook for 1986 is better than that for any previous year since 1980. The industrial sector, however, continues to face severe problems. Capacity utilization in industry is currently lower than 30 per cent. The share of manufacturing in GDP has fallen from 9 per cent in 1978 to about 5 per cent in 1984.

The Structural Adjustment Programme covering the period 1982-85 aimed at restoring 1979 production levels and doubling exports by 1985. Some progress has been made, but the foreign exchange constraints continued to inhibit growth prospects.

Since the early 1980s the Government has attempted to deal with the foreign exchange crisis by stimulating exports through a substantial devaluation of the Tanzanian shilling and a significant increase in producers' prices. Export volumes have however not risen and the budget deficit is still relatively large.

In 1982 it was estimated that the annual foreign exchange requirements for industrial development were about \$300 million at 1982 prices. An IMF agreement which would lead to the provision of about \$150 million per annum for a period of 3 years has not yet been completed. A large-scale devaluation of the Tanzanian shilling, which is likely to be stipulated in IMF conditions for a standby agreement, may not sufficiently stimulate primary commodity exports earnings due to the low price elasticities of Tanzanian major commodity exports. However, manufactured exports may be more responsive to exchange rate changes. Food manufacturing branches in particular have been identified as having significant export potential.

Increased export orientation could have a significant impact on the structure of Tanzanian industry. In the past the Government pursued primarily an import substitution industrialization strategy and invested heavily in the

intermediate goods industries. These industries grew rapidly but remained heavily import-dependent. The intermediate industries have fared particularly badly during the last few years. Employment expanded more than output. Inefficiencies in public sector management contributed to the low rates of return.

During the 1970s manufacturing value added grew at a real rate of about 2.2 per cent per annum. The growth of real MVA, measured at constant 1966 prices, registered two-digit negative growth rates during 1980-82. In 1985 real MVA suffered a negative growth rate of 3.4 per cent.

Industrial rehabilitation and restructuring would enable the redeployment of capital and manpower from industries with high foreign exchange costs to industries with strong linkages with the domestic economy. This would imply a significant change in the output mix of Tanzanian manufacturing. The new industrial strategy of the Government is geared towards such change.

Revitalizing the industrial sector requires substantial foreign assistance, preferably in the form of programme rather than project aid. Programme aid would be needed to increase utilization of installed capacity rather than creating new capacities. In this context assistance for the training of management personnel would be crucial for achieving improved public sector performance.

In the past the growth of the parastatals and public sector industries was not synchronized by the development of managerial and technical skills to ensure a high level of productivity and quality of production. Although some educational and training institutions have been established, the needs for manpower development at all levels remain very considerable and cannot be met solely by existing programmes. The strengthening of existing institutions, in-country training programmes, and fellowships abroad would be major requirements. Assistance is also called for to support the development of a viable rehabilitation programme which can provide a framework for the transfer of resources from inefficient and import-dependent projects to projects which are sustainable in the medium run on the basis of Tanzania's domestic resources and capabilities.

## 1. THE TANZANIAN ECONOMY

### 1.1 Recent economic trends

The economic outlook for 1986 is better than that for any previous year since the beginning of the recession in 1980. This recession has been exceptionally severe. Gross domestic product at factor cost grew in real terms at -1.7 per cent in 1981, -3.3 per cent in 1982 and -1.2 per cent in 1983.<sup>1/</sup> In 1984 and 1985 GDP rose at about 2.5 per cent during both years and it is expected that positive growth in GDP will also be registered during 1986. While real GDP thus has increased at a little over 2 per cent during the last 3 years, population has increased at an annual rate of 3.2 per cent - GDP per capita has therefore continued to decline since 1980.

Subsistence production now is estimated at almost 40 per cent of the national output. Real income per capita has dropped by about 13 per cent since 1979. Agricultural production levels have fallen due to the drought in 1984 and this made increased food aid an urgent necessity. Manufacturing output has also declined since 1980. Manufacturing currently accounts for about 5 per cent of gross domestic production.

The share of public administration in GDP has increased from about 19 per cent in 1980 to over 26 per cent in 1983. There has been a large budget deficit in every financial year since 1981/82. The budget deficit of 1985/86 is expected to be larger than that of the previous three years. In the 1981/82 budget, capital expenditure had been reduced by 6 per cent in current prices; in 1982/83 there was a further 20 per cent reduction (also measured in current prices). Development spending rose by 30 per cent in 1984/85. The 1985/86 budget estimates an increase in development expenditure of less than 1 per cent in money terms. Given an annual inflation rate of over 35 per cent, the level of development expenditure is therefore still well below that

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<sup>1/</sup> Measured at constant 1966 prices, real GDP fell by 1.0 per cent during 1980-83 (see Table 1).

achieved in 1981/82. Over this period recurrent expenditure has more than doubled, increasing from TShs. 9,858 million to TShs. 23,360 million in current prices.

The budget deficit has mainly been financed by bank borrowing. The 1985/86 budget introduced a new payroll levy which is expected to realize TShs. 198 million. Sales tax - the main revenue earner for the Government - has been increased on beer, spirits and some other consumer goods. Corporation tax has, however, been substantially reduced and so have import levies on chemicals and agricultural machinery. The cumulative effect of these and other measures has resulted in a rise of domestic revenue by about 7 per cent over the 1984/85 level. The total budget deficit, however, is expected to grow by almost 10 per cent to TShs. 5,200 million.

1984/85 was the final year of the Structural Adjustment Programme (SAP) launched by the Tanzanian Government in 1982. The main aims of the programme were:

- to achieve a reduction in the rate of inflation;
- to reduce the large balance of trade gap; and
- to control the activities of the unofficial non-regulated market which has grown to significant proportions during the last few years.

The annual rate of inflation was of the order of 29 per cent in 1982, 27 per cent in 1983 and 35.8 per cent in 1984. Inflation has accelerated somewhat during the period 1983-84 and has exceeded 35 per cent. There has been a noticeable reduction in the size of the parallel market since early 1983 when Anti Economic Sabotage measures were instituted. The growth of money supply has also been held down to about 25 per cent per annum over the 1980-83 period.

However, measures adopted under SAP did not stimulate exports to targeted levels. The current account deficit has increased from \$279 million in 1981/82 to \$540 million in 1984/85. The trade deficit is expected to decline to \$480 million in the current financial year. Exports are estimated to have increased from \$369 million in 1982/83 to \$390 million in 1985. Exports are expected to increase by no more than 3 per cent in dollar terms during

1985/86. The Government succeeded in reducing imports from \$903 million in 1982/83 to \$875 million in 1983/84. Imports then rose to \$930 million in 1984/85 but the Government hopes to reduce them by about 7 per cent during the present financial year. A severe problem has been the continuing decline in Tanzania's terms of trade in recent years, i.e. from 100 in 1980 to 83 by 1983.

The trade deficit has generally been financed by foreign aid. However, a necessary major expansion in aid has been delayed because of prolonged negotiations between the IMF and the Government about the terms on which a \$300 million stand-by agreement for a three-year period could be signed with the Fund. The 1984/85 budget, incorporating an increase in producers' prices, a reduction in food subsidies and a 26 per cent devaluation of the shilling on top of the 20 per cent devaluation announced in June 1983, seemed to have indicated a move towards an agreement with the IMF. However, the 1985/86 budget proposals, despite the continued emphasis on improving producers' prices, do not envisage a further large-scale devaluation of the Tanzanian shilling or a reduction in the public sector deficit. Agreement on a new IMF stand-by agreement during 1986 seems thus unlikely.

Prospects for 1986 depend crucially on the performance of the agricultural sector. Agricultural production is likely to increase during 1985/86 due to improved weather conditions and the more attractive producer prices that the Government is now offering to farmers producing cash crops. Even then the economic crisis would by no means be over, as there are serious long-term structural imbalances which have to be corrected in order to revitalize the Tanzanian economy.

## 1.2 Economic structure

With a per capita income level of \$250 (1982), Tanzania belongs to the group of least developed countries. Agriculture is the main economic sector with a GDP share of about 39.6 per cent in 1981. The service sector is almost equally important in terms of its GDP share. The shares of both mining and manufacturing have suffered a decline. Growth rates until the beginning of the present crisis have been broadly similar to those in the rest of Africa. Over the period 1963-1970, GDP per capita grew at a real annual rate of

3.94 per cent in Tanzania as compared to 2.91 per cent in Africa as a whole. During 1970-81 annual real growth rates of GDP were 1.06 per cent for Tanzania and 1.12 per cent for the whole of Africa. Up to 1981, the performance of the agricultural sector had been particularly good by African standards. Agricultural output grew at a real annual rate of 3.38 per cent in Tanzania during 1970-81, as compared to an overall African growth rate of just 0.92 per cent per annum. Over the period 1970-79 manufacturing growth in Tanzania was broadly similar to most of her neighbours but there has been a marked deceleration since 1973. The share of the manufacturing sector measured in constant prices has fallen from 11.5 per cent in 1973 to 5.8 per cent in 1981. The mining sector has also experienced negative growth rates through most of the 1970s. Currently, it accounts for less than 0.5 per cent of GDP.

Investment levels have generally been relatively high. Gross domestic investment as a proportion of GDP increased from 14 per cent in 1972 to 18 per cent in 1982. The average ratio of gross domestic investment to GDP in low-income developing countries (other than India and China) was 13 per cent in the early 1980s. The Tanzanian gross domestic savings as a proportion of GDP was only 11 per cent in 1982. The late 1970s in particular saw many additions to Tanzania's fixed capital stock. Capital formation has, however, fallen during the crisis period from TShs. 9,908 million in 1981 to TShs. 8,552 million in 1983 in current prices. The public sector's share in gross capital formation increased from 44 per cent in 1981 to 48.3 per cent in 1983. The share of the parastatals also rose from 16.9 per cent to 23.4 per cent of gross capital formation over this period.

The Tanzanian economy has been suffering from a serious imbalance in international trade. In 1978 the trade deficit stood at TShs. 5,128 million. This rose to a peak of TShs. 6,414 million in 1982. The deficit fell in 1983 but has increased in both 1984 and 1985. Whereas the Government has succeeded in restraining the growth of imports, declining terms of trade have eroded export earnings. Moreover, world demand for Tanzania's major exports - coffee, cotton, cloves and cashew nuts - has also been sluggish in recent years.

Limited foreign exchange earnings have increased the dependence of the economy on aid and other concessional flows. Total external public debt stood

at about \$2.6 billion at the end of 1984, representing 30 per cent of GNP. Moreover, foreign aid inflows have been relatively stagnant in recent years. An increase in these flows largely depends on reaching an agreement with the IMF.

Such an agreement will have far-reaching implications for the pattern and orientation of economic policy in Tanzania. The next section explains the implications of an IMF stand-by agreement for the growth of the Tanzanian manufacturing sector.

### 1.3 Overview of the manufacturing sector and the possible impact of an IMF stand-by agreement on manufacturing activities

The industrial sector's share of GDP grew steadily up to the early 1970s but since then has shown signs of decreasing. The overall value of industrial output has also declined. The fall is attributed to the scarcity of foreign exchange needed to import raw materials and spare parts and the resulting imposition of import restrictions. Other bottlenecks include shortages of locally produced raw materials, water and power supply, inadequate infrastructure and shortage of skilled and experienced industrial manpower. Consequently, only about a third of industrial production capacity is currently utilized. As a result, severe shortages have been experienced in several essential commodities such as sugar, bread, oil, milk, cigarettes, soap, detergents and tyres.

The 1981-1986 Development Plan gave priority to expansion of the industrial sector, emphasizing schemes for processing local materials and developing heavy industry. Moreover, as part of the economic recovery programme launched in 1981, priority in the allocation of foreign exchange was being granted to industries exporting more than 15 per cent of their output. The National Survival Plan launched in 1980 and the three-year Structural Adjustment Programme adopted in 1982 shifted the balance of investment emphasis towards agriculture.<sup>1/</sup>

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<sup>1/</sup> The industrial priorities of SAP are detailed in section 3.2.

The manufacturing sector which contributes about 5 per cent of GDP is dominated by consumer goods industries involved in the processing of agricultural products. The manufacturing sector accounted for about 17 per cent of the total employed labour force in Tanzania in 1982. This proportion is likely to have fallen drastically in the past few years and thus led to significant expansion of the subsistence sector.

In the next few years considerable change in the structure of manufacturing production and investments are expected, particularly if a stand-by agreement is signed with the IMF. Such an agreement is likely to include:

- a further large devaluation of the Tanzanian shilling;
- a substantial reduction in consumer subsidies, and a holding down of industrial wage levels in order to reduce the budgetary deficit and the public sector borrowing requirement in Tanzania;
- a reduction in the growth of money supply; and
- a further substantial increase in producers' prices for agricultural cash crops.

The net effect of these measures as far as the manufacturing sector is concerned would be to increase the incentives for investment growth in the cash crop producing sector of the economy and a relative decline in both manufacturing and food production. The control on domestically manufactured industrial input prices will be reduced and increasingly determined by the international market.

The Tanzanian manufacturing sector has been very severely hampered by the foreign exchange shortage which has meant a drastic reduction in essential imports. Import levels are currently at least 25 per cent below those of 1970. However, without a substantial increase in imports capacity utilization within the manufacturing sector cannot increase significantly. If imports could be increased sufficiently, industry could function at a normal level of capacity utilization and sales and excise revenue would be doubled.<sup>1/</sup> This in turn might eliminate the current fiscal deficit. An increase in imports could be financed by improved export earnings or increased concessional foreign assistance. What are Tanzania's prospects on these counts?

1/ Singh, A., The Continuing Crisis of the Tanzanian Economy, University of Cambridge (mimeo) 1984.



Export prospects depend crucially on the likely movements in Tanzania's commodity terms of trade. During 1983-85, terms of trade have deteriorated and a substantial devaluation as recommended by the IMF would drastically increase the price of imports. Whether export volumes can rise sufficiently as a result of improved domestic prices depends crucially on the supply elasticity of the commodities Tanzania exports and thus on the continuing recovery in the developed market economy countries. If this recovery slows down or is halted, terms of trade trends will inevitably deteriorate. Of the total Tanzanian exports 45.8 per cent went to the EEC countries during the period 1981-83, whereas only about 4 per cent of these exports went to the United States. The prospects for Tanzanian exports thus depend largely on the extent to which the EEC sustains economic recovery.

Devaluation is unlikely to lead to a rapid rise in export commodity values because, in a small commodity exporting, centrally planned economy like Tanzania, export commodity volumes are determined largely by domestic production. Domestic production can, of course, be stimulated by rising prices, but export commodity receipts will be determined by international prices which are independent of prices prevailing in Tanzania. Devaluation can, however, fuel inflation which may lead to increased wage costs for the manufacturing sector.

Whereas the above is true for most of Tanzania's exports, manufactured exports, which in 1981 accounted for about 10.6 per cent of total Tanzanian exports, will probably respond more positively to devaluation than agricultural exports. However, changing the international price of the Tanzanian shilling can only be a secondary stimulant to manufacturing exports since the decline in capacity utilization has virtually eliminated manufactured exports in recent years. The primary stimulant should increase the supply response which necessitates the need for importing industrial inputs which will become increasingly costly to finance from export earnings because devaluation will increase import prices.

If foreign exchange for importing inputs are made available, devaluation can be expected to increase the proportion of exportable goods in manufacturing production. Appendix Table A-1 shows that the branches with the

highest proportion of exports to apparent consumption over the period 1981-83 were:

- (a) Aluminium tubes, pipes, plates, sheets, strip, etc.;
- (b) Residual fuel oils;
- (c) Raw sugar;
- (d) Motor gasoline; and
- (e) Distillate fuel oils.

These products originate in the industrial chemicals, non-ferrous metals and food manufacturing branches. The first two of these are very small as proportions of the manufacturing sector output. Their combined average contribution to MVA over the period 1976-81 was 6.8 per cent. In 1981, they accounted for about 3 per cent of total manufacturing employment. Restoring normal capacity utilization levels in these sectors will not be in itself sufficient to revitalize the manufacturing sector. If "export-led" growth is to be achieved, there must either be:

- a large expansion of existing capacity in the export-oriented manufacturing branches, or
- a re-orientation of domestic-demand and import-substituting industries (in particular, textiles and leather processing) towards export orientation.

Given the existing low levels of apparent consumption in import substituting industries, such a re-orientation may create shortages of essential consumer goods, such as clothes and shoes and other items that would contradict the structural adjustment programme which gives investment priority for the provision of basic needs of the population. SAP does, however, indicate that the Government is willing to re-orientate the textile and the cement industry - both producers of basic needs - to take export opportunities.

A key industry for manufactured export growth is processed food products. The main products of this sector include sugar, tobacco, coffee, tea and cashew nuts. Domestic demand for sugar products very substantially exceeds supply. The production of cashew nuts has been decreasing for some

time. Therefore, the main hope for increased exports within the processed food sector lies with the tea, coffee and tobacco plants.

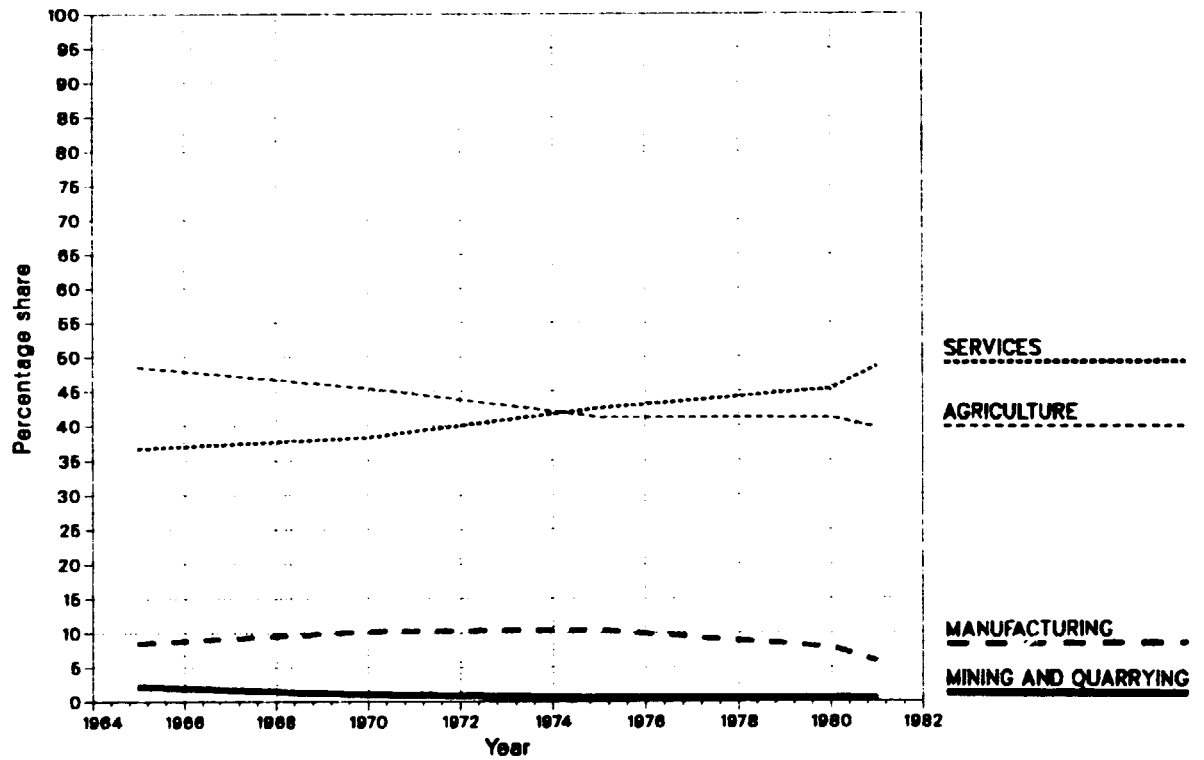
It is apparent that the real bottleneck here is the limited non-availability of essential inputs such as production machinery and trucks. The crucial question, therefore, is the impact of an IMF package on Tanzania's ability to finance a higher level of imports. The IMF has argued that export revenues will be stimulated by devaluation and the rise in producers' prices. But there is no evidence to show that the aggregate supply elasticity of Tanzanian agriculture is positive. A likely impact of these measures would be a switching from the production of non-cash to cash crops and this may lead to food shortages. Food shortages could entail an increased allocation of foreign exchange to this sector and manufacturing would find itself deprived of foreign exchange resources despite export growth. Food shortages already existed in Shiyanga and Mwanza regions during 1984. Food imports increased by 102 per cent in fiscal 1983/84 from 161,432 tons to 326,330 tons. The FAO agreed in June 1984 to provide 5,000 tons of cereals.

An agreement with the IMF would probably not increase foreign exchange resources by more than \$150 million per annum over the period 1986-88 (assuming a \$300 million stand-by IMF agreement on a 3-year basis and a \$150 million 'structural' agreement with the World Bank). The actual trade deficit of 1984-85 was over \$542 million and the estimated trade deficit of 1985-86 is about \$500 million. The major importance of the IMF agreement would be not mainly in the amount of foreign exchange support it would directly supply, but in its ability to induce other donors to increase Tanzania's aid. As far as the manufacturing sector is concerned, the key question is the willingness of foreign suppliers of capital to direct their resources to the revitalization of idle capacity and thus to reach compatibility between the priorities of the aid givers and the Tanzanian Government. As concerns the Tanzanian Government's ability to borrow from the international capital markets it seems unlikely that the IMF agreement would be able to positively affect that, despite Tanzania's generally good debt standing, particularly by African standards.

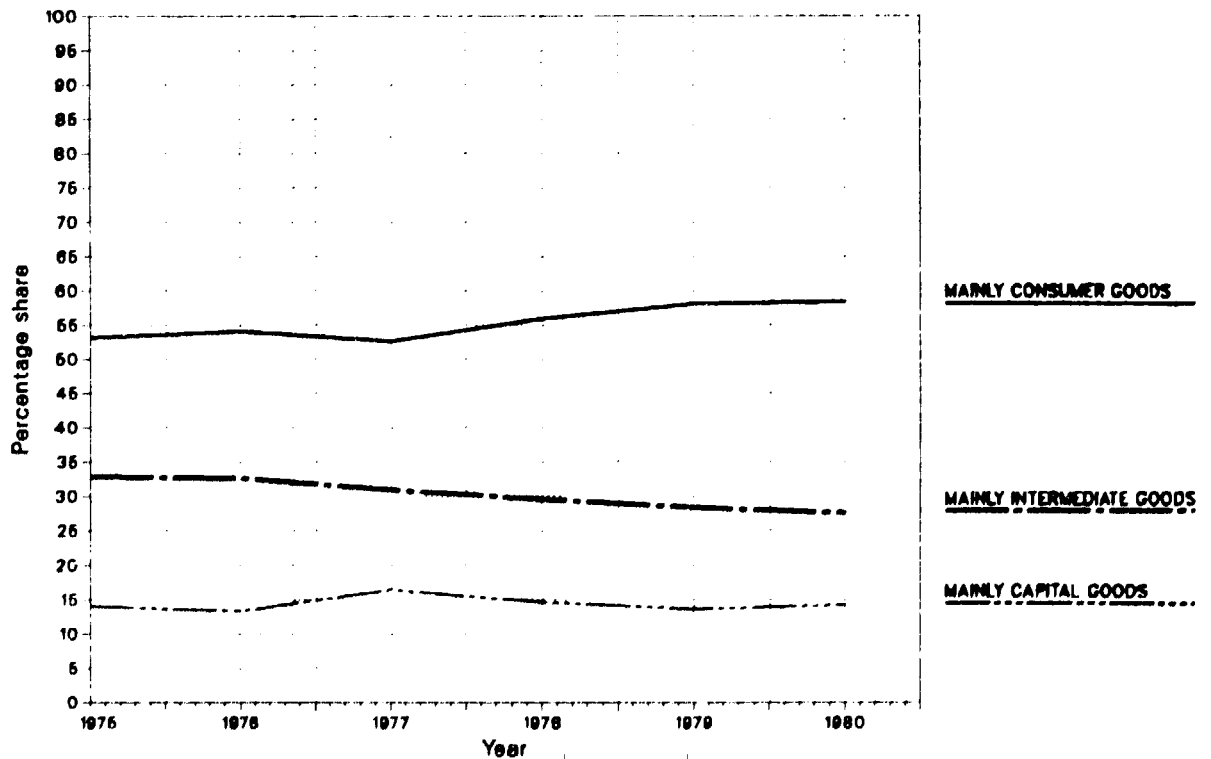
Revitalizing Tanzanian industry is going to be a difficult task. It is to be based on a systematic assessment of the structural characteristics and potentialities of the manufacturing sector. Chapter 2 addresses this question.

# MANUFACTURING TRENDS

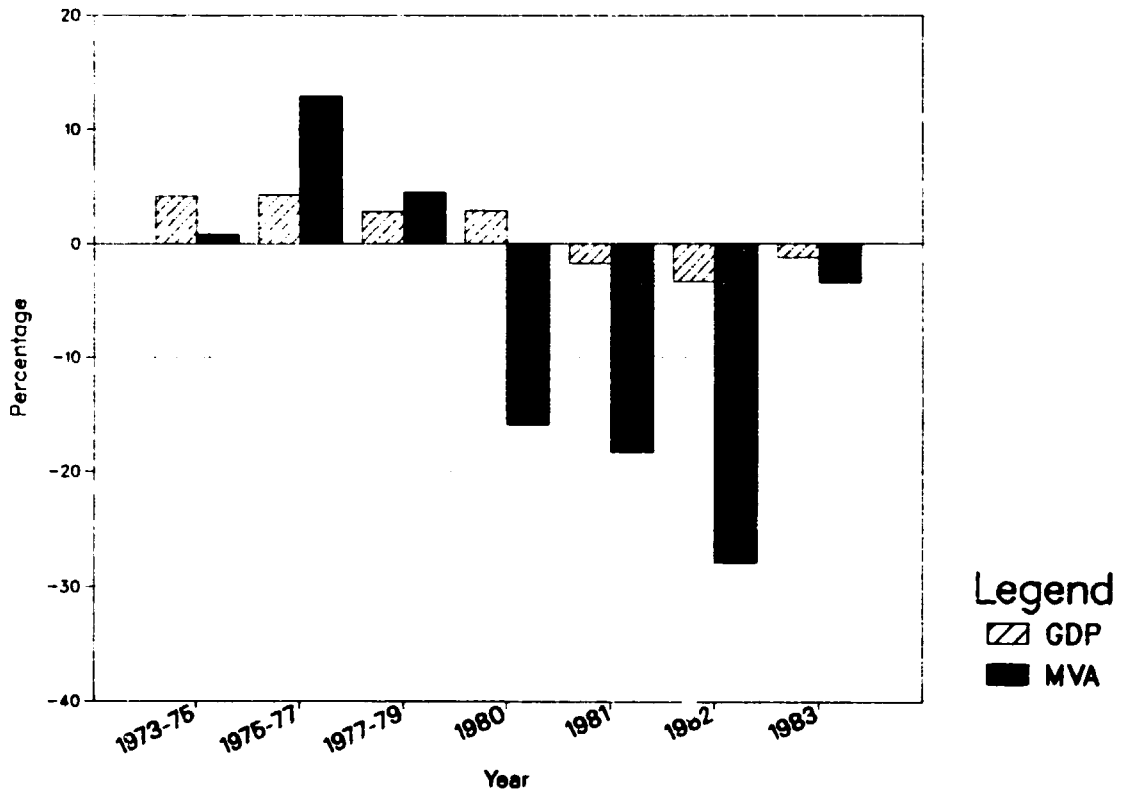
## DISTRIBUTION OF GDP BY SECTOR OF ORIGIN, 1965-1981 (at constant 1975 prices)



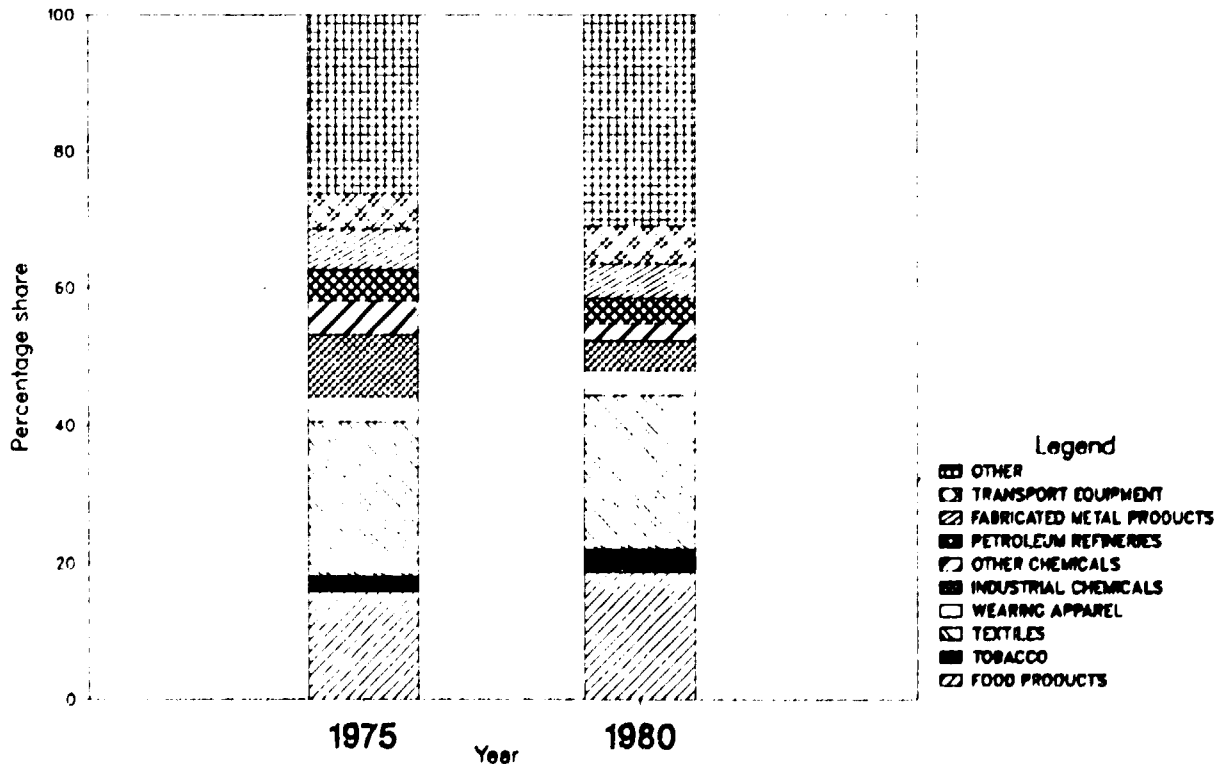
## COMPOSITION OF MVA BY END USE, 1975-1980 (at constant 1980 prices)



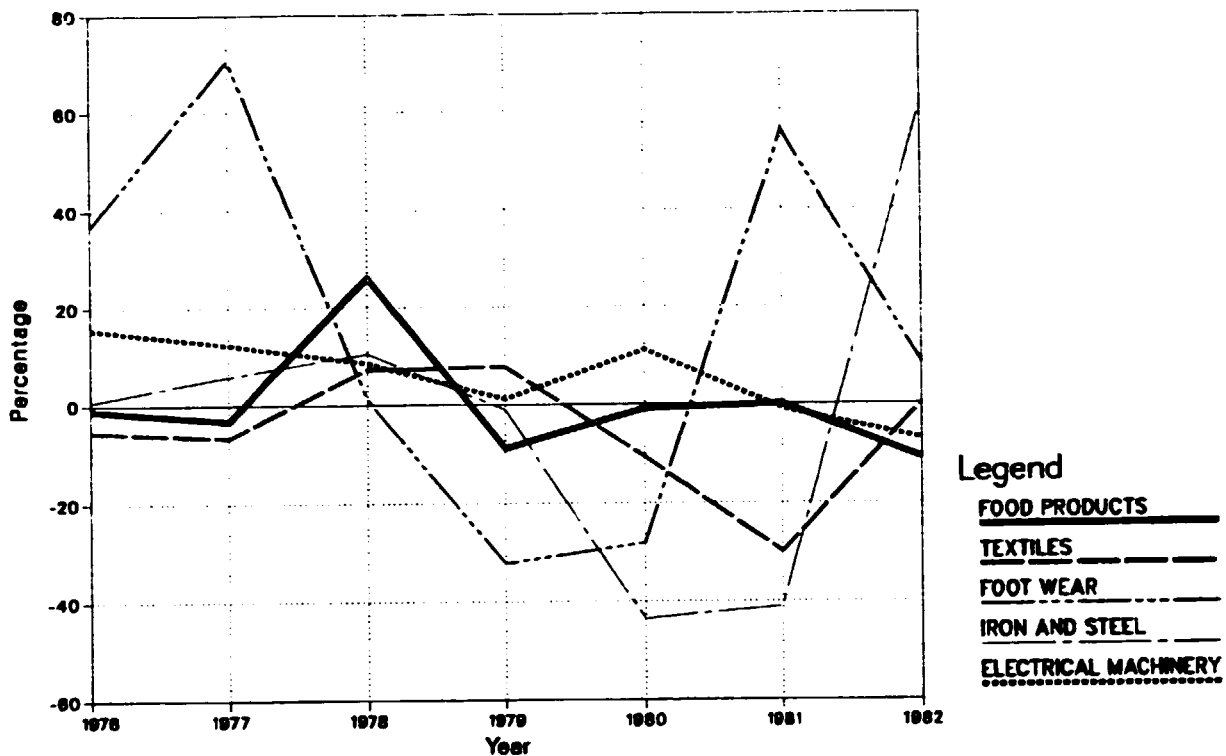
**ANNUAL GROWTH RATES OF GDP AND MVA, 1973-1983**  
(at constant 1966 prices)



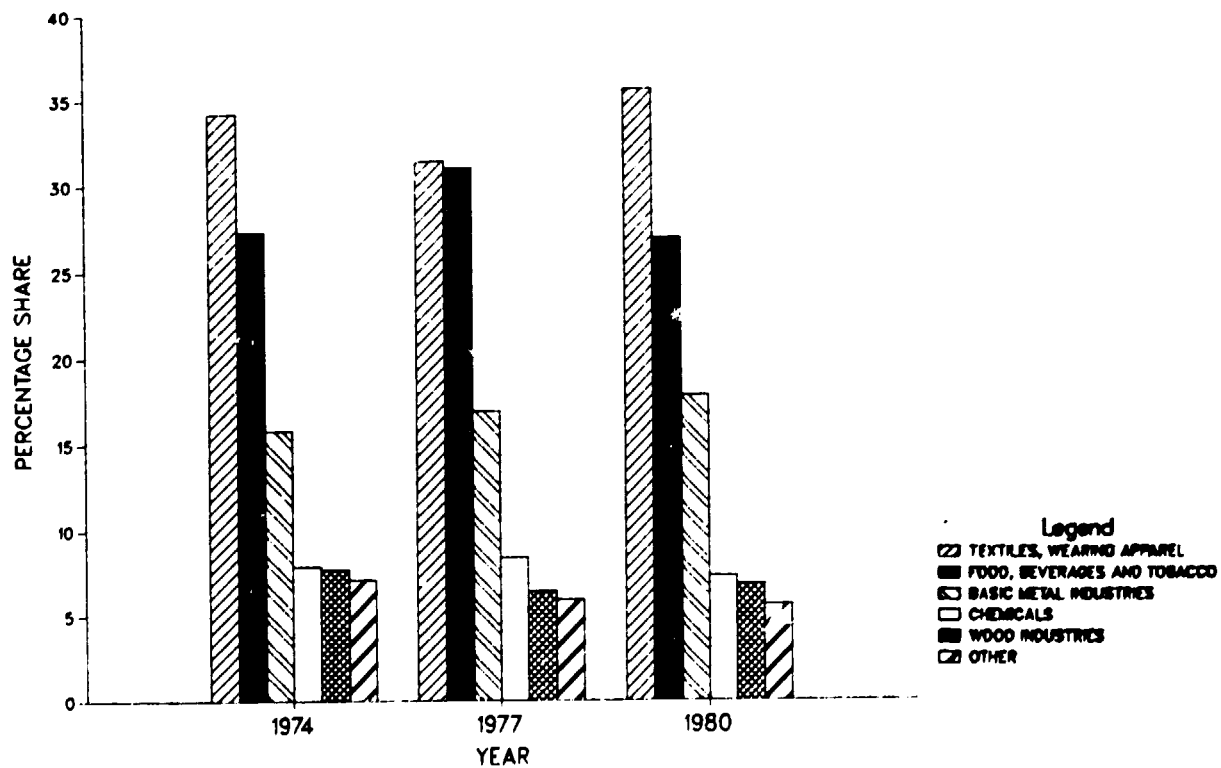
**COMPOSITION OF MVA BY MAIN BRANCHES, 1975 AND 1980**  
(at constant 1980 prices)



**ANNUAL GROWTH RATES OF MVA, SELECTED INDUSTRIES, 1976-1982**  
(at constant 1980 prices)

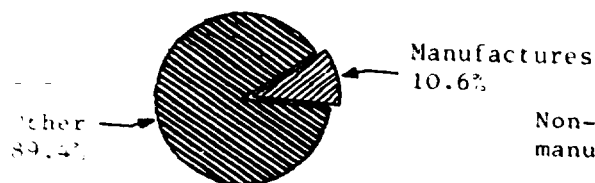


**STRUCTURE OF MANUFACTURING EMPLOYMENT, 1974, 1977 AND 1980**

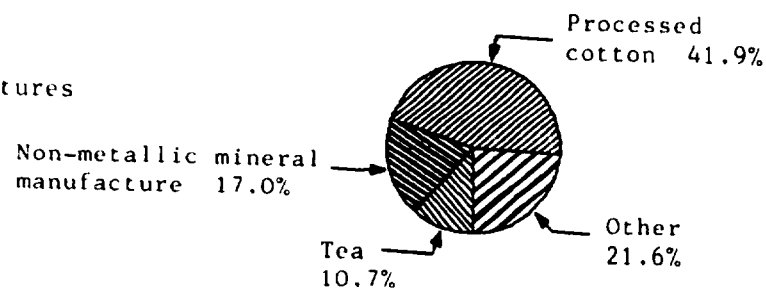


# MANUFACTURED EXPORTS AND IMPORTS IN 1981

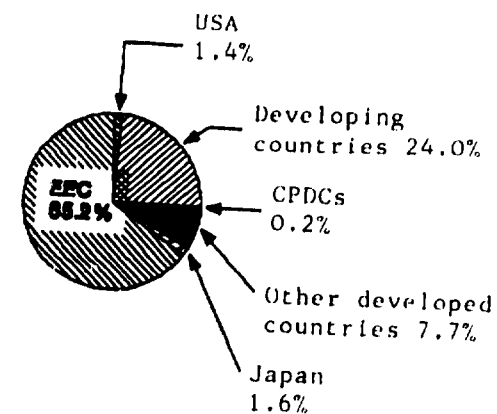
SHARE OF MANUFACTURES  
IN TOTAL EXPORTS



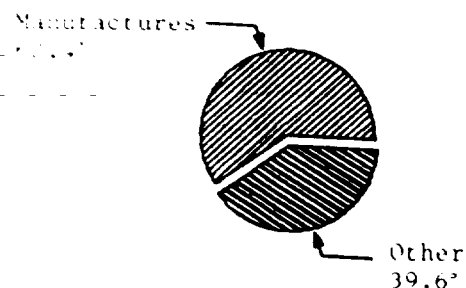
COMPOSITION OF MANUFACTURED  
EXPORTS



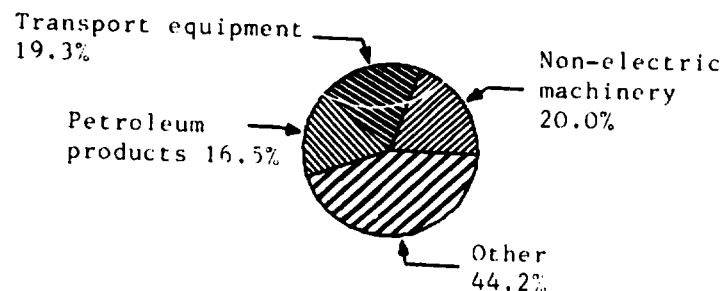
DESTINATION OF MANUFACTURED  
EXPORTS



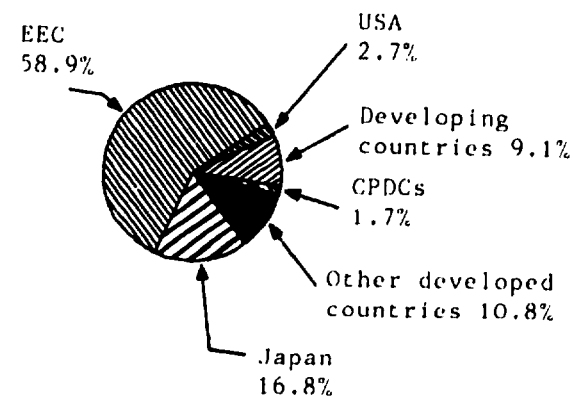
SHARE OF MANUFACTURES  
IN TOTAL IMPORTS



COMPOSITION OF MANUFACTURED  
IMPORTS



ORIGIN OF MANUFACTURED  
IMPORTS



## 2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

### 2.1 Growth and structural change

The weight of the manufacturing sector in the Tanzanian economy has shown a declining trend since the beginning of the present crisis. Measured in constant prices the MVA/GDP ratio declined from 12.2 per cent in 1978 to 5.2 per cent in 1983. During 1966-73 manufacturing output grew at an annual rate of 7.8 per cent. The rate of growth slowed to 6 per cent during the next five years, and since 1978 negative growth rates have been registered with respect to both manufacturing output and MVA in every successive year. As Table 2 shows, production in all but two industries (leather products and agricultural implements) in 1983 was substantially below the 1978 level.

Table 1. Growth of MVA and industrial sector contribution to GDP, 1973-83  
(at current and constant prices, in millions of TShs.)

Year	MVA		Annual change		Total GDP		Contribution of Industrial sector to total GDP	
	Current Prices	Constant Prices (1966)	Current Price:	Constant Prices (1966)	Current Prices	Constant Prices (1966)	Current Prices	Constant Prices (1966)
1973	1,260	888	+10.1	+4.5	11,489	8,800	11.0	10.1
1974	1,482	900	+17.6	+1.4	14,010	9,020	10.6	10.0
1975	1,774	903	+19.7	+0.3	16,988	9,553	10.4	9.5
1976	2,349	1,063	+32.4	+17.7	20,645	10,163	11.4	10.5
1977	2,777	1,152	+18.3	+8.4	26,569	11,063	10.5	10.4
1978	3,848	1,429	+36.6	+24.0	30,566	11,697	12.6	12.2
1979	3,850	1,259	+0.5	-11.9	32,622	11,694	11.8	10.8
1980	4,077	1,059	+5.0	-15.9	36,296	12,035	11.2	8.8
1981	4,474	865	+8.9	-18.3	40,303	11,719	10.0	7.4
1982	4,507	624	-5.2	-27.9	42,883	11,494	10.0	5.4
1983	4,263	603	-1.0	-3.4	46,341	11,671	9.2	5.2

Source: Bureau of Statistics Tanzania, Annual Economic Surveys.

As noted earlier, the major factor contributing to the decline in industrial output has been the severe shortage of foreign exchange and the connected drastic reduction in the import of industrial inputs. The high import dependence of most industrial branches has meant that import shortages have led to a rapid deceleration in the rate of growth of Tanzanian industry. The crisis has also had an impact on the structure of the manufacturing sector.



Table 2. Production in selected industries, 1977-83

Type of Product	Unit Measures	Capacity Per Year		Actual Production							Percentage Change 1982/83
		1976	1983	1977	1978	1979	1980	1981	1982	1983	
Textiles	Metres 3 (Mill)	90	200	78.9	72.9	85.1	93.1	96.1	86.3	59.7	-30.9
Paints	Litres ('000)	5,035	10,330	3,047	4,682	2,512	1,364	1,474	1,139	713	-37.4
Blankets	Nos. (Mill)	6.0	6.0	0.91	1.06	0.963	0.728	0.71	0.726	0.615	-15.3
Bags	Piece	10.0	10.0	2.4	3.6	4.1	5.3	5.3	5.3	4.8	-9.4
Leather	Ft. 2(Mill)	11.8	32.5	9.8	7.7	15.6	13.0	10.9	10.3	10.2	-1.0
Shoes	Pairs(Mill)	6.0	14.0	7.8	7.9	6.3	5.3	2.4	2.8	2.6	-7.1
Hoes/ploughs	Tons	1,200	3,000	1,110	1,068	1,400	1,940	2,463	1,600	2,761	72.6
Cement	Tons ('000)	340	1,350	247	250.7	299.5	309.0	395.0	334.0	247.0	-26.1
C. I. Sheets	Tons	52,000	43,000	27,506	30,183	29,985	17,322	10,105	16,044	23,330	44.7
Steel (Rolled)	Tons	30,000	30,000	11,912	16,423	17,950	18,414	16,473	12,104	9,116	-25.0
Tyres & Tubes (m/cars)	Nos.	438,000	538,000	399,400	444,454	351,000	432,247	313,523	314,688	393,728	25.1
Beer	Cases	6.3	9.1	5.0	6.5	6.0	5.1	6.2	5.1	5.2	2.2
Cigarettes	Nos.(Bill)	5.9	4.8	4.01	4.3	4.2	4.74	3.9	4.8	3.8	18.2
Chibuku	Litres('000)	21,736	21,736	12,857	15,210	22,094	13,422	14,162	15,644	18,453	18.0
Fertilizers	Tons	105,000	134,000	36,886	44,443	45,384	50,852	69,029	13,662	31,211	128.5
Containers (Metal)	Nos.(Mill)	63.5	196.0	80.1	91.6	52.0	81.4	59.7	80.0	62.0	-3.7
Batteries (Dry cells)	Nos.(Mill)	96.0	96.0	64.7	70.9	79.2	79.2	78.0	73.2	47.4	-35.3

Source: Bank of Tanzania.

The development of the Tanzanian industry has followed the pattern of primary processing and light import substitution. The Arusha Declaration in 1967 laid the basis for a policy of self-reliance.

Currently, consumer goods account for more than half of total MVA. A further grouping of industrial goods shows that in the early seventies non-food products were increasing and food products decreasing. Intermediate goods increased their share by about one-third over 1970-76, while the share of capital goods has remained almost constant at a low level. Moreover, the capital goods sector consists almost solely of assembling.

All sectors, except for intermediate goods, reacted strongly to the oil price shock in 1973/74. The consumer goods sector was doubly affected because of the drought occurring at the same time. The intermediate sector shows a "building-up" trend in the early 1970s, including the establishment of a few larger industries, such as iron, steel and metal products, glass, cement, tyres and fertilizers. With the exception of glass and cement, these industries are highly import dependent and have minimal linkages with domestic resources, neither raw materials nor technology.

Since 1979, the growth of the industrial sector has declined and the structure of value added has changed significantly. The importance of the intermediate goods sector declined in 1980. It accounted for only 27.5 per cent of MVA as compared to 32.8 per cent in 1975. The consumer goods sector accounted for 58.3 per cent of MVA in 1980 as compared to 53.2 per cent in 1975. The impact of the recession has thus been most severe on the intermediate and capital goods sectors.

Appendix Table A-3 shows the changes for some selected goods measured by production quantity. The Table confirms that intermediate industrial branches have suffered much more severely than either the consumer or the heavy industries during the period 1978-82. With the sole exception of cement, production fell significantly in all intermediate branches, whereas gains were recorded in the production of sugar, chibuku, cigarettes, leather, hoes and ploughs and dry battery cells. The greater resilience of the assemblage - 'capital goods' - industries is partly explained by the presence of parastatals within these branches. The parastatals have had easy access to import licenses and have also benefited from a greater availability of

project-linked foreign exchange in these sectors. Some consumer goods branches have also been able to obtain foreign exchange through joint venture arrangements.

Future growth prospects of individual branches depend crucially upon the extent to which they succeed in substituting domestically-produced inputs for imports. Consumer goods industries have shown a relatively high capacity for increasing domestic resource use and they are therefore likely to adjust better to a persistent shortage in foreign exchange.

## 2.2 Performance and productivity

Up to the mid-1970s the manufacturing sector performed quite well. Industrial employment almost doubled. The average growth rate in the labour force was 6.2 per cent during 1970-1980. The sectoral structure of employment in manufacturing remained largely unchanged. The consumer goods employed two-thirds of the industrial labour force and the intermediate goods sector about one-fourth. Increases in wages and salaries mainly occurred in the intermediate goods sector, and particularly in a few branches like sawmilling, iron and steel.

To assess aggregate factor productivity trends in Tanzanian manufacturing is a problem both at the level of the firm and particularly for the manufacturing sector as a whole. Indices of real value added per employee in manufacturing during 1964-78 are shown in Table 3 (column A or B). Due to the wide range of values indicated, it is difficult to draw definitive conclusions. However, a number of more specific points can be made; firstly, whatever the overall trend of labour productivity since 1964 there is a marked decline in all measures since 1973; secondly, measures of labour productivity for the manufacturing sector will obviously be affected by structural changes within the sector. A disaggregated study at the two-digit sectoral level for 1965 to 1972 indicated<sup>1/</sup> that changes of output per worker varied from increases of 869 per cent (Machinery), 289 per cent (Metal Products), 137 per

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<sup>1/</sup> Silva, R., Manufacturing Efficiency in the Tanzanian Economy, University of Dar-es-Salaam, 1975 (mimeo), pp.17-19.

cent (Textiles), 135 per cent (Drinks), through slight declines of 11 per cent (Tobacco and Printing) to significant downward trends of -78 per cent (Footwear), -81 per cent (Rubber) and -90 per cent (Pulp and Paper). Those sectors where productivity increased most also increased their share of total manufacturing value added over the period.

Table 3. Indices of real value added per employee in manufacturing, 1964-78  
(at constant prices)

Year	Survey of industrial production based indices (1966=100)		National accounts and employment and earning based indices (1966=100)	
	A	B	C	D
1964	...	...	95	86
1965	89	100	99	98
1966	100	100	100	100
1967	113	102	104	101
1968	104	98	98	90
1969	110	102	95	85
1970	111	94	93	83
1971	116	104	81	86
1972	121	126	87	90
1973	113	...	85	62
1974	111	...	79	75
1975	96	...	69	76
1976	104	...	72	80
1977	104	...	74	86
1978	...	...	75	...

Source: Bienefeld, M.A., Evaluating Tanzanian Industrial Development, IDS (mimeo), Sussex, 1981, p.8.

Estimates of the trend in capital productivity via the incremental capital-output ratio (ICOR) method seem just as problematic as the measure of labour productivity. A detailed analysis of the question concludes<sup>1/</sup> that,

"When the National Accounts figures are used, along with National Accounts statistics on value added, the evidence for the manufacturing parastatals reveals a roughly constant ICOR between 1969-71 and 1973-75 with highly unstable results for 1967-68 and 1968-70".

However, all other estimates point to a deteriorating ICOR.

<sup>1/</sup> Bienefeld, M.A., Evaluating Tanzanian Industrial Development, IDS (mimeo) Sussex, 1981, p.45.

The World Bank<sup>1/</sup> estimates that the aggregate manufacturing ICOR increased from 3.7 in 1970 to 10.1 in 1976, reflecting the decline in output in both parastatal and private sector manufacturing enterprises. It also illustrates deterioration in the use of capital and capacity utilization. As Table 4 shows, trends in labour productivity have been more ambiguous; a definite decline being evident only after 1979. It is interesting to note that unit labour costs have continued to decline for almost the entire period 1960-1981. Thus the fall in factor productivity is almost entirely attributable to falling output levels. During the 1970s employment growth within the manufacturing sector did not exceed the growth of value added. Since the onset of the crisis, however, MVA has declined much more rapidly than manufacturing employment and a reduction of unit wage costs has not led to a very large reduction in the total wage bill of the manufacturing sector.

Table 4. Employment, value added and labour costs in manufacturing enterprises,<sup>a/</sup> 1966-81

	1966	1976	1977	1978	1979	1980	1981
Value Added (TShs. m)	295	794	861	829	1,062	782	566
Labour Cost (TShs. m)	135	294	291	294	360	307	193
Employment ('000)	30.3	78.1	84.2	96.4	105.8	102.3	101.3
Value Added/ Worker ('000) (Index)	9.7 (100)	10.2 (104)	10.2 (105)	8.6 (88)	10.0 (103)	7.6 (78)	5.6 (57)
Labour Cost/ Worker ('000) (Index)	4.5 (100)	3.8 (84)	3.5 (78)	3.0 (68)	3.4 (76)	3.0 (67)	1.9 (42)

Source: Bureau of Statistics, Economic Surveys.

a/ Establishments with 10 or more employees.

1/ World Bank, Economic Memorandum on Tanzania, January 23, 1981, p.7.

As stated earlier, one explanation for the poor performance of Tanzanian manufacturing is the low (and declining) level of capacity utilization even during the 1970s. Estimates of changes in capacity utilization rates during 1970-82 are presented in Table 5. Only three of the nineteen industrial branches for which data is available recorded increases in utilization rates over this period. The most significant fall in the rate of capacity utilization rates was recorded by intermediate branches. Micro-studies of individual firms also confirm this trend. For example, a study<sup>1/</sup> of capacity utilization in 39 manufacturing firms in 1974 and 1975 found that 80 per cent of the firms sampled suffered from raw material shortages which were caused primarily by an inadequate foreign exchange allocation.

Table 5. Capacity utilization in selected industries, 1976 and 1982

<u>Product</u>	<u>Unit</u>	<u>Capacity</u>		<u>Production</u>		<u>Capacity Utilization (percentage)</u>	
		1976	1982	1976	1982	1976	1982
Textiles	Metres (million)	90.0	200.0	75.0	74.5	83	41
Cement	Tons ('000)	340.0	1,020.0	244.5	368.9	72	28
Beer	Cases (million)	6.3	9.1	5.3	5.1	84	56
Cigarettes	Number (billion)	4.8	5.9	3.7	4.7	77	80
Paints	Litres (million)	5.0	10.3	3.2	1.4	63	13
Fertilizers	Tons ('000)	105.0	134.0	41.6	13.7	40	10
Shoes	Pairs (million)	6.0	14.0	4.0	2.9	67	21
Tyres and tubes	Number ('000)	438.0	538.0	375.0	286.0	86	53
Bicycles	Number ('000)	...	150.0	...	3.7	...	2
Leather	Sq. feet (million)	11.8	32.5	7.8	10.4	66	32
Hoes/ploughs	Tons ('000)	2.0	3.0	1.7	1.6	84	53
Corrugated iron sheets	Number ('000)	52.0	34.0	30.0	16.0	58	47
Blankets	Number (million)	6.0	6.0	0.86	0.73	14	12
Garments	Number (million)	...	1.5	...	0.38	...	25
Dry cell batteries	Number (million)	96.0	96.0	54.8	73.1	57	76
Iron	Tons ('000)	30.0	30.0	12.2	12.8	41	43
Bags	Number (million)	10.0	10.0	3.7	3.5	37	35
Sugar	Tons ('000)	115.0	195.0	...	103.3	...	53
Containers	Number (million)	63.5	196.0	76.7	68.4	121	35

Source: Ministry of Industries.

<sup>1/</sup> Wangu, S.M., The Excess Capacity in Manufacturing Industry, University of Dar-es-Salam, Para 76.2, 1976.

Selected indicators of industrial performance for 1973 and 1974 - two years thought to be fairly representative of the period 1968-1978 - are given in Appendix Table A-5. MVA per employee was highest in the intermediate goods industries - petroleum refineries, iron and steel, rubber, etc. and in units assembling electric machinery and transport equipment. Among the consumer goods industries leather products had a high value of MVA per employee - ranking second in both the 1973 and 1974 lists. In general the correlation between MVA per worker and wages per worker is low; the highest values for the latter are once again among the intermediate goods branches, the exception this time is beverages from the consumer goods group. The same trend is revealed when one looks at the share of value added in gross output but the difference between the performance of consumer and intermediate branches is somewhat narrowed. Tobacco ranks second in both 1973 and 1974 in terms of this indicator and leather products appear in the top five in the 1974 list. Finally, intermediate industries also have significantly higher non-wage value added for employee ratio but the highest value for this indicator is obtained for the leather products branch for both 1973 and 1974. The overall conclusion, therefore, is that the intermediate goods by the mid-1970s were more capital intensive than the consumer goods branches, and rates of return as measured by non-wage value added in the former groups tended to be higher. The major exception was the leather products branch which had the highest non-wage value added per worker and the second highest value added per employee ratio for both the years for which data was available.

Assessing the return on investment presents various problems. Firstly, reliable figures for net profits are difficult to obtain due to the accounting procedures<sup>1/</sup> of a number of parastatals.

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<sup>1/</sup> The Tanzanian Audit Corporation (T.A.C.), which is entrusted under Act No. 1 of 1968 to provide audits for all government parastatals, made the following remarks in its report for the year 1979,

"Approximately 100 parastatals were in arrears in the preparation of their accounts for one year or more...out of 247 accounts of parastatals certified during the year, only 76 accounts got unqualified audit reports, 138 got qualified reports, 15 received negative opinion reports and 18 disclaimer of opinion results".

See Tanzania Audit Corporation, 11th Annual Report, Dar-es-Salaam 1979, pp.10-11.

Secondly, the profits which have been recorded are difficult to assess in terms of an efficiency criterion because many State enterprises enjoy import protection and price control. Moreover, commercial profit may not be the paramount objective of the management.

These points would need to be borne in mind when the figures in Table 6 are reviewed. Between 1967 and 1978 the industrial parastatals generated a surplus (net operating profit, in absolute terms) of approximately TShs. 1,728 million while absorbing TShs. 2,576 million in capital formation. The financial gap between investment and surplus appears to widen significantly from the early 1970s.

Table 6. Fixed capital formation and surplus generation in the industrial parastatal sector, 1967-78  
(TShs. million)

<u>Year</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Fixed Capital Formation	62.2	44.5	59.7	203.2	176.4	128.1	152.2	159.2	202.3	453.0	431.0	504.0
Net Operating Profits	24.2	35.6	55.6	58.0	78.2	132.0	76.1	68.1	191.6	259.7	393.1	356.3

Source: "Analysis of Parastatal Accounts," Economic Survey 1979.

Thus, over the period 1973-83, MVA declined in real terms and value added in manufacturing was actually lower in 1983 than 11 years earlier. Although manufacturing employment almost doubled, the performance of manufacturing enterprises deteriorated and capacity utilization rates fell sharply. The main obstacle experienced was the inability to earn adequate levels of foreign exchange to finance necessary imports.

### 2.3 Manufactured exports and imports

The share of exports in gross manufacturing output declined from 13 per cent in 1977 to just over 7 per cent in 1981. The share of manufacture in total exports has remained at about 16 per cent over the period 1977-82 as shown in Table 7. In 1980 the ratio of manufactures to total exports rose sharply to 28 per cent as a result of barter deals between Tanzania and other



Table 7. Merchandise exports at current prices,<sup>a/</sup> 1970-82 (selected years)

Item	1970	1975	1978	1979	1980	1981	1982
<b>Primary products<sup>b/</sup></b>	<b>1,407.1</b>	<b>2,193.5</b>	<b>3,080.0</b>	<b>3,446.6</b>	<b>3,301.0</b>	<b>4,047.7</b>	<b>3,339.4</b>
<b>Major items</b>	<b>1,095.9</b>	<b>1,850.6</b>	<b>2,620.8</b>	<b>2,835.8</b>	<b>2,508.5</b>	<b>3,419.2</b>	<b>2,860.1</b>
Coffee	316.7	488.4	1,303.3	1,215.5	1,181.3	1,258.1	1,205.7
Tea	42.3	81.4	168.3	164.0	181.9	164.3	170.7
Cotton	251.5	313.4	420.3	492.0	359.2	642.0	509.0
Sisal fiber	179.0	302.4	218.4	257.9	246.3	269.7	213.7
Cashew nuts (Raw)	115.2	176.9	160.9	145.3	60.2	285.6	42.2
Cashew kernels	21.7	44.5	67.9	83.4	125.6	215.3	155.0
Tobacco	59.5	122.7	221.5	148.7	102.7	150.5	170.5
Cloves (Whole)	109.5	320.9	60.2	329.0	251.3	433.7	393.3
<b>Minor items</b>	<b>311.2</b>	<b>342.9</b>	<b>459.2</b>	<b>610.8</b>	<b>792.5</b>	<b>628.5</b>	<b>479.3</b>
Cereals and cereal prep.	23.2	0.2	61.4	200.1	20.5	16.3	1.5
Animal feed	30.9	40.1	39.4	45.2	62.0	101.6	22.6
Meat and meat prep.	36.1	17.4	3.4	1.1	40.3	22.0	1.9
Vegetables	36.2	55.0	98.2	100.4	130.7	118.3	106.2
Sugar and sugar prep.	2.0	56.8	48.3	47.4	51.8	14.7	38.3
Oil seeds and nuts	37.0	23.6	50.8	37.1	40.8	27.1	7.4
Hides, skins and fur	29.0	44.3	18.4	40.9	36.7	22.2	18.6
Other	116.8	105.5	135.8	138.6	409.7	306.3	282.8
<b>Manufactured products<sup>c/</sup></b>	<b>429.1</b>	<b>543.1</b>	<b>568.7</b>	<b>981.5</b>	<b>1,334.5</b>	<b>658.1</b>	<b>693.7</b>
<b>Major items</b>	<b>299.2</b>	<b>405.1</b>	<b>441.2</b>	<b>703.7</b>	<b>734.0</b>	<b>473.9</b>	<b>517.6</b>
Sisal cordage and twine	26.7	87.8	115.5	219.0	230.7	90.2	117.5
Petroleum products	111.5	139.3	82.8	136.5	204.1	129.6	189.6
Diamonds <sup>d/</sup>	161.0	178.0	242.9	348.2	298.6	254.1	210.5
<b>Minor items</b>	<b>129.9</b>	<b>138.0</b>	<b>127.5</b>	<b>277.8</b>	<b>600.5</b>	<b>184.2</b>	<b>176.1</b>
Wattle extract	7.5	20.9	23.5	27.8	30.5	16.1	7.0
Textiles and clothing	16.1	19.3	14.1	104.3	138.5	30.2	20.9
Leather and footwear	5.6	1.4	0.7	1.2	1.9	1.7	.
Batteries	4.4	5.0	11.3	.	20.0	28.8	32.4
Other	96.3	91.4	77.9	144.5	409.6	107.4	115.8
<b>Total Exports</b>	<b>1,836.2</b>	<b>2,736.6</b>	<b>3,648.7</b>	<b>4,428.1</b>	<b>4,635.5</b>	<b>4,705.8</b>	<b>4,033.1</b>
<b>Re-Exports<sup>e/</sup></b>	<b>15.6</b>	<b>53.5</b>	<b>39.0</b>	<b>91.4</b>	<b>87.6</b>	<b>99.7</b>	<b>111.8</b>
<b>Total Exports and Re-Exports</b>	<b>1,851.8</b>	<b>2,790.1</b>	<b>3,687.7</b>	<b>4,519.5</b>	<b>4,723.1</b>	<b>4,805.5</b>	<b>4,144.9</b>

Sources: Customs and Excise Department, Annual Trade Report; Bank of Tanzania.

a/ Data cover mainland and Zanzibar, and include exports to each.

b/ SITC categories 0 to 2.

c/ SITC categories 3 to 9.

d/ From 1976, data are based on value of London sales.

e/ Excludes crude petroleum.

African countries. Rates of growth of primary and manufactured imports have been broadly similar in recent years.

Export support is provided to producers in the form of import duty rebates and credit facilities. Preferential access is accorded to exporters to part of their foreign exchange earnings. In February 1986 the Government announced a series of export incentives. Exports are divided into three categories under the new scheme. Category A covers traditional exports including coffee, cotton, lint, sisal fibre, tea, raw tobacco, cashews, diamonds, organized gold and cloves. Exporters of Category B are now allowed to retain 50 per cent of foreign exchange earnings as against 10-15 per cent foreign exchange retention allowed until February 1986. Category B comprises non-traditional industrial products including textiles, chemicals, timber, pulp and paper products, metal and leather products, and canned foods. Category C consists of products of semi-manufacturing or processing capacities. The major thrust of the new incentives is to link foreign exchange retention to a recently expanded list of goods available for import which would boost utilization of domestic industrial capacity back-up to 70-80 per cent.

Coffee is now the biggest single export item accounting for 30 per cent of export earnings. Cotton products, non-metallic mineral manufactures and tea are the main manufacturing exports. Textile exports declined sharply during the recessionary period (see Appendix Table A-6).

During the 1970s manufactured imports tended to grow more rapidly than manufactured exports. Although the rate of growth has slackened somewhat since 1978, manufactures still account for about 65 per cent of total import expenditure. In 1970, the share had been as high as 80 per cent. Machinery and transport equipment take up almost 40 per cent of total manufactured imports. During 1970-1978 their share had been 50 per cent. Other major imports are petroleum products, various chemicals and food.

The main trading partners are the developed market economy countries. In 1983 they bought 74 per cent of Tanzanian exports and supplied over 80 per cent of her imports. The EEC accounts for 60 per cent of exports and

two-thirds of imports. Developments of Tanzanian manufactured exports depend crucially on the European market and agreements with the EEC Governments.

#### 2.4 Investment, ownership, size structure and geographical distribution

Whereas manufacturing production slowed down, investment continued to grow throughout the 1970s. The manufacturing sector's share of national investment was more than three times higher than its share of GDP during the 1970s. The primary aim was to achieve a higher share of manufacturing in GDP and to generate employment opportunities. Parastatal investment expanded during 1980-82 but there was a sharp contraction of private sector manufacturing investment during this period.

The continued expansion of parastatal investment during the crisis period is largely due to the availability of project-linked foreign aid. Thus, production capacity has continued to expand while existing capacity was facing increasing constraints. The continued growth of parastatal investment increased the share of the public sector within Tanzanian industry.

At the time of independence (1966), most of the industrial units were privately owned. The newly independent Government adopted an industrial strategy based on encouraging private investors, particularly the African entrepreneur, to produce goods for the home market. In the First Five-Year Plan it was envisaged that 75 per cent of total industrial investment was to be financed by the private sector. However, private investments did not increase as planned.

With the adoption of the Arusha Declaration in 1967, ownership of major industrial units was shifted to the public sector. A number of enterprises were nationalized either entirely or to 60 per cent State ownership, and new public-owned industries were established. Although emphasis on industrial development was now placed on public investment, it was still recognized that the private industrial sector had a beneficial role to play. Investment in national industries, i.e., large- and medium-scale industries, should be controlled by the State, but private foreign investment would be permitted in certain sectors, though only on the basis of joint ventures with a State

enterprise. The foreign investors should mainly supply technology and management, while the financial resources mainly should be local.

Public enterprises are organized under manufacturing holding companies in so-called parastatals, which are defined as "commercial enterprises owned by the Government or with majority Government participation and run on commercial principles and whose accounts are not directly integrated with the government budget". Each holding corporation is responsible to a parent ministry and supervises a number of subsidiary companies. Usually these subsidiaries are the producing units. A list of major current holding corporations is given below:

Manufacturing holding corporations in Tanzania:

- National Development Corporation (NDC) (metal and engineering)\*
- National Chemicals Industries (NCI)\*
- State Motor Corporation, (motor vehicle assembly)\*
- Tanzania Cigarette Company Ltd. (TCC)\*
- Tanzania Textile Corporation (TEXCO)\*
- Saruji Corporation, (cement and related non-metallic building materials)\*
- Tanzania Karatasi Associated Industries, (paper and paper products, publishing and printing)\*
- Tanzania Leather Associated Industries\*
- Tanzania Breweries Ltd\*
- National Chemicals Industries (NCI)
- National Milling Corporation (Ministry of Agriculture), (food manufacturing)
- Sugar Development Corporation (Ministry of Agriculture), (plantation and processing)
- Tanzania Petroleum Development Corporation (TPDC) (Water and Energy Ministry)
- Tanzania Wood Industries Corporation (TWICO) (Natural Resources and Tourism Ministry).

This organizational structure of the parastatals has created various major problems for the coordination of industrial planning. Changes have been made in the managerial/administrative systems by, among other things, issuing guidelines to parastatals defining the concepts of responsibility and authority and by simplified planning in parastatals.

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\* Under the Ministry of Industry.

In spite of the great emphasis on public ownership, and its subsequent increased production capacity and increasing share of MVA, the private sector accounts for almost two-thirds of MVA in 1979 (see Table 8). In 1974, a peak year, they accounted for 50 per cent of manufacturing exports.

Table 8. Value added in parastatal and private manufacturing enterprises, 1966-79 (selected years)  
(percentage)

	1966	1970	1976	1979	Growth rates 1966 - 1979 (annual average)
Total manufacturing	100	100	100	100	4.9
Parastatal manufacturing	5	25.6	37.4	31.0	20.8
Private manufacturing	95	74.4	62.6	69.0	2.4

Source: World Bank, Economic Memorandum on Tanzania, Report No. 3086-TA, 23 January 1981.

Note: This source also gives a more detailed description of performance, organization and control of the parastatals.

The dominance of public industrial enterprises varies from one sector to another. Among the metal-based industries, the public industrial enterprises are most predominant in the iron and steel industry, which is entirely public. While the public enterprises dominate the manufacture of metal construction materials (except nails), metal containers, farm implements, spares and components, the private sector enterprises dominate in the manufacture of household metal products, assembly of electrical equipment and apparatus and motor vehicle bodies. In the chemical sector, public industries dominate the manufacture of tyres, fertilizers and pharmaceuticals. The private sector controls the manufacture of plastics, mosquito coils, pesticides, paints, soap and cosmetics and glass. Of the paper-based industrial output 74 per cent comes from the public sector. Cement production is a wholly public industry. The textile sector is predominantly a public activity (83 per cent) with a few large enterprises, while there are a lot of small private textile enterprises. Also the leather industry is dominated by the public sector.

One area in which private enterprise is particularly encouraged is the small-scale sector. There is some evidence that the decline in medium- and large-scale enterprises in the late 1970s has been partly offset by increased production at the small-scale level.

Table 9. Small-scale industry in Tanzania, 1977/78 and 1980

	Number of establishments <sup>a/</sup>	Number of persons employed	Value added (TShs. million)
1977/78	4,000	52,000	850
1980	5,000	69,000	900

Source: Small Industries Development Organization, Summary of the Third Five-Year Plan for Development of Small-scale Industries in Tanzania, 1980, p.3.

<sup>a/</sup> Around 2,000 crafts-based artisan enterprises, especially in handicrafts sector, are not included.

Out of the 5,000 units of small industries, approximately 2,000 are situated in Dar-es-Salaam and a great portion of the rest are concentrated in the northern and coastal industrial zones. The distribution of small-scale industries has been affected by urbanization and large-scale industrialization, general developments in the agrarian economy, proximity to rail and road transport, and availability of raw materials.

There are major constraints to the development of small-scale industry. One is financial assistance to small enterprises, since neither the Bank of Commerce nor the Tanzanian Rural Development Bank has a policy of providing loans to small rural enterprises. To cope with this problem, a Small-scale Industries Section was established in 1981 within the Tanzanian National Bank to extend loans to entrepreneurs for industrial ventures (up to 85 per cent of the total costs for viable projects).

Another constraint is the structural organization of registered units. According to the law, assistance can only be provided by the Small Industries Development Organisation (SIDO) to a co-operative unit, which will often comprise a number of persons. Thus many individuals must agree on the start-up of a new small enterprise which can be time-consuming. A re-establishment of regional co-operative unions is forthcoming. Guidelines

and codes of conduct for the unions with regard to scope of operation, management system, funding and their relationships with existing organizations have been set up. SIDO also has an institution for small-scale management under preparation. An expansion of the small-scale industries would lead to a better regional distribution of manufacturing investment in Tanzania.

For industrial decentralization purposes Tanzania has been divided into six industrial zones, with priority given to the development of the Lake, Central, South Western and South Eastern zones (see map in Appendix D).

The bulk of industrial activity in Tanzania is still concentrated in and around Dar-es-Salaam (see Appendix Table A-10), including most of the private sector industries, with the major companies located between the airport and the harbour and railway station (the Pugo Road industrial area). A rapid achievement of the regional diversification target is essential for increasing the domestic linkages of Tanzanian industry.

## 2.5 Summary

The Tanzanian manufacturing sector grew at a moderate rate during the 1970s. Until 1976 the capital goods sector grew more rapidly than consumer goods due mainly to government investment and policy support. Despite a series of policy reforms introduced by the Government, economic performance was not outstanding. Factor productivity did not increase significantly. Import dependence increased. Management inefficiencies were a common constraint. Linkages with the domestic economy remained small. Nevertheless, manufactured exports grew more rapidly than the export of traditional products.

The recession which began in the late 1970s disrupted development in the Tanzanian manufacturing sector. Negative growth rates have been recorded in terms of both value added and output in each of the last four years. Capacity utilization has been reduced to about 30 per cent. Export volumes have stagnated. The most severely affected has been the intermediate goods sector which has been heavily dependent on government support and on imports.

The single most important constraint on industrial development has been the high import dependence of Tanzanian manufacturing units, both public and private. This is particularly true for the aluminium, steel rolling and metal products branches. In industrial rehabilitation and restructuring the redeployment of capital and manpower from branches with high foreign exchange costs to industries with strong linkages with the domestic economy would be an important policy. This implies a significant change in the output mix of Tanzanian manufacturing - firms would be induced to produce more agricultural processed goods, less steel and aluminium. The new industrial strategy of the Tanzanian Government reflects such development policies.

The rehabilitation of the manufacturing sector is expected to attempt at increasing domestic linkages and efficiency on the one hand and its export performance on the other. The Government's revised industrial development strategy incorporated in the Structural Adjustment Programme aims at providing a suitable policy framework for this task.



3. INDUSTRIAL DEVELOPMENT STRATEGIES, POLICIES, PLANS AND INSTITUTIONS

3.1 Principles, objectives and targets

The overall development strategy of Tanzania is based on the Arusha Declaration adopted in 1967 emphasizing self-reliance, equality, and public ownership of industrial capital. Increased emphasis is being placed on the development of domestic resource-based industries.

The industrial strategy has been further elaborated in the Third Five-Year Plan which included a strategy for long-term industrial development (1975-2000): the so-called Basic Industry Strategy. The Fourth Plan for 1981-86 aimed at an annual overall growth rate of 6 per cent. Total investment was to be TShs. 40.2 billion. The largest share (25.2 per cent) was allocated to industry. The National Economic Survival Plan and the Structural Adjustment Programme which took effect in 1982 (see section 3.2) superseded the Fourth Plan.

The long-term industrial development strategy aims at:

- achieving a growth rate for the industrial sector at two times that of agriculture during 1975-2000;
- increasing MVA from TShs. 1,266 million (1974) to TShs. 8,216 million in 1995 - a real annual growth of about 9.8 per cent over 20 years;
- producing goods for the basic needs of Tanzanians, including clothes, building materials, food and basic services like health, water and education;
- establishing engineering and metal working industries to manufacture implements, machines, components and spares so as to increase self-reliance and expand the domestic market for metal products;
- establishing heavy industries, especially chemical industries and iron and steel;
- establishing small- and medium-scale industries in regions, districts and villages with the objective of locating production of basic goods closer to the people and at the same time distribute industries more equitably in the regions and zones of the country;
- expanding industries that process agricultural products and that produce exportable commodities;

- accelerating the growth of domestic resource-based industries instead of depending on imported ones;
- improving scientific, technical and technological skills by expanding training of industrial labour-force and by establishing various industrial technology centres;
- increasing technical and industrial co-operation with friendly neighbouring countries and international institutions with the objective of strengthening the industrial sector.

The Long Term Industry Strategy emphasizes the small-scale sector, but the protection of small-scale industrial production will only be given to the extent to which small-scale techniques can compete reasonably well in price and quality with large-scale technologies.

Although the criteria for the choice of techniques within sectors are supposed to give priority to increasing industrial growth, employment creation and regional dispersion, the efficiency of the technology will also tend to be a dominant factor in the choice.

A similar economic consideration is likely to direct the use of local raw materials, which will normally be given preference but limited to a specified percentage (30 per cent) above the cost of imported raw materials.

### 3.2 Recent policy trends

Events since 1978 have overtaken the strategy outlined in the Third and Fourth Five-Year Plans. The growing crisis in the Tanzanian economy induced the Government to adopt the wide-ranging Structural Adjustment Programme (SAP) in June 1982 for the period 1982-1985.

The economic strategy outlined in the Structural Adjustment Programme continues to provide the most detailed statement of the Government's intentions to deal with the current economic crisis. Despite the fact that the three-year period (1982-85) for which SAP was originally devised has lapsed, the major features of policy outlined by this programme continued to determine the priorities and attitudes of the Tanzanian Government. SAP incorporates detailed proposals for revitalizing the industrial sector. These are summarized below.

The objectives of the industrial sector component of the Structural Adjustment Programmes were to:

- (a) increase the supply to the domestic market of basic consumer goods for the urban and rural sector, inputs for agriculture and goods to encourage cash crops production;
- (b) reduce the import content of industrial production;
- (c) generate a much higher level of industrial exports;
- (d) minimize demands on the balance of payments for the expansion of industrial capacity; and
- (e) maximize revenue generating potential from new production units.

Priority in the allocation of foreign exchange to industry will be accorded to:

- (a) the supply of certain basic amenity goods, the scarcity of which has particularly demoralizing effects on the public - for example, soap and cooking oil;
- (b) ensuring a reasonable flow of incentive goods such as bicycles, radios, etc. to stimulate, inter alia, production;
- (c) inputs for agriculture - for example, agro-chemicals, tools and equipment;
- (d) the production of goods generating high sales and excise tax revenues - for example, beer and cigarettes; and
- (e) the production of goods for exports.

Foreign exchange allocations will be made to ensure capacity utilization of the most efficient plants producing priority goods for the domestic market and/or goods for export. The over-riding criteria for measuring efficiency will be:

- (a) for the domestic market - the foreign exchange cost per unit of output compared to the cost of imports; and
- (b) for the export market - net foreign earnings.

Industries with surplus capacity or plants producing low priority goods will be closed down.

The achievement of full capacity in plants identified for rehabilitation will require the provision of imported replacement or additional machinery and equipment, spare parts, as well as imported materials and additional locally produced materials.

A review by the Ministry of Industries is periodically undertaken to identify those requirements on an annual, plant by plant and industry basis. It is anticipated that foreign exchange will be available to meet these requirements through general import support under SAP. It is also intended to develop policy rehabilitation packages containing requirements for larger plants or for particular industries such as textiles. Such plant or industry rehabilitation packages would be the basis for negotiating specific rehabilitation projects supported by individual donors.

The export promotion component of the industrial sector programme will attempt to double industrial exports over the three-year period. Detailed assessments are also to be undertaken of the foreign exchange costs of production of specific firms and of markets and prices for potential export goods including cement, textiles, clothing and certain food products. Particular attention will be given to the feasibility of shifting plants entirely to export production (for example, Tanga cement to the Middle East and Indian market), which will facilitate provision of necessary foreign exchange and financial support packages.

A more effective set of policy instruments was to be prepared to provide incentives for facilitating industrial export promotion. The most important single objective was to streamline and consolidate procedures, controls and incentives currently under the responsibility of a number of government agencies.

The Board of External Trade (BET) - a parastatal under the Ministries of Trade and Industries - was to be given overall responsibility for export promotion activities. BET was to provide a "one stop" service to exporters through a single government office for information, licences, incentives, subsidies, rebates, etc.

The Industrial Sector Programme was to give priority to the rehabilitation of existing capacity and a number of projects planned for implementation in the immediate future were postponed or cancelled. Exception was to be made only for projects which would break bottlenecks to enable support expansion in the utilization of existing industrial capacity, or which will generate an immediate expansion in net foreign exchange earnings.

External support was sought for the development of:

- Industry/plant rehabilitation packages in textiles;
- Industrial innovation scheme; and
- The Board of External Trade.

As noted in section 1.1 of this Review, the first two years of SAP have been particularly difficult ones. MVA growth has not been positive. Manufacturing exports have stagnated and capacity utilization remains very low. Over the period 1979-82 textile production declined by 21 per cent, beer by 24.4 per cent, canned meat by 56 per cent, iron sheets by 47 per cent, fertilizers by 69 per cent. The Government's intention of establishing local resource-based industries - such as coal, iron and paper - remains unchanged. The TShs. 2 billion pulp and paper plant at Mujundi has started production and the authorities are also going ahead with the ammonia and urea plant at Kilwa which will be based on local natural gas. The Mgala glass factory began production in 1985 and the Tanite cashew nut factory has been rehabilitated. The Small Industries Development Organization has substantially increased its production of farm tools.

The restructuring of the steel industry, however, poses many problems. The proposed 300,000-tons-a-year steel plant in the Iringa region has been delayed. The Friendship Textile Mill which had to lay off almost 15 per cent of its total work force in February 1984 still faces acute shortages of raw cotton and water. The Kilimanjaro Textile Mill has faced serious water shortages. Water and raw material shortages also affect the chemical industry. Spare part shortages are severe for the cement and rubber industry.

Major new industrial projects include the construction of a 30,000 tons per-year Bitumen plant near the Dar-es-Salaam refinery, the establishment of a

polyester textile factory in Morogora which started production in October 1985, the launching of a joint project for the reconditioning of land rover trucks and the commissioning of a new razor blade plant at Dar-es-Salaam. Italian, German and British firms are associated with these projects. Raw material bottlenecks restricting industrial production have been eased due to grants from the Swedish and the Canadian Governments. Spare parts have also been provided by The People's Republic of China for increasing production at the Textile Friendship Mill. Other textile plants, however, are still experiencing difficulties.

Tanzania finds it easier to attract foreign finance for new projects - for this involves the winning of lucrative orders by firms in the donor countries. Obtaining balance-of-payments support has proved more difficult and hence rehabilitation and revitalizing of the traditional industries - cigarettes, meat canning, brewing and cashew nut shelling is proving more difficult.

SAP has recognized that increasing both domestic and foreign investment in Tanzanian industry requires extensive development in the institutional framework determining industrial policy formulation and implementation in Tanzania. The next section describes the structure of industrial policy making in Tanzania.

### 3.3 Institutional framework for industrial development

SAP envisaged a growth in the institutional infrastructure supporting Tanzanian industry. In addition to the parastatal manufacturing holding companies dealing directly with production, a number of other institutions have been set up to support manufacturing in the fields of industrial promotion, consultancy, training, research and development and finance.

The most important institutions for manufacturing are listed below and grouped according to promotion, research and finance.

Table 10. Institutions for industrial development in Tanzania

INSTITUTIONS CONCERNED WITH PROMOTION, CONSULTANCY AND TRAINING	INSTITUTIONS CONCERNED WITH RESEARCH AND DEVELOPMENT	INSTITUTIONS CONCERNED WITH FINANCE
<p>- <u>Small Industries Development Organization (SIDO)</u>, established under Ministry of Industry: planning and promoting development of small-scale industries, particularly important are SIDOs establishing of industrial estates and training centres.</p>	<p>- <u>Tanzania Industrial Research and Development Organization (TIRDO)</u>, established in 1979 under Ministry of Industry with assistance from UNIDO: agency for industrial research and development of industrial technology with laboratory and workshop facilities.</p>	<p>Loans for fixed capital investment (first three banks are wholly owned by Government under Ministry of Finance and Planning)</p> <p>- <u>Tanzania Investment Bank (TIB)</u>: providing development finance for all productive sectors, and supporting both new ventures and the rehabilitation of existing industries, including resources required for productivity measure, training, etc.</p>
<p>- <u>Department of Private Sector Monitoring</u>, established in 1961 under Ministry of Planning and Economic Affairs: analysing performance of private sector and planning guidelines for the sector.</p>	<p>- <u>Institute for Production Innovation (IPI)</u>, established in 1979 as a department of the University: dealing with applied research and prototype construction of appropriate machinery and offering consultancy to local industry.</p>	<p>- <u>Tanzania Rural Development Bank (TRDB)</u>: providing finance for the rural sector including the participation in financing small industries and other industrial and commercial projects on a regional or district level.</p>
<p>- <u>Tanzania Industrial Studies and Consulting Organization (TISCO)</u>, established in 1977 under Ministry of Industry: Multidisciplinary consulting organization concentrating on industrial development.</p>	<p>- <u>National Institute of Productivity (NIP)</u>, established in 1974 under Ministry of Labour and Social Welfare: publishing materials, conducting courses to improve productivity and efficiency, studying techniques for minimization of industrial manpower problems in Tanzania.</p>	<p>- <u>Tanzania Housing Bank (THB)</u>: financing office and commercial buildings for example shops and godowns.</p>
<p>- <u>Metals and Engineering Industrial Development Association (MEIDA)</u>, started in 1979 with support from the Swedish Federation of Metal Engineering Industries and Works along the same lines as a supporting institution for the branch. Identifies current problems of the</p>	<p>- <u>Bureau of Resources Assessment and Land Use Planning (BRALUP)</u>, established in 1967 in</p>	<p>- <u>Tanzania Development Finance Co. Ltd. (IDFL)</u> (30 per cent government share, rest by foreign organizations): acting as a project promoter both in terms of</p>

INSTITUTIONS CONCERNED WITH PROMOTION, CONSUL- TANCY AND TRAINING	INSTITUTIONS CONCERNED WITH RESEARCH AND DEVELOPMENT	INSTITUTIONS CONCERNED WITH FINANCE
<p>quality of industrial goods and promotes the standardization of industrial products.</p> <p>- <u>National Productivity Council (NPC)</u>, established under Ministry of Industry: to supervise implementation of the national policy on productivity, incomes, wages and prices; devise methods of establishing production targets and efficiency standards, advise the Government on implementation of policy and forms of motivation of workers.</p> <p>- <u>Industrial Promotion Services Tanzania LTD (IPS)</u>, established 1963 to stimulate industrial activity in the country: Acting as promoter, developer, financial partner, co-ordinator, consultant or management resource, depending on circumstances. Initiating and promoting new projects and assisting in the management of existing ones. Carrying out feasibility studies, arranging, financing and taking a minority equity share itself.</p>	<p>relation to University of Dar-es-Salaam interdisciplinary studies.</p> <p>- <u>The Tanzania Bureau of Standards (TBS)</u>, established in 1975: determining specifications for the quality of industrial goods and promoting the standardization of industrial products.</p> <p>- <u>Tanzanian Agricultural Machinery Testing Unit (TAMTU)</u> under Ministry of Industry: Testing, modifying and designing prototype machinery and equipment.</p>	<p>risk capital and through loan finance for medium and relatively large-scale industries.</p> <p>Short-term loans for working capital:</p> <p>- <u>National Bank of Commerce (NBC)</u>: commercial banking functions including small-scale Industries Section.</p> <p>- <u>National Insurance Corporation (NIC)</u> and <u>National Provident Fund (NPF)</u>: providing insurance, retirement benefits to the public, and investing largely in government stocks, occasionally NIC participates in projects through equity contribution.</p>
	<p>INSTITUTIONS CONCERNED WITH WORKERS</p>	
	<p><u>JUWATA</u>, the workers' organization, field branch at every working place employing 10 or more union members.</p>	

Note: A detailed list with addresses of Ministries and other relevant institutions is contained in: A Manual for Investors in Tanzania, published by TNCO, 1980.



Recent changes in the institutional infrastructure for industry contained in the structural adjustment programme include:

- (1) The establishment of a Committee including members of the SAP Secretariat, the Tanzanian Industrial Studies and Consulting Organization, and the Tanzanian Investment Bank within the Ministry of Industry to identify foreign exchange priorities;
- (2) The strengthening of the Board of External Trade marking it a "one stop" service point for exporters;
- (3) The establishment of a Committee consisting of officials from the Ministry of Trade and Industry, the SAP secretariat, the Central Bank and BET to recommend action for the creation of an Industrial Export Development Credit Scheme or a Revolving Export Fund;
- (4) The granting of greater discretion to public enterprise managers;
- (5) Extension of the power of the Permanent Labour Tribunal to determine wage and bonus increases;
- (6) The preparation of an emergency programme for improving bookkeeping by the National Milling Corporation;
- (7) The issuing of annual budget guidelines by the Treasury for each parastatal and the integration of the budgets of the parastatals with the annual national budget formulation and security procedures; and
- (8) The review of performance relative to budget on a quarterly basis.

During the course of the last two years, efforts have been made to implement these policy changes. The deteriorating international situation has prevented an improvement of industrial performance and an adequate utilization of the natural resources base for the restructuring and development of Tanzanian industry.

4. RESOURCES FOR INDUSTRIAL DEVELOPMENT

4.1 Raw materials

Available land encompasses 65 per cent of the total area in Tanzania. However, at present only 8 per cent is under cultivation. It is planned to increase this to 10 per cent by 1995. Table 11 presents trends in cash crop production over the period 1979-84.

Table 11. Cash crops by volume, 1979/80 - 1983/84  
(thousands of tons)

	1979/80	1980/81	1981/82	1982/83	1983/84 <sup>a/</sup>	<u>1983/84</u> 1979/80 (per cent)
Sisal	86	74	61	61	45	52.3
Coffee	48	67	56	54	56	116.6
Cotton	180	175	134	128	135	75.0
Tobacco	17	17	16	14	12	70.5
Pyrethrum	1.6	2.0	1.9	1.6	1.6	100.0
Tea	17	16	16	18	20	117.6
Cashew nuts	57	34	44	32	34	59.6
Sugar	128	124	119	154	...	120.3 <sup>b/</sup>

Source: The Economist Intelligence Unit, Tanzania, Mozambique, Annual Supplement 1985, p.11.

<sup>a/</sup> Estimates.

<sup>b/</sup> 1982/83 divided by 1979/80.

An overview of the utilization of and potentials for each crop is provided below:

Cotton

The production of cotton which increased considerably in the 1960s as a result of expanded acreage, stagnated in the 1970s in spite of rising producer prices. In the first half of the 1970s annual production was over 200,000 tons (350,000 bales), but the second half has seen a drop to an average of just over 170,000 tons. Exports have halved. Decline in production has

continued during the first half of the 1980s. Shortage of labour, repeated cultivation on the same plots without adequate application of acidity, limitations on research and extension capacities and erratic climate conditions are some of the major problems affecting cotton production.

#### Sisal

Production of sisal has declined from 200,000 tons in 1964/65 to only 45,000 tons in 1984. In the 1960s the decline was due mainly to the collapse of the world (export) price. Consequently most producers either abandoned their farms or opted for the cultivation of other crops and most of the labour force was laid off. When prices began to improve in the 1970s production could not be increased automatically because of an acute shortage of the labour force, especially sisal cutters. Sisal, being a perennial crop, takes a long time (at least 5 years) to grow. A revival of the sisal output would also require significant infrastructural investment. The international market has remained depressed and output levels have continued to fall during the 1980s.

#### Sugar

Production of sugar remained fairly constant in the 1970s. This has not been enough to satisfy the growing domestic market. There was a recovery in the early 1980s but bad weather and production bottlenecks at the sugar factories have led to a fall in output during both 1984 and 1985/86. A number of reasons, especially an inadequate supply of sugarcane, on a continuous basis, machine breakdowns and transport problems of sugar from the mills to the distribution centres, have resulted in under-utilization of capacity of the sugar mills. International sugar prices have plummeted due to the breakdown of the International Sugar Agreement in 1985.

#### Coffee

The peak production of coffee was recorded in 1980/81 when 67,000 tons were produced. Since then production has fluctuated around 55,000 tons. With an adequate supply of fertilizers, farm machinery and equipment, proper

control of pests, diseases, and an adequate transport and marketing system, it is believed by the Tanzania Coffee Authority that coffee production could be doubled. Besides, production could be increased if new areas which are suitable for growing the crop were exploited, particularly in Morogoro, Mara and West Lake Regions. Increase in producers' prices seem to have a positive impact on coffee production. However, international developments have been very minimal. World price for Tanzanian coffee has fallen by more than 40 per cent during the present financial year according to government estimate, and the International Coffee Organization has reduced Tanzania's quota from 766,901 bags in 1984/85 to 726,000 bags in 1985/86 - a fall of almost 6 per cent.

#### Tea

Production of tea increased from 9,000 tons in 1970/71 to 20,000 tons in 1984/85. Production increase was mainly due to the expansion of planted hecterage, thanks to the World Bank (IDA Credit) small-holder tea development projects under which producers were provided with establishment credit in the form of planting materials and fertilizers through the Tanzania Rural Development Bank. Inadequate transport facilities to the mountainous areas where tea is grown and frequent breakdowns of the processing factories are the major problems facing the tea industry in the country. Green leaf must be carried daily and promptly from the collection centres at which producers sell their tea to the processing plant and must be processed as soon as possible or else the leaves wilt and are lost.

#### Cashew nuts

Production of cashew nuts dropped drastically from 145,000 tons in 1973/74 to the recent levels of around 34,000 tons. The slackening of crop husbandry practices, particularly weeding, is believed to be the most important contributor to this downward trend in production. Poor price is another contributing factor. Producers' prices have been raised and a cashew nut rehabilitation programme involving a modernization of the twelve cashew nut factories is envisaged but its activation is conditional on revival of cashew nut production.

### Pyrethrum

Production of this crop fell from about 4,000 tons in the early 1970s to 1,600 in 1984/85. The main reason given by the Pyrethrum Development Board for the decline is that, due to the opening of the Uhuru Railway Lines along the major producing areas, the farmers have become increasingly aware of more profitable and less tedious crop production alternatives.

### Tobacco

Production of tobacco wet leaves has declined from 18,000 tons in 1974/75 to about 12,000 tons currently. Exports have all dropped steadily. In spite of increases in prices and adequate supply of fertilizers the production decline has continued. This may be due to poor extension and fertilizer credit supervision leading to some of the fertilizers not being used or misused or applied to other crops such as maize.

### Other food crops

Like the cash crops, other food crops output has not responded vigorously to the increase in producer prices. The country remains dependent on a high level of cereal imports.

### Livestock

Tanzania has abundant livestock resources and ranks among the three most important exporters of cattle hides in Africa and among the four principal exporters of goat skins. Leather goods factories for production of shoes, handbags, etc. have recently been constructed and may be able to improve performance in the livestock industry, which has been disappointing recently.

### Fishing

Fishing possibilities in Lake Tanganyika are relatively under utilized, but efforts (with FAO and UNDP) are being made to increase the activities in this sector.

### Forests

Of the total land area, 43 per cent is covered by forests, but the largest part is not exploited commercially. The wood processing industry is dominated by saw milling with a total installed capacity estimated at 250,000 cubic metres, of which a little less than half is under the State-owned Tanzania Wood Industries Company (TWICO). The wood industry faces a number of problems such as old and worn-out machinery, lack of proper specification of production machinery and equipment, low efficiency of operation due to inadequate log supply mainly because of transport problems, lack of spare parts, poor quality of products and difficulties in finding markets on a continuous sales basis.

### Mining

Currently mining accounts for about 0.5 per cent of GDP. The Government's mining policy is to give priority to:

- a) minerals used by the local industries, like limestone, clays and sands;
- b) foreign exchange earners or savers like diamonds, gold and coal as fuel substitute for oil; and
- c) mineral industries with linkage possibilities like iron, chemical industries and coal.

Mineral sales by volume are shown in Table 12. A brief description of current mining projects and a listing of known mineral reserves are provided in Appendix Table A-12. The production of diamonds has declined significantly in recent years. Gold production on the other hand has revived and a new mine started production in 1985. Salt and tin production has also increased. Attempts at increasing the utilization of phosphate, iron ore and uranium deposits are also under way.

#### 4.2 Energy resources

The principal energy source is wood, accounting for over 90 per cent of total consumption. Total coal reserves are estimated at 360 million tons.

The Government plans to expand production to about 170,000 tons per annum (current coal production is about 12,000 tons).

Table 12. Mineral sales by volume, 1976-82<sup>a/</sup>

		1976	1977	1978	1979	1980	1981	1982
Diamonds	('000 grams)	87.6	81.5	58.6	64.6	49.9	98.4	47.3
Gold	('000 grams)	0.3	...	...	8.9	7.6	...	11.4
Gemstones	('000 grams)	3,543	713	94	1,211	3,052	19.5	...
Salt	('000 tons)	57	33	33	37	33	30.5	29.2
Lime	(tons)					3,953	129	993

Source: Bureau of Statistics.

a/ For a detailed listing, see Minerals Yearbook.

Small reserves of oil and natural gas have been discovered on Kilwa Island and at Kimji. The Dar-es-Salaam has a capacity of 750,000 tons per annum and is currently working at about a capacity utilization rate of 66 per cent. Import of crude oil was reduced by about 50 per cent in value from 1980 to 1981 by the institution of strict petroleum rationing - in 1982 energy imports were once again allowed to increase.

Total electricity generated has increased by 38 per cent over the period 1977-83. Further major developments in the pipeline are expected to significantly increase the local supply of electricity.

#### 4.3 Financial resources

Investment in industry increased from 15.4 per cent of total investment to 24 per cent in the Third Five-Year Plan which was to cover the period 1977-81. Allocation to industry was increased to 25 per cent of total investment in the Fourth Plan (1981-86). Total industrial investment amounted

to TShs. 10 billion. The continuing balance-of-payments crisis has meant that government investments have been seriously curtailed and although a few important new projects are going ahead (described in section 3.2), the emphasis is on consolidation and improving industrial efficiency.

No direct evidence on the rate of savings within the manufacturing sector is available. Table 6 in chapter 2 showed that investment has substantially exceeded net operating profits among the parastatal group. Domestic financial institutions - mainly Tanzania Investment Bank (TIB) and Tanzania Development Finance Co. Ltd. (TDFC) - have channelled resources to the manufacturing sector. Domestic institutional financing increased from TShs. 473 million in 1974 to Tshs. 1,249 million in 1979.

Foreign aid and investment is an increasingly important source of industrial financing in Tanzania. Foreign direct investment has mainly taken place in modern and often relatively large-scale enterprises with imported technology and machinery. Foreign aid has partly been distributed to the development of small industries through SIDO. One problem is that the majority of foreign-assisted firms are very import-dependent. This has raised considerably the demand for foreign exchange allocations, while at the same time Tanzania's ability to earn foreign exchange has stagnated. Due to the difficult foreign exchange situation, which is likely to prevail over the next few years, investment possibilities in new ventures will be limited and whatever foreign funds can be secured will have to be redirected to support the import of raw materials, intermediate goods and machinery spares to already existing enterprises. This, as has been noted earlier, can create problems for the restructuring of aid and investment patterns.

#### 4.4 Role of technical co-operation in industrial development

The SAP estimated in 1982 that a total of TShs. 586 million worth of foreign exchange would be required for the rehabilitation of the manufacturing sector and a further TShs. 3,947 million would be required on an annual basis. Technical assistance provided by UNIDO totalled \$1,018,364 in 1985.

The considerable demand for foreign exchange allocations to industry, and Tanzania's weakened ability to earn it are likely to continue over the



next few years. Investment possibilities in new ventures will be limited to those which could improve the foreign exchange earning capability, and whatever foreign funds can be secured will have to be redirected to support the import requirements of existing industries. The crucial question remains as to whether foreign aid donors will maintain the considerable aid inflow in order to support operating costs instead of development costs. Parallel to that, intensive efforts would need to be made to improve productivity and quality, develop managerial and technical skills, improve the wage, price, incentive and distribution systems, and develop the infrastructure.

UNIDO assistance is currently being provided for the establishment of an ammonia urea plant utilizing natural gas, the strengthening of the textile industry, the establishment of an iron foundry, and preparation for establishing industrial estates in Zanzibar, etc. UNIDO has also been involved in examining the possibility of the establishment of a major steel work in the Tringa region. Progress in this case has been relatively slow. Details of UNIDO projects currently under way in Tanzania are given in Appendix B.

International technical assistance can play an important role by facilitating the development of a comprehensive rehabilitation programme for Tanzanian industry. Such a rehabilitation programme could provide a framework for the transfer of human and capital resources from inefficient, import-dependent industries to branches that have a high domestic resource content and can be internationally competitive and capable of earning significant levels of foreign exchange. The revitalization of Tanzanian industry could also imply the development of viable schemes of regional co-operation in specific branches and project areas. This is necessary to realize sizeable economies of scale. Tanzania has been an enthusiastic supporter of regional co-operation ventures and is a member of both the Southern African Development Coordinating Committee (SADCC) and the Preferential Trade Area (PTA). Efforts are also being made to revive the East African Community. Technical assistance geared to facilitating a harmonization of industrial policy within a regional framework can therefore be of significant benefit to Tanzania.

Appendix A

Statistical Tables

Table A-1. Average apparent consumption of selected manufactures, 1981-83

Product grouping and commodity (ISIC)	Unit	Average apparent consumption per 1000 inhabitants	Imports   Exports		Average annual production	Growth rate of apparent consumption
			As percentage of apparent consumption			
			1981-1983	1981-1983		
<b>FOOD PRODUCTS</b>						
Raw sugar (311801)		5 44	0 0	8 6	114333	0 72
Refined sugar (311804)	a/	5 83	5 0	0 2	104681	1 96
Cocoa powder (311907)						
Cocoa butter (311910)						
Chocolate and chocolate products (311913)						
Prepared animal feeds (312201)						
<b>OILS AND FATS</b>						
Oils and fats of animals, unprocessed (311507)						
Oils of vegetable origin (311510*)	W	4 24	5 2	0 3	77347	4 32
<b>TEXTILES</b>						
Wool yarn, pure and mixed (321103)	a/	0 00	100 0	0 0	0	21 82
Cotton yarn, pure and mixed (321109)						
Cotton woven fabrics (321128)	a/	4785 62	0 1	0 9	91000000	1 32
Woolen woven fabrics (321134)		0 02	100 0	0 0	0	-45 07
Knitted fabrics (321301)	W					
<b>FOOTWEAR</b>						
Footwear, excluding rubber footwear (324000)	a/	358 14	1 2	0 2	6710820	10 10
<b>WOOD AND WOOD PRODUCTS</b>						
Veneer sheets (331110)	V					
Particle board (331122)	V	0 16	5 9	1 1	3000	-3 18
<b>PAPER AND PAPER PRODUCTS</b>						
Wood pulp, mechanical (341101)	W	0 00	100 0	0 0	0	
Pulp of fibres other than wood (341104)	W	0 00			0	
Wood pulp, dissolving grades (341107)	W	0 00			0	
Wood pulp, sulphate and soda (341110)	W	0 06	100 0	0 0	0	40 58
Wood pulp, sulphite (341113)	W	0 00			0	
Wood pulp, semi-chemical (341116)	W	0 00			0	
Newsprint (341119)	W	0 12	100 0	0 0	0	-4 66
Other printing and writing paper (341122)	W					-23 70
Kraft paper and kraft paperboard (341125)	W	0 23	100 0	0 0	0	-7 05
Other paper and paperboard (341131)	a/	0 22	100 0	0 0	0	-2 52
<b>INDUSTRIAL CHEMICALS</b>						
Methanol (methyl alcohol) (351121)	W	0 00	100 0	0 0	0	-50 91
Glycerine (glycerol) (351125)	a/	0 00	100 0	0 0	0	-6 82
Chlorine (351145)	a/	0 00	100 0	0 0	0	-48 30
Sulphuric acid (351147)	W					
Nitric acid (351149)	W	0 00	100 0	0 0	0	64 31
Zinc oxide (351154)	a/	0 01	100 0	0 0	0	13 78
Titanium oxides (351155)	a/	0 00	100 0	0 0	0	35 50
Lead oxides (351157)	a/	0 00	100 0	0 0	0	-19 88
Ammonia (351158)	a/	0 00	100 0	0 0	0	-29 35
Caustic soda (351159)	W					
Soda ash (351166)	W					
Hydrogen peroxide (351171)	a/	0 00	100 0	0 0	0	-18 49
Calcium carbide (351173)	a/	0 01	100 0	0 0	0	-3 14
Dyestuffs, synthetic (351174)	a/	0 01	100 0	0 0	0	-12 50
Vegetable tanning extracts (351175)	W					
Nitrogenous fertilizers (351201)	T	1 07	75 3	0 0	5058	5 89
Phosphatic fertilizers (351204 + 351207)	T	0 34	14 6	0 0	5518	-10 62
Potassic fertilizers (351210)	T	0 17	100 0	0 0	0	-9 92
Insecticides, fungicides, etc (351216)	W					
Rubber, synthetic (351301)	a/	0 06	100 0	0 0	0	-9 57
Non-cellulosic staple and tow (351304)	W	0 01	100 0	0 0	0	69 63
Regenerated cellulose (351331)	W	0 02	100 0	0 0	0	7 07

\*\*\*\*\* continued

Table A.1 (continued)

Product grouping and commodity (ISIC)	Unit	Average apparent consumption per 1000 inhabitants		Imports   Exports As percentage of apparent consumption		Average annual production		Growth rate of apparent consumption	
		1981-1983		1981-1983		1981-1983		1975-1983	
		1981	1983	1981	1983	1981	1983	1975	1983
<b>PETROLEUM REFINERIES</b>									
Motor gasoline (353057A)	W	4.22		5.8		4.5	80000	-5.35	
Kerosene (353013A)	W	2.80		35.4		1.2	35333	2.47	
Distillate fuel oils (353019A)	A	14.62		54.1		3.0	135000	1.39	
Residual fuel oils (353022A)	W	10.61		0.0		13.8	231667	3.38	
Lubricating oils (353025A)	W								
Liquefied petroleum gas (353037A)	W	0.31		0.0		0.0	6000	-1.83	
<b>GLASS AND CEMENT</b>									
Glass bottles and containers (362010B)	A	1.09		18.5		0.0	16714	14.26	
Cement (369204)	W	20.63		8.0		1.0	362000	9.24	
<b>IRON AND STEEL</b>									
Pig iron (371007 + 371010)	W	0.01		100.0		0.0	0	12.85	
Wire rods (371028)	W								
Angles, shapes and sections (371035)	W								
Plates (heavy) over 4.75 mm (371040)	A	0.10		100.0		0.0	0	8.90	
Plates (medium) 3 to 4.75 mm (371043)	W	0.06		100.0		0.0	0	18.60	
Plates and sheets < 3 mm (371046 + 371049 + 371052)	W	0.27		102.1		2.1	0	-32.13	
Tinplate (371055)	A	0.23		100.0		0.0	0	-1.76	
Railway track material (371067)	W	0.09		100.0		0.0	0	-17.45	
Wire plain (371070)	W	0.44		100.1		0.1	0	-2.57	
Tubes seamless (371076)	W	0.02		101.8		1.8	0	-7.95	
Tubes welded (371079)	A	0.06		101.1		1.1	0	-14.30	
Steel castings in the rough state (371085)	W								
Steel forgings (371088)	W								
<b>NON-FERROUS METALS</b>									
Copper refined unwrought (372004)	W								
Copper bars, rods, angles, etc. (372010 + 372013)	A	0.00		100.0		0.0	0	-51.25	
Copper plates, sheets, strip and foil (372016)	W	0.00		100.0		0.0	0	7.93	
Copper tubes and pipes (372019)	W	0.03		100.0		0.0	0	2.81	
Aluminium unwrought (372022)	A	0.20		100.0		0.0	0	5.89	
Aluminium bars, rods, angles, etc. (372025 + 372028)	W								
Aluminium plates, sheets, strip, etc. (372031)	A	0.22		23.4		13.0	3796	5.25	
Aluminium tubes and pipes (372034)	W	0.00		172.7		72.7	0	-16.65	
Lead refined unwrought (372037)	W								
Zinc unwrought (372043)	W								
Zinc plates, sheets, strip and foil (372046)	W								
Tin unwrought (372049)	W	0.00		100.0		0.0	0	-5.41	

Source: Statistics and Survey Unit, UNIDO.

Based on data supplied by the UN Statistical Office with estimates by the UNIDO Secretariat.

Note: ISIC 311510\* consists of 311510 + 311513 + 311516 + 311519 + 311522 + 311525 + 311528 + 311531 + 311534 + 311537.  
Growth rates have been calculated on the basis of available annual data over the period indicated.  
Footnotes: a. Data for 1983 not available.

Table A-2. Value added in manufacturing, 1969-78 (selected years)  
(TShs. millions in current prices)

	1969	1971	1972	1973	1974	1976	1977	1978
<b><u>GRAND TOTAL</u></b>	<b><u>475.4</u></b>	<b><u>642.9</u></b>	<b><u>806.3</u></b>	<b><u>914.3</u></b>	<b><u>1,156.7</u></b>	<b><u>1,755.8</u></b>	<b><u>2,074.8</u></b>	<b><u>2,186.0</u></b>
<b><u>CONSUMER GOODS</u></b>	<b><u>281.6</u></b>	<b><u>412.5</u></b>	<b><u>485.1</u></b>	<b><u>538.4</u></b>	<b><u>606.5</u></b>	<b><u>1,060.2</u></b>	<b><u>1,139.4</u></b>	<b><u>1,066.0</u></b>
<b><u>Food and food products</u></b>	<b><u>125.7</u></b>	<b><u>159.9</u></b>	<b><u>186.5</u></b>	<b><u>208.5</u></b>	<b><u>242.7</u></b>	<b><u>479.5</u></b>	<b><u>518.8</u></b>	<b><u>507.2</u></b>
Meat, vegetable and fruit canning and dairy products	12.2	7.3	7.9	13.4	31.1	33.7	54.3	86.3
Grain mill products	19.4	43.5	41.7	27.3	32.5	161.0	182.0	211.4
Sugar factories and refineries	30.2	40.1	38.5	46.9	48.2	91.1	107.9	91.1
Edible oil milling	7.0	12.0	21.1	37.5	18.0	9.3	27.3	27.3
Tea processing, coffee curing and roasting and others	56.9	57.0	77.3	83.4	112.9	184.4	147.3	91.1
<b><u>Non-food products</u></b>	<b><u>155.9</u></b>	<b><u>252.6</u></b>	<b><u>298.6</u></b>	<b><u>329.9</u></b>	<b><u>363.8</u></b>	<b><u>580.7</u></b>	<b><u>620.6</u></b>	<b><u>558.4</u></b>
Breweries	28.3	52.7	53.7	40.6	43.4	75.8	69.7	83.8
Tobacco manufacture	28.6	41.1	53.6	66.6	82.5	95.8	98.6	124.5
Cotton ginning spinning and weaving of textiles	78.5	92.7	129.0	146.7	150.7	221.6	224.9	185.2
Manufacture of carpets and knitting mills	3.7	6.7	10.9	14.0	11.4	15.1	43.3	57.4
Cordage, ropes and twine	7.0	12.1	10.4	14.3	19.1	44.1	45.6	10.1
Wearing apparel and made-up textile goods	9.8	37.3	40.9	47.7	56.7	128.3	138.5	97.0
<b><u>Intermediate goods</u></b>	<b><u>14.7</u></b>	<b><u>197.5</u></b>	<b><u>256.4</u></b>	<b><u>302.8</u></b>	<b><u>458.0</u></b>	<b><u>541.0</u></b>	<b><u>747.4</u></b>	<b><u>966.2</u></b>
Sawmilling and plywood, manufacture of wood products	19.1	15.9	17.5	25.3	20.4	27.1	48.1	58.8
Manufacture of furniture and fixtures	7.7	10.8	7.1	7.8	11.2	11.3	15.3	15.3
Printing and publishing	17.7	23.8	20.7	35.1	58.9	51.5	63.4	82.1
Manufacture of pulp, paper board and products	0.9	2.5	7.3	8.4	13.5	35.8	37.3	60.0
Basic industries chemicals, non-edible and petroleum products	30.6	54.1	58.9	58.0	78.9	93.2	112.4	126.3
Tanneries and leather finishing	1.1	10.9	8.0	19.8	22.1	39.4	29.9	60.5
Manufacture of pharmaceuticals, paints, soaps and other chemical products	22.2	8.9	11.3	24.3	21.5	38.5	43.2	95.8
Manufacture of fertilizers and pesticides		3.5	7.9	9.0	61.0	33.4	105.2	40.2
Manufacture of rubber products including tyres and tubes	2.2	3.5	22.0	16.6	43.7	60.0	105.5	124.0
Manufacture of plastic products		4.4	10.8	12.7	23.2	28.2	28.9	25.0
Manufacture of glass products and building materials	20.7	23.9	37.2	30.7	36.2	17.8	23.3	124.3
Iron, steel and other non-ferrous metal basic industries	20.5	12.5	19.8	28.9	32.7	62.4	70.2	153.9
Manufacture of metal products	20.5	22.8	27.9	26.2	34.7	42.6	64.7	153.9
<b><u>Capital goods</u></b>	<b><u>48.2</u></b>	<b><u>48.6</u></b>	<b><u>51.7</u></b>	<b><u>62.3</u></b>	<b><u>74.9</u></b>	<b><u>121.9</u></b>	<b><u>134.6</u></b>	<b><u>126.0</u></b>
Manufacture and repair of machines	7.2	13.0	20.6	28.8	31.3	55.8	66.0	58.9
Motor vehicle assembling	41.0	15.6	30.9	34.5	43.6	66.1	68.6	67.1
<b><u>Other manufacturing</u></b>	<b><u>2.9</u></b>	<b><u>4.2</u></b>	<b><u>13.1</u></b>	<b><u>9.8</u></b>	<b><u>16.6</u></b>	<b><u>32.5</u></b>	<b><u>53.4</u></b>	<b><u>28.5</u></b>

Source: Ministry of Finance and Planning Survey of Industries 1965 and Survey of Industrial Production, 1960, 1971-1973. Taken from World Bank, Tanzania, Basic Economic Report, Annex, December 1977, p. 149. Survey of Industrial Production, 1974, and data provided by the Bureau of Statistics. Taken from UNIDO/IT 293, p. 178.

Table A-3. Indices of industrial production, selected products, 1977-82  
(1976 = 100)

	1977	1978	1979	1980	1981	1982
Sugar <sup>a/</sup>	100.0	96.2	126.0	122.8	149.7	106.4
Wheat flour	111.4	121.0	74.7	43.5	35.9	37.5
Beer	111.6	122.6	113.2	96.0	96.7	96.6
Chibuku	111.3	131.7	191.3	116.2	122.6	143.7
Cigarettes	108.1	116.2	113.5	127.0	105.4	127.0
Textiles	95.4	88.1	102.9	112.6	116.2	90.1
Leather	125.6	98.7	200.0	166.6	139.7	133.3
Shoes	195.0	197.5	157.5	132.5	60.0	72.5
Gunny bags	64.9	97.3	110.8	143.2	143.2	93.2
Fishnets	212.9	189.5	214.5	85.1	50.4	25.8
Plywood	151.0	124.4	99.8	108.4	88.3	95.5
Pyrethrum	71.7	52.2	37.7	34.1	28.3	26.1
Fertilizers	87.5	105.5	110.3	120.7	163.8	32.4
Paints	102.1	157.0	84.2	45.7	61.2	46.3
Petroleum products	83.2	71.7	75.2	78.8	64.5	67.7
Tyres and tubes	106.5	118.4	93.6	115.2	45.6	38.1
Cement	101.2	102.9	123.0	126.6	161.9	151.2
Rolled steel	113.4	156.4	171.0	175.4	156.9	115.3
Galvanized iron sheets	103.2	114.0	96.6	71.0	47.9	53.4
Hoes and ploughs	65.8	63.3	83.0	115.0	146.0	94.8
Radios	107.1	98.0	102.9	92.9	64.6	45.8
Dry cell batteries	111.7	122.5	123.3	136.8	135.2	126.3

Source: Bureau of Statistics, Economic Survey, Ministry of Industries.

<sup>a/</sup> Based on 1977 = 100.

Table A-4. Employment, wages and salaries and value added per worker  
in larger industries, 1974 and 1978  
(thousand TShs. at current prices)

	value added		employment		wages and salaries		value added per worker	
	1974	1978	1974	1978	1974	1978	1974	1978
<u>Grand total</u>	<u>1,156.7</u>	<u>2,186</u>	<u>69,974</u>	<u>95,041</u>	<u>512.6</u>	<u>703.1</u>	<u>16.5</u>	<u>22.7</u>
<u>Consumer goods</u>	<u>606.5</u>	<u>1,066</u>	<u>47,987</u>	<u>66,041</u>	<u>303.7</u>	<u>412.8</u>	<u>12.6</u>	<u>11.6</u>
<u>Food and food products</u>	<u>242.7</u>	<u>507.2</u>	<u>15,933</u>	<u>24,983</u>	<u>92.6</u>	<u>105.7</u>	<u>15.2</u>	<u>19.2</u>
Meat, vegetable and fruit canning and dairy products	31.1	86.3	1,657	3,862	12.5	13.1	18.8	22.3
Grain mill products	32.5	211.4	2,423	5,852	12.7	16.0	13.4	36.1
Sugar factories and refineries	48.2	91.1	2,219	5,883	19.1	19.8	21.7	15.5
Edible oil milling	18.0	27.3	1,639	1,974	7.8	11.2	11.0	13.8
Tea processing, coffee curing and roasting others	112.9	91.1	7,995	7,412	40.5	45.6	14.1	13.8
<u>Non-food products</u>	<u>363.8</u>	<u>558.4</u>	<u>32,054</u>	<u>41,040</u>	<u>211.1</u>	<u>307.1</u>	<u>11.3</u>	<u>13.6</u>
Breweries	43.4	83.8	1,913	2,126	25.6	30.9	22.7	39.4
Tobacco manufacture	82.5	124.5	4,468	5,119	26.3	33.4	18.5	24.2
Cotton ginning, spinning and wearing of textiles	150.7	185.2	16,744	20,130	103.2	140.8	9.0	9.2
Manufacture of carpets and knitting mills	11.4	57.4	823	4,068	5.8	7.8	13.9	14.1
Cordage, ropes and twines	19.1	10.1	2,270	3,853	12.9	15.2	8.4	16.9
Wearing apparel and made-up textile goods	56.7	97.0	5,836	5,744	37.3	79.0	9.7	16.9

Table A-4 (continued)

	value added		employment		wages and salaries		value added per worker	
	1974	1978	1974	1978	1974	1978	1974	1978
<u>Intermediate goods</u>	<u>458.0</u>	<u>966.2</u>	<u>17,594</u>	<u>23,783</u>	<u>165.9</u>	<u>228.9</u>	<u>26.0</u>	<u>39.8</u>
Sawmilling and plywood, manufacture of wood products	20.4	58.8	3,206	3,013	16.5	24.4	6.4	19.5
Manufacture of furniture and fixtures	11.2	15.3	85	1,382	5.5	6.3	13.1	11.0
Printing and publishing	58.9	82.1	1,761	2,439	17.4	23.0	33.4	33.7
Manufacture of pulp, paper board and products	13.5	60.0	1,156	1,779	7.7	9.8	11.7	33.9
Basic industries chemicals, non-edible and petroleum products	78.9	126.3	1,316	3,054	28.5	28.0	59.9	83.2
Tanneries and leather finishing	22.1	60.5	453	721	4.0	9.3	48.8	41.4
Manufacture of pharmaceuticals, paints, soaps and other chemical products	21.5	95.8	763	1,151	6.8	13.6	28.2	76.0
Manufacture of fertilizers and pesticides	61.0	40.2	995	1,458	15.2	18.3	61.3	27.6
Manufacture of rubber products including tyres and tubes	43.7	124.0	1,252	1,422	12.5	17.4	34.9	87.2
Manufacture of plastic products	23.2	25.0	528	876	5.2	8.7	43.9	71.4
Manufacture of glass products and building materials	36.2	124.2	2,162	2,674	18.7	25.1	16.7	71.4
Iron, steel and other non-ferrous basic industries	32.7	153.9	888	3,814	7.6	10.0	36.8	63.3
Manufacture of metal products	34.7	153.9	2,259	3,814	20.3	32.0	15.4	28.1



Table A-4 (continued)

	value added		employment		wages and salaries		value added per worker	
	1974	1978	1974	1978	1974	1978	1974	1978
<u>Capital goods</u>	<u>74.9</u>	<u>126.0</u>	<u>3,047</u>	<u>4,087</u>	<u>30.8</u>	<u>49.8</u>	<u>24.6</u>	<u>30.8</u>
Manufacture and repair of machinery	31.3	58.9	1,482	1,933	13.7	23.2	21.1	30.5
Motor vehicle assembling	43.6	67.1	1,565	2,154	17.1	26.6	27.9	31.1
<u>Other manufacturing</u>	<u>16.6</u>	<u>28.5</u>	<u>1,346</u>	<u>1,021</u>	<u>12.2</u>	<u>11.6</u>	<u>12.3</u>	<u>27.9</u>

Source: Bureau of Statistics.

Table A-3. Selected indicators of industrial performance, by branch of manufacturing, 1973 and 1974  
(at current prices)  
(currency - Shilling)

Description (ISIC)	Value added per employee		Wages and salaries per employee		Share of value added in gross output (percentage)		Share of wages and salaries in value added (percentage)	
	1973	1974	1973	1974	1973	1974	1973	1974
TOTAL MANUFACTURING(300)	15514	16528	5838	6765	31.6	29.8	37.6	40.9
Food products(311)	12272	14285	4571	5348	24.0	24.6	37.3	37.4
Beverages(313)	30935	23546	8620	10285	37.9	32.8	27.9	43.7
Tobacco(314)	17643	18465	5944	5295	48.8	50.9	33.7	28.7
Textiles(321)	10740	8905	4219	5760	42.7	32.5	39.3	64.7
Wearing apparel,except footwear(322)	10523	9853	5556	5917	20.1	20.7	52.8	60.1
Leather products(323)	49560	48786	6418	8433	37.6	41.7	12.9	17.3
Footwear,except rubber or plastic(324)	18857	13944	8959	7013	21.1	22.9	47.5	50.3
Wood products,except furniture(331)	8358	6363	4236	4832	39.8	31.9	50.7	75.9
Furniture,except metal(332)	10833	13099	4962	6199	33.8	40.0	45.8	47.3
Paper and products(341)	10106	13062	4971	6332	27.7	27.0	49.2	48.5
Printing and publishing(342)	26247	33447	9879	9313	48.2	50.3	37.6	27.0
Industrial chemicals(351)	15569	51571	10106	12008	13.2	24.6	64.9	23.3
Other chemicals(352)	23023	24426	8854	8117	23.5	22.4	38.5	33.2
Petroleum refineries(353)	129842	137778	46495	42634	68.0	64.8	35.8	30.9
Misc. petroleum and coal products(354)	...	...	...	...	...	...	...	...
Rubber products(355)	18390	34824	8902	8922	25.6	30.7	48.4	25.6
Plastic products(356)	30568	43939	7795	9205	46.7	43.8	25.5	20.9
Pottery, china, earthenware(361)	...	...	...	...	46.6a/	39.5a/	...	...
Glass and products(362)	...	...	5933	8897	...	...	...	...
Other non-metallic mineral prod.(369)	...	...	6782	8197	...	...	...	...
Iron and steel(371)	47377b/	36824b/	7836b/	8356b/	24.3b/	17.2b/	16.5b/	22.7b/
Non-ferrous metals(372)	...	...	...	...	...	...	...	...
Fabricated metal products(381)	13888	15361	6517	8349	24.7	23.4	46.9	54.4
Machinery,except electrical(382)	10132	12899	8176	8835	26.5	35.8	80.7	68.5
Machinery electric(383)	32072	28909	7380	8988	31.6	28.2	23.0	31.1
Transport equipment(384)	33297	27859	9265	10300	26.5	23.1	27.8	37.0
Professional & scientific equipm.(385)	...	...	...	...	...	...	...	...
Other manufactured products(390)	15186	20235	7926	8159	29.6	27.7	52.2	40.3

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.

Footnotes: a/ 3610 includes 3620 3690.  
b/ 3710 includes 3720.

Table A-6. Product mix of traded manufactured goods, 1970, 1980 and 1981\*/

SITC DESCRIPTION OF TRADE GOODS	E X P O R T S				I M P O R T S			
	1970	1980	1981	1981	1970	1980	1981	1981
	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	(1000 US \$)	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	(1000 US \$)
01 Meat and meat preparations	4.829	2.429	1.436	2652	0.093	0.011	0.015	103
02 Dairy products and eggs	0.022	0.070	0.230	424	1.216	1.037	1.068	7230
032 Fish n.e.s. and fish preparations	...	0.000	...	...	0.098	0.044	0.002	16
046 Meal and flour of wheat or of meslin	0.001	0.000	0.000	0	0.362	0.645	0.777	5259
047 Meal and flour of cereals, except above	0.004	0.104	0.295	545	0.161	0.009	0.000	3
048 Cereals preparat. & starch of fruits & vegetab.	0.001	0.490	0.690	1274	0.338	0.526	0.363	2456
052 Dried fruit	0.000	...	0.000	0	0.015	0.001	0.002	14
053 Fruit, preserved and fruit preparations	0.117	0.033	0.017	31	0.118	0.002	0.005	32
055 Vegetables, roots & tubers, preserved or prepared	0.003	0.021	...	...	0.238	0.023	0.015	104
06 Sugar, sugar preparations and honey	0.185	3.120	0.958	1770	0.351	1.046	0.682	4619
0713 Coffee extracts, essences, concentrates & similar	0.052	0.027	0.007	12	0.002	0.000	0.001	6
0722 Cocoa powder, unsweetened	...	...	...	...	0.008	0.000	0.000	1
073 Chocolate and related food preparations	...	...	...	...	0.088	0.005	0.014	92
074 Tea and mate	5.832	11.098	10.726	19804	0.008	0.000	0.000	1
081 Feeding-stuff for animals	4.172	3.732	6.632	12246	0.021	0.040	0.087	587
09 Miscellaneous food preparations	0.006	0.760	0.979	1808	0.454	0.323	0.299	2024
11 Beverages	0.001	0.000	0.015	28	0.742	0.077	0.134	907
122 Tobacco manufactures	0.001	1.260	1.588	2931	0.019	0.000	0.003	20
2219 Flour and meal of oil seeds, nuts, kernels	...	...	...	...	...	0.011	...	...
231 Crude rubber, synth. & reclaimed (excl. SITC 2311)	...	0.003	...	...	0.074	0.318	0.312	2111
243 Wood, shaped or simply worked	2.128	0.405	0.610	1125	0.010	0.003	0.000	2
251 Pulp and waste paper	0.000	0.032	...	...	0.094	0.023	0.026	173
263 Cotton	34.175	25.684	41.926	77412	0.009	0.005	0.000	1
266 Synthetic and regenerated (artificial) fibres	...	...	...	...	0.283	0.136	0.191	1295
267 Waste materials from textile fabrics (incl. rags)	...	...	...	...	0.145	0.138	0.010	67
332 Petroleum products	15.413	12.298	0.506	934	5.206	14.253	16.563	112115
4 Animal and vegetable oils and fats	3.304	0.806	1.053	1945	0.999	1.487	1.221	8264
411 Animal oils and fats	0.019	...	...	...	0.397	0.544	0.332	2251
421 Fixed vegetable oils, soft (incl. SITC 422)	2.751	0.227	0.132	243	0.373	0.443	0.132	896
431 Animal and vegetable oils and fats processed	0.533	0.579	0.921	1701	0.230	0.500	0.756	5117

Table A-9 (continued)

SITC DESCRIPTION OF TRADE GOODS	E X P O R T S				I M P O R T S			
	1970	1980	1981	1981	1970	1980	1981	1981
	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	(1000 US \$)	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	PERCENT IN TOTAL MANUFACTURES	(1000 US \$)
5 Chemicals	1.718	1.932	2.093	3865	9.674	13.423	12.749	86301
51 Chemicals elements and compounds	0.000	0.244	0.122	226	1.206	2.253	2.943	19924
52 Tar and chemicals from coal,petroleum,nat. gas	...	...	...	...	0.076	0.140	0.203	1371
53 Dyeing,tanning and colouring materials	1.036	1.489	1.686	3112	1.380	1.053	1.151	7786
54 Medicinal and pharmaceutical products	0.006	0.000	0.003	6	2.496	3.245	3.797	25703
55 Essential oils and perfume materials	0.586	0.010	0.104	193	0.644	0.326	0.330	2236
56 Fertilizers,manufactured	...	...	...	...	0.878	1.382	0.932	6306
57 Explosives and pyrotechnic products	...	0.000	...	...	0.335	0.102	0.239	1618
58 Plastic materials,regenerated cellul. & resins	0.011	0.069	...	...	0.978	2.004	1.561	10568
59 Chemical materials and products n.e.s.	0.079	0.119	0.177	328	1.681	2.920	1.594	10788
6 Manufactured goods classified by material	27.549	25.783	25.745	47535	28.927	18.630	15.717	106389
61 Leather manufactured n.e.s. & dressed fur skins	0.360	0.001	0.002	4	0.062	0.099	0.117	795
62 Rubber manufactures n.e.s.	...	0.271	0.239	442	3.145	1.006	1.141	7726
63 Wood and cork manufactures(excl.furniture)	0.294	0.133	0.240	444	0.399	0.206	0.164	1109
64 Paper,paper board and manufactures thereof	0.024	0.047	0.158	292	2.335	2.213	2.066	13987
65 Textile yarn,fabrics,made-up articles	3.672	15.240	7.391	13646	6.630	4.055	3.031	20517
66 Non-metallic mineral manufactures,n.e.s.	22.873	8.246	17.028	31440	1.934	1.250	1.525	10321
67 Iron and steel	0.008	0.477	0.180	333	6.946	4.323	3.447	23336
68 Non-ferrous metals	0.166	0.773	0.469	866	1.328	1.520	0.702	4752
69 Manufactures of metal,n.e.s.	0.152	0.596	0.037	68	6.148	3.959	3.523	23847
7 Machinery and transport equipment	0.001	1.442	1.878	3467	43.296	44.080	44.881	303802
71 Machinery,other than electric	0.000	0.017	0.031	58	21.579	23.029	20.605	139477
72 Electrical machinery,apparatus and appliances	0.001	1.332	1.846	3409	5.789	6.638	5.968	40398
73 Transport equipment	0.000	0.093	0.000	0	15.928	14.414	18.308	123927
8 Miscellaneous manufactured articles	0.490	8.469	2.616	4830	6.948	3.702	4.863	32916
91 Sanitary,plumbing,heating & lightning fixtures	0.001	0.000	...	...	0.492	0.151	0.193	1308
92 Furniture	0.032	0.176	0.033	61	0.184	0.158	0.211	1427
93 Travel goods,handbags and similar articles	0.000	0.004	0.004	8	0.297	0.005	0.002	17
94 Clothing	0.058	6.974	0.473	873	1.904	0.203	0.469	3173
95 Footwear	0.001	0.117	0.113	208	0.264	0.041	0.040	271
96 Professional,scient. & controll. instruments	...	0.000	0.004	8	1.574	1.236	0.965	6531
99 Miscellaneous manufactured articles,n.e.s.	0.396	1.198	1.989	3672	2.233	1.908	2.953	20190
TOTAL MANUFACTURES	1970	1980	1981	1981	1970	1980	1981	1981
TOTAL: SITC 5-8 LESS 68 a/	101277	202579	184637	252792	973860	676910	524657	867286
TOTAL TRADED GOODS: SITC 0-9	29968	74657	58831	221237	762684	524657	524657	524657
	236142	527666	552699	271488	1211386	867286	867286	867286

Note: Data and SITC descriptions refer to SITC revision 1.

a/ 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-7. Origin of manufactured imports by product, 1981<sup>\*/</sup>

SITC DESCRIPTION OF TRADE GOODS	WORLD TOTAL (1000 US\$)	DEVELOPING COUNTRIES (PERCENT)	DEVELOPED MARKET ECONOMIES				CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT)
			TOTAL (PERCENT)	USA (PERCENT)	EEC (PERCENT)	JAPAN (PERCENT)	
01 Meat and meat preparations	103	24.34	75.54	7.06	63.79	0.23	0.12
02 Dairy products and eggs	7230	2.64	91.70	6.67	60.67	0.02	5.65
032 Fish n.e.s. and fish preparations	16	0.00	100.00	5.06	93.19	0.75	0.00
046 Meal and flour of wheat or of meslin	5259	0.13	99.87	0.00	99.87	0.00	0.00
047 Meal and flour of cereals, except above	3	0.00	100.00	0.00	98.26	1.74	0.00
048 Cereals preparat. & starch of fruits & vegetab.	2456	0.14	99.79	0.11	96.68	3.00	0.08
052 Dried fruit	14	0.00	100.00	3.44	49.29	0.00	0.00
053 Fruit, preserved and fruit preparations	32	0.00	93.54	8.86	84.48	0.06	6.46
055 Vegetables, roots & tubers, preserved or prepared	104	0.29	97.83	1.99	95.29	0.54	1.88
06 Sugar, sugar preparations and honey	4619	0.01	99.97	0.01	99.95	0.01	0.02
0713 Coffee extracts, essences, concentrates & similar	6	0.00	100.00	99.36	0.64	0.00	0.00
0722 Cocoa powder, unsweetened	1	0.00	99.99	21.70	76.73	0.00	0.00
073 Chocolate and related food preparations	92	0.00	99.87	0.09	99.64	0.04	0.13
074 Tea and mate	1	0.00	100.01	0.00	84.74	15.26	0.00
081 Feeding-stuff for animals	587	0.00	99.97	0.00	99.97	0.00	0.03
09 Miscellaneous food preparations	2024	8.49	83.95	14.82	67.55	0.49	7.28
11 Beverages	907	1.00	98.37	0.00	90.80	0.00	0.57
122 Tobacco manufactures	20	39.70	59.69	0.00	52.38	1.18	0.61
231 Crude rubber, synth. & reclaimed (excl. SITC 2311)	2111	0.25	94.40	11.22	76.55	4.57	5.35
243 Wood, shaped or simply worked	2	0.00	100.00	0.00	12.61	0.00	0.00
251 Pulp and waste paper	73	49.86	50.14	0.00	0.00	0.00	0.00
263 Cotton	1	0.00	100.00	0.00	100.00	0.00	0.00
266 Synthetic and regenerated (artificial) fibres	1295	0.00	100.00	0.00	100.00	0.00	0.00
267 Waste materials from textile fabrics (incl. rags)	67	14.73	84.34	4.84	71.78	0.00	0.80
332 Petroleum products	112115	66.40	30.65	0.19	28.42	0.05	0.02
4 Animal and vegetable oils and fats	8264	2.61	97.39	2.90	94.45	0.00	0.00
411 Animal oils and fats	2251	0.00	100.00	0.00	100.00	0.00	0.00
421 Fixed vegetable oils, soft (incl. SITC 422)	896	6.49	93.51	26.77	66.47	0.03	0.00
431 Animal and vegetable oils and fats processed	5117	3.09	96.91	0.00	96.91	0.00	0.00
5 Chemicals	86301	6.96	92.24	1.97	69.68	4.71	0.45
51 Chemicals elements and compounds	19924	6.71	93.29	3.68	72.61	10.37	0.00
52 Tar and chemicals from coal, petroleum, nat. gas	1371	0.00	100.00	0.00	97.98	2.02	0.00
53 Dyeing, tanning and colouring materials	7788	2.55	97.44	0.24	83.95	0.03	0.00
54 Medicinal and pharmaceutical products	25703	11.30	86.11	2.15	69.36	0.21	1.44
55 Essential oils and perfume materials	2236	6.30	93.51	1.03	69.26	0.48	0.18
56 Fertilizers, manufactured	6306	12.79	87.21	0.00	66.63	17.99	0.00
57 Explosives and pyrotechnic products	1618	1.55	98.45	0.02	57.30	0.00	0.00
58 Plastic materials, regenerated cellul. & resins	10568	3.23	96.73	0.10	64.75	4.78	0.04
59 Chemical materials and products n.e.s.	10788	2.37	97.55	3.37	59.68	2.46	0.07
6 Manufactured goods classified by material	106389	16.12	81.85	1.86	49.51	18.17	2.00
61 Leather manufactured n.e.s. & dressed fur skins	795	45.34	54.66	0.22	42.18	11.02	0.00
62 Rubber manufactures n.e.s.	7726	23.71	75.91	8.41	48.65	14.12	0.38
63 Wood and cork manufactures (excl. furniture)	1109	37.13	62.54	0.36	35.28	0.28	0.11
64 Paper, paper board and manufactures thereof	13987	3.62	95.05	1.55	37.82	0.90	1.32
65 Textile yarn, fabrics, made-up articles	20517	25.31	73.26	0.22	31.30	40.32	1.43
66 Non-metallic mineral manufactures, n.e.s.	10321	26.71	63.03	5.66	46.37	1.66	10.23
67 Iron and steel	23336	4.78	94.27	0.04	60.40	31.31	0.95
68 Non-ferrous metals	4752	10.11	89.88	0.06	60.54	24.14	0.01
69 Manufactures of metal, n.e.s.	23847	18.86	79.63	1.94	61.71	4.72	1.45

SITC DESCRIPTION OF TRADE GOODS	WORLD TOTAL (1000 US\$)	DEVELOPING COUNTRIES (PERCENT)	DEVELOPED MARKET ECONOMIES				CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT)
			TOTAL (PERCENT)	USA (PERCENT)	EEC (PERCENT)	JAPAN (PERCENT)	
7 Machinery and transport equipment	303802	6.16	91.73	2.91	53.81	19.02	1.74
71 Machinery, other than electric	139477	7.39	88.96	3.60	58.67	17.91	3.30
72 Electrical machinery, apparatus and appliances	40398	7.04	92.55	0.94	46.05	17.79	0.35
73 Transport equipment	123927	4.48	94.57	2.78	50.86	20.67	0.43
8 Miscellaneous manufactured articles	32916	11.64	85.96	2.25	62.72	11.87	2.22
81 Sanitary, plumbing, heating & lightning fixtures	1308	2.70	80.50	1.11	51.83	6.12	16.79
82 Furniture	1427	5.51	92.28	5.17	71.02	1.18	1.99
83 Travel goods, handbags and similar articles	17	15.75	83.39	4.12	67.72	8.76	0.86
84 Clothing	3173	23.53	76.00	0.14	4.69	71.00	0.41
85 Footwear	271	1.22	97.62	0.66	96.33	0.55	1.11
86 Professional, scient. & controll. instruments	6531	4.20	94.60	3.56	60.09	21.17	1.13
89 Miscellaneous manufactured articles, n.e.s.	20190	13.32	84.48	2.04	72.36	0.85	1.94
TOTAL manufactures	676910	17.86	80.07	2.18	53.08	12.61	1.36
TOTAL: SITC 5-8 LESS 68 a/	524657	8.62	89.46	2.53	56.04	16.00	1.62
TOTAL traded goods: SITC 0-9	867286	17.93	64.94	1.79	42.12	11.47	1.06

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.

Table A-8. Destination of manufactured exports by product, 1981<sup>\*/</sup>

SITC DESCRIPTION OF TRADE GOODS	WORLD TOTAL (1000 US\$)	DEVELOPING COUNTRIES (PERCENT)	DEVELOPED MARKET TOTAL (PERCENT)	USA (PERCENT)	ECONOMIES EEC (PERCENT)	JAPAN (PERCENT)	CENTRALLY PLANNED DEVELOPED COUNTRIES (PERCENT)
01 Meat and meat preparations	2652	96.99	2.86	0.00	2.86	0.00	0.00
02 Dairy products and eggs	424	98.37	0.00	0.00	0.00	0.00	0.00
046 Meal and flour of wheat or of meslin	0	0.00	0.00	0.00	0.00	0.00	0.00
047 Meal and flour of cereals, except above	545	94.66	5.31	0.00	5.31	0.00	0.00
048 Cereals preparat. & starch of fruits & vegetab.	1274	96.14	3.81	0.00	3.81	0.00	0.00
052 Dried fruit	0	0.00	100.00	0.00	100.00	0.00	0.00
053 Fruit, preserved and fruit preparations	31	49.56	49.26	0.00	49.26	0.00	0.00
05 Sugar, sugar preparations and honey	1770	61.28	38.70	0.00	38.70	0.00	0.00
0713 Coffee extracts, essences, concentrates & similar	12	90.01	1.77	1.74	0.03	0.00	0.88
074 Tea and mate	19804	27.33	71.30	7.89	56.45	0.05	0.00
081 Feeding-stuff for animals	12246	0.02	98.53	1.26	97.27	0.00	0.96
09 Miscellaneous food preparations	1808	99.53	0.45	0.00	0.44	0.01	0.00
11 Beverages	28	97.94	1.27	0.00	1.27	0.00	0.00
122 Tobacco manufactures	2931	98.31	1.69	0.00	1.69	0.00	0.00
243 Wood, shaped or simply worked	1125	3.21	96.79	0.10	95.23	0.00	0.00
263 Cotton	77412	60.03	29.75	0.00	11.48	0.86	2.29
332 Petroleum products	934	19.59	0.00	0.00	0.00	0.00	0.00
4 Animal and vegetable oils and fats	1945	0.69	94.55	24.93	40.36	29.26	4.71
421 Fixed vegetable oils, soft (incl. SITC 422)	243	5.50	94.03	71.60	0.02	22.41	0.00
431 Animal and vegetable oils and fats processed	1701	0.00	94.62	18.25	46.13	30.24	5.38
5 Chemicals	3865	94.44	5.10	0.00	0.00	0.00	0.00
51 Chemicals elements and compounds	226	15.82	84.18	0.00	0.00	0.00	0.00
53 Dyeing, tanning and colouring materials	3112	100.00	0.00	0.00	0.00	0.00	0.00
54 Medicinal and pharmaceutical products	6	0.00	100.00	0.00	0.00	0.00	0.00
55 Essential oils and perfume materials	193	99.63	0.37	0.00	0.00	0.00	0.00
59 Chemical materials and products n.e.s.	328	94.55	0.00	0.00	0.00	0.00	0.00
6 Manufactured goods classified by material	47535	13.59	85.34	1.70	79.78	1.97	0.29
61 Leather manufactured n.e.s. & dressed fur skins	4	0.42	73.56	12.92	17.85	0.00	25.79
62 Rubber manufactures n.e.s.	442	98.25	1.75	0.18	0.13	0.00	0.00
63 Wood and cork manufactures (excl. furniture)	444	23.10	72.26	4.54	37.39	7.83	1.62
64 Paper, paper board and manufactures thereof	292	99.95	0.05	0.00	0.05	0.00	0.00
65 Textile yarn, fabrics, made-up articles	13646	27.79	68.66	5.72	51.39	6.35	0.96
66 Non-metallic mineral manufactures, n.e.s.	31440	1.97	98.03	0.02	97.78	0.11	0.00
67 Iron and steel	333	100.00	0.00	0.00	0.00	0.00	0.00
68 Non-ferrous metals	866	100.00	0.00	0.00	0.00	0.00	0.00
69 Manufactures of metal, n.e.s.	68	34.06	64.39	0.00	0.68	0.00	0.00
7 Machinery and transport equipment	3467	98.34	1.64	0.00	1.63	0.01	0.00
71 Machinery, other than electric	58	0.65	98.09	0.00	98.09	0.00	0.00
72 Electrical machinery, apparatus and appliances	3409	99.99	0.01	0.00	0.00	0.01	0.00
73 Transport equipment	0	100.00	0.00	0.00	0.00	0.00	0.00
8 Miscellaneous manufactured articles	4830	27.74	70.41	0.10	1.86	0.02	0.03
82 Furniture	61	82.90	3.41	0.00	2.71	0.00	1.20
83 Travel goods, handbags and similar articles	8	1.18	71.48	0.00	62.93	0.00	0.00
84 Clothing	873	92.79	0.69	0.00	0.05	0.00	0.00
85 Footwear	208	97.97	1.30	0.00	1.30	0.00	0.00
86 Professional, scient. & controll. instruments	8	57.12	42.88	0.00	18.38	0.00	0.00
89 Miscellaneous manufactured articles, n.e.s.	3672	7.37	92.08	0.14	2.14	0.03	0.02
TOTAL manufactures	184637	41.99	52.69	1.63	39.44	1.18	1.15
TOTAL: SITC 5-8 LESS 68 a/	58831	23.79	75.17	1.38	64.71	1.59	0.24
TOTAL traded goods: SITC 0-9	552699	36.13	58.65	3.57	43.91	2.84	2.75

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.

Table A-9. Shares of exports and imports classified according to level of processing, 1975 and 1981, and trend growth rates, 1975-80 and 1980-81

CLASSES	E X P O R T S				I M P O R T S			
	CLASS SHARE OF TOTAL		CLASS GROWTH RATE		CLASS SHARE OF TOTAL		CLASS GROWTH RATE	
	(PERCENTAGE) 1975	(PERCENTAGE) 1981	(PERCENTAGE) 1975-1980	(PERCENTAGE) 1980-1981	(PERCENTAGE) 1975	(PERCENTAGE) 1981	(PERCENTAGE) 1975-1980	(PERCENTAGE) 1980-1981
A : Non-processed goods for further processing	57.70	63.05	6.01	18.16	19.53	1.78	-8.95	-83.61
B : Processed goods for further processing	3.41	3.57	2.16	10.14	12.89	10.85	6.33	-40.16
C : Non-processed goods for final use	27.54	26.67	3.16	22.58	0.21	0.40	25.43	-40.93
D : Processed goods for final use	11.35	6.71	12.88	-60.46	67.38	86.97	17.11	-28.59
Sum of classes: A+B+C+D in 1000 current US\$		1975 343113		1981 552551		1975 682228		1981 681202
Total trade SITC 0-9 in 1000 current US\$		343178		552699		718161		867286

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 countries' trade reporting in general, but especially at the 3-, 4- and 5-digit SITC level.



Table A-10. List of geographical dispersal of industries in different sectors<sup>a/</sup>

Agricultural processing industries

- National milling (wheat and maize) is still concentrated in Dar-es-Salaam, but national maize mills have opened over the last five years.
- Sisal processing is concentrated in the Tanga - Morogoro - Dar-es-Salaam regions.
- Cashew processing which started in Dar-es-Salaam is now widely dispersed in Lindi and Mtwara and elsewhere in the South.
- Sugar factories at Moshi, Kilombero, Tanga and Kagera are widely dispersed.
- Oil seed crushing is at Dar-es-Salaam and Mwanza with new under-utilized factories at Morogoro and Nachinqwea.
- Tanneries have been established at Mwanza, Moshi and Morogoro.
- Cotton ginneries were always widely dispersed in West Lake and Mwanza regions.
- Meat processing factories have been established in Shinyanga and Mwanza to supplement the Tanganyika Packers Factory at Dar-es-Salaam.

Consumer goods

- The cigarette factory (old B.A.T. Unit) has remained in Dar-es-Salaam but the brewery is planning a new unit at Mwanza to reduce transport costs.
- Soft drinks production started in Dar-es-Salaam but is now quite well regionalized with more to come.
- Textile industry has been subject to the most conscious policy of regionalization of industry with factories in Mwanza, Tanga, Arusha and Morogoro and new units planned at Shinyanga and Mtwara.
- In footwear, Bora shoes (ex. Bata) remains in Dar-es-Salaam. A new factory is under construction at Morogoro.

Agricultural intermediates

- Fertilizer plant is located at Tanga.

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a/ Source: UNIDO/IS.293, pp. 187-188.

Table A-10 (continued)

- Metal Box remains in Dar-es-Salaam.
- Tyre factory in Arusha has been established by General Tyre.

Large-scale industry

- Cement factories are at Wazo Hills north of Dar-es-Salaam, at Tanga and Mbeya.
- The oil refinery, steel rolling mills and Kibo Paper Mill are located in Dar-es-Salaam; the new pulp and paper mill complex is under construction at Mufindi; and there are plans to develop a fertilizer complex at Kilwa based on Songo-Songo Island natural gas.

Vehicle assembly is all concentrated at Dar-es-Salaam.

This list gives only a partial coverage (80-90 per cent) of Tanzania's industrial sector output. It reflects the dominance of the public sector corporations although some private units are included such as:

- small oil seed units
- small tanneries
- soft drinks units
- textile and garment firms.

Table A-11. Major planned industrial projects<sup>a/</sup>  
(original list)

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShs. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
<b>1. Agro-based industries</b>									
1.1	Sugar industry	Mtwara (SUDECO)	To produce white sugar for the southern market	250	10,000 tons	100	2,000	Sugar cane farming to be incorporated in the project	Foreign financing required
		Musoma (SUDECO)	To produce white sugar to supplement demand in the Lake and northern regions	N.A.	60,000 tons	600	3,000	Sugar cane production to be incorporated in the project	Project at pre feasibility stage
		Ruipa Kilombero (SUDECO)	To produce white sugar to the expanding national market and to export the surplus (if any)	3,300	100,000 tons	1,000	3,000	Sugar cane production to be incorporated in the project	Foreign financing required
1.2	Textile industry	Mtwara Textile Mills (TEZCO)	Besides the apparently saturated market of textiles, TEZCO is considering constructing an integrated textile mill in Mtwara to serve the southern regions and for export	1,100	25 million linear metres	460	2,200	Cotton to be supplied locally	Foreign financing required The location lacks enough basic utilities such as electricity and water
		Cotton hosiery and garments unit (MICO)	To manufacture various types of garments such as men's shirts and trousers, T-shirts, underwear, ladies wear and under garments to be located in Mara region to cater to Lake regional market	13	350,000 units of various types	17	288	Cloth to be acquired locally	It is a regional project
		Terry towels, handkerchiefs and cotton furnishing unit (MICO)	To produce terry towels, curtain materials and handkerchiefs	28	600,000 towels, 200,000 metres of curtains and 1.2 metres handkerchiefs	30	172	Locally available	It is a regional project

Table A-11 (continued)

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShs. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
		Bandages, cotton wool and other hygienic materials (NICO)	To produce rolls of cotton dressing, bandages and guazes	21	1.3 million rolls	8	67	The basic raw materials - cotton, spinning wastes and cotton yarn are available locally	It is a regional project
1.3	Sisal industry	Sisal bags Tanga (TSA)	To manufacture sisal bags	17	10 million bags	80	809	Sisal fibre to be available from local sources	A pre-feasibility study available
		Sisal puddings/ mattresses Musoma (TSA)	To manufacture rubberized sisal mattresses	N.A.	2,800 tons	N.A.	N.A.	Hedgerow sisal fibre available around lake regions	
1.4	Food processing								
1.4.1	Maize mill	Korogwe (MMC)	To establish maize flour mill in Tanga region so as to reduce transport costs of maize to other milling plants	10	18,000 tons	35	33	Maize to be purchased locally	A full feasibility study exists
1.4.2	Fruit canning	Several localities (NIDO/Private)	Not specified but fruit canning can be done at a small scale through assistance from SIDO, etc. depending on availability of raw materials in a specific area	3	-	-	-	Depending on availability of fruits	
1.4.3	Edible oil	Several localities (SIDO/Private)	Small edible oil mills may be started on particular localities	10	-	-	-	Depending on availability of oilseeds	
1.4.4	Coffee/tea processing	Bukoba/Moshi Arusha/Dar (IAT)	Possibility of starting projects to prepare ready-made coffee and tea mainly for export	-	-	-	-	Coffee and tea locally available	

Table A-11 (continued)

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShs. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
<b>1.5 Forest based projects</b>									
1.5.1	Saw mills	Kagera (Regional Authorities)	Kagera regional authorities are considering building several saw mills in the region to exploit the existing forest products (logs) in the area. One such saw mill proposed to be located at Krishanda valley. Similar ones are planned for Minziro and Biharamalo using mobile saw mills	7	1,350 m <sup>3</sup>	5	46	Logs to be exploited from surrounding forests	Full feasibility studies exists
1.5.2	Furniture joinery	Mwanga (District Authorities)	To manufacture various school office and domestic furniture items	4	4,600 m <sup>3</sup>	3	26	Sawn wood to be supplied from neighbouring districts	Full feasibility study exists
<b>2. Metal-working industries</b>									
2.1	Machine tools	Moshi (NDC)	To produce 400 types of machine tools in collaboration with a Bulgarian firm	159	N.A.	47	436	Initially castings and few other components to be imported, later to be supplied from central foundry and forge plant	The plant is under construction
2.2	Farm implements	Mwanza (NDC)	To produce animal and tractor drawn farming implement	309	7,700 tons	190	583	Initially steel and castings will be imported, later to be supplied from central foundry and forge plant	Project under active study
2.3	Transformer and switchgear	Arusha (NDC)	To produce distribution transformer and switchgear	62	640 units of distribution transformer 130 switchgear	115	330		Project under construction

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShs. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
2.4	Welding electrode and welding	(MDC)	To produce welding transformer and electrode	25	-	47	74		Project under study
2.5	Light commercial vehicles	Kibaha/Dar (SMC/MDC)	To assemble CKD vehicles in collaboration with Isuzu of Japan	125	-	800	632	CKD components imported from Japan, 15 per cent materials local	Negotiations underway
2.6	Tractors	Kibaha (SMC)	Initially to assemble tractors, later to manufacture them in collaboration with a foreign company	325	1,000 units	450	180	Initially to import CKD, later to get castings and forging requirements from proposed central foundry and forge plant	Negotiations underway with vermet tractors of Finland
2.7	Trailer and low loader	Dar-es-Salaam (MDC)	To expand the present Burns and Biane Co. to manufacture various components in stages	79	-	120	215	Initially to assemble trailers from imported components, later to be manufactured locally	Negotiations with M/S Vocila Glorica of Yugoslavia
2.8	Railway wagons	Dar-es-Salaam (MDC)	To manufacture railway wagons	118	400	195	320	Initially to be imported, later to be manufactured locally	A Swedish firm M/S Kochum Ab to participate
2.9	Motor cycles	Dar-es-Salaam (MDC)	To manufacture motor cycles	52	5,000	53	192	It will start with assembling them, later most components to be manufactured locally	SMC seeking collaboration with HONDA of Japan
2.10	Heavy structural boiler shops	...	Many similar items to be grouped together and produced in an organized unit. The products will be utilized by various sectors in the country	225	-	160	785	Some materials will be imported, others to be available locally	Foreign technical collaboration required

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Table A-11 (continued)

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShs. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
2.11	Cable and stranded G.L. wire	Dar-es-Salaam (NDC)	To expand the present Tanzania cables to meet future demands	5	-	40	94	From existing mills and imports	Tanzania cables has the technology
2.12	Diesel engines and pumps	(NDC)	To produce various items like diesel engines, pumps, garage compressors, sewing machines and sealed units	65	-	55	555	Heavy castings to come from proposed central laundry unit	Foreign collaboration needed
2.13	Industrial machinery and light structurals	(NDC)	To produce transmission towers tanks, light material handling machines, cranes, conveyors and small industry	60	-	75	370	Some imported, others locally available	Foreign technical assistance needed
2.14	Expansion of Mang'ula mechanical and machine company	Kilombero (NDC)	To expand the existing facility and introduce new product mix so as to utilize the excess capacity available by adding a few matching equipment. Construction machinery, spare parts and technological structure	39	-	30	676	To be imported, others local	
2.15	Foundry and forge	Location to be determined by considering main source of raw materials and major centres of market (NDC)	It is necessary to establish a central foundry and demand of castings that will be required by the various industries, some of which are mentioned in this appendix. This plant will reduce the import content of the various units	335	-	350	1,650	Sponge iron (iron ore) and coal, to be available if iron and coal deposits are exploited. Scrap iron should also be used. Some other items will be imported	Technical and financing collaboration required

Table A-11 (continued)

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShs. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
2.16	Auto components	(SNC/Private)	To manufacture auto components for the present population of automobiles and future addition. A detailed study is required to determine the type and quantity of components to be manufactured	1,000	-	N.A.	N.A.	To be studied	Foreign collaboration required
2.17	Zonal workshops	In each industrial zone	Initially 4 zonal workshops are envisaged for repair and produce minor spare parts for various factories	172	-	-	720	Local from central foundry unit and rolling units	
2.18	Rural working small units	Various locations (SIDO/Private)	There are many small items which can profitably be promoted by SIDO, including those especially some auto components and building materials	Approx. 200	-	-	-	Mainly from central foundry and steel rolling mills, other sources and imports	
2.19	Building materials	(NDC/Private)	To produce various building items such as steel doors, windows, hardware, etc.	100	-	-	-	General foundry and steel rolling units	
2.20	Boat building	(NDC/Private)	To manufacture small fishing vessels so as to improve the fishing industry and repair other vessels	N.A.	10 boats	-	-	Local and imported	
2.21	Telephone equipment	N.A. (T/Posts and Telecomms)	To produce various telephone equipment	-	-	-	-		
3.	<u>Chemical-based industries</u>								
3.1	Sulphur-based	Tanga Dar-es-Salaam (NCI/Private)	A proposal to start a project to produce sulphuric acid and alum, important chemical in water treatment	60	M2S04155,000	60	100	Pyrited, bauxite and sulphuric acid and alumina, all locally available	



Table A-11 (continued)

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShr. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
3.2	Pesticides insecticides	Dar-es-Salaam Morogoro, Tanga	To manufacture pesticides and insecticides for mainly the agricultural sector	60	5,000	90	60		
3.3	Lime/Bleaching powder/precipitated calcium carbonate	Tanga, Dar-es-Salaam, Arusha	To produce locally those commodities which are used in textile, leather, paper, print and rubber plastics industries	35	<u>Tons</u> Lime 6,000 B.P. 3,000 P.C.C. 3,000	-	200	Limestone	
3.4	Mini pulp and paper plants	(SIDO)	To start mini pulp and paper plants to serve specific market segments					Several sources such as bagasse, waste paper, etc.	To be initiated by SIDO
3.5	Dyes for leather and textiles	Mwanza, Dar-es-Salaam	To produce some dyes for the leather and textile industry	15	150 tons	10	25	To be studied to determine the least cost materials	
3.6	Alcohol, bakers yeast	Moshi (NCI)	To produce 1,000 tons of bakers yeast, 8 million litres of alcohol, 250 tons of dry yeast and 14,000 tons of vinesses	250	-	140	186	Sugar molasses to be produced from sugar mills	
3.7	Viscose rayon	Dar-es-Salaam Tanga, Iringa		150	3,000 tons	100	415	Cotton linters, caustic soda	A pre-feasibility study needed
3.8	Refractories	Tanga (Saruji Corporation)	A plant to produce basic bricks and monolithics and aluminous bricks and monolithics	450	30,000 tons	192	135	Ball clays and calcinated kaolin local, others to be imported	A full feasibility study is available
3.9	Coal based chemicals	Mbeya, Tukuyu	To investigate producing a number of chemicals from coal such as ammonia, urea, gasolines, organic chemical explosives, synthetic rubber and phernolic resins					Coal deposits in Mbeya Region	

Table A-11 (cont. Inued)

No.	Name of project	Location and (promoter)	Description of project	Estimated capital investment TShs. mill	Quantity to be produced per annum	Turnover per annum TShs. mill	Employment No.	Main raw materials	Comments
3.10	Cement	Kilwa, Mwanza, Bukoba	To build a medium size cement plant at Kilwa and several mini cement plants around the lake regions		Kilwa 80,000 tons			Gypsum deposits	
3.11	Fertilizers	Kilwa	To produce natural gas amonia urea	4,000 <sup>b/</sup>				Natural gas	Under implementation
3.12	Glass	Mwanza, glass container Dar-es-Salaam sheet glass (SARUJI)	To produce glass containers and sheet glass	460	20,000 tons	N.A.		Silica sand, felspar quartz	Under implementation

Source: TISCO, Parastatal, Ministry of Industries.

a/ Details pertaining to recent developments in the implementation of these planned industrial projects may be obtained from the Tanzania Industrial Studies and Consulting Organization.

b/ Including exploitations of natural gas.

Table A-12. Locations of known mineral resources in Tanzania

Minerals	Location/region	Remarks/reserve
1. Aquamarine	Southwest Moshi, Kilimanjaro Region	Not explored.
2. Amethyst <sup>a/</sup>	Sekenke District, Singida	Not explored.
3. Iron	Chunya and Liganga, Mbeya	40 and 45 million tons of proven reserves respectively.
4. Bentonite	Singa and Minijingu Districts, Arusha	Cast reserves estimated.
5. Beryl <sup>a/</sup>	Manyara Kibaya, Arusha Region	Mining took place over the 1972-77 period.
6. Calcite	Coast region	Not explored.
7. Chrysoprase	South of Kondoa	Proven reserves only.
8. Coal	Songwe-Kiwira, Mchuchuma District Mbeya	Total proven reserves 324 million tons, total estimated reserves 1.5 billion tons.
9. Copper	Same District, Kilimanjaro Mpanda District, Kigoma	Being investigated.
10. Corundum <sup>a/</sup>	Kagera District, Arusha	Not explored.
11. Diamonds	Mwadui in Shinyanga District	Reserves 2.5 million tons.
12. Garnet	Same District, Kilimanjaro	Some being mined.
13. Gold reef	Geita and Chunya Districts Mbeya; Mpanda, Kigoma, Sekenke and Kahama; Singida	800,000 tons of ore deposit proved, large potential for more reserves exist.
14. Gold alluvial	Chunya and Mpanda District; Kigoma	
15. Gypsum	Itigi, Dodoma, Kilwa town, Ruvuma and Same District, Kilimanjaro	At Kilwa 2.6 million tons proved reserves.
16. Hametite	Kongwa, Mpwapwa District	Not explored.

Table A-12 (continued)

Minerals	Location/region	Remarks/reserve
17. Kaolin	Pugu, Kisaware District	50 million tons estimated reserves.
18. Lime and limestone	Dar-es-Salaam and Tanga Regions	Vast reserves.
19. Magnesite	Chambogo and Lobolo in Same District, Kilimanjaro	4.5 million tons.
20. Meerschaum	Sinya in Arusha Region	28,000 tons.
21. Mica	Near Tukuyu, Mbeya; Near Mpanda, Kigoma; Kilosa, Morogoro	Being mined at Tukuyu, and Kilosa.
22. Moonstone	Kibaya, Arusha	Not explored.
23. Opal	Same District, Kilimanjaro	Not explored.
24. Pitchblende	Morogoro District	Not explored.
25. Ruby	Mondoli, Tanga	Not explored.
26. Salt	Nyanza, Mwanza, Bagamoya Coast Lindi and Dar-es-Salaam Regions	60,000 tons a year for 20 years.
27. Saltpetre	Lake Natron	Not explored.
28. Sapphire	Mkata	Not explored.
29. Scapolite	Mpwapwa District	Not explored.
30. Sepiolite	Arusha District	Not explored.
31. Tin	Karagwe District, Bukoba	Not explored.
32. Topaz <sup>a/</sup>	Namanga in Arusha District	Not explored.
33. Tourmaline <sup>a/</sup>	South of Arusha	Not explored.
34. Travertine	Mbeya District	Not explored.
35. Turquoise	Tanga District	Not explored.
36. Uranionite	Mgeta, Morogoro District	Not explored.

Table A-12 (continued)

Minerals	Location/region	Remarks/reserve
37. Vermiculite	Morogoro District	Not explored.
38. Wolfram	Bukoba District	Not explored.
39. Zircon <sup>a/</sup>	Singida District	Not explored.
40. Zoisite	South of Arusha	Not explored.
41. Uranium	Near Tukuyu, Mbeya	Under investigation.
42. Emerald <sup>a/</sup>	Manyara District, Arusha	Not exploited.
43. Lead	Mbeya District	Under investigation.
44. Guano	Mbeya District	Not explored.
45. Phosphates	Minijigu, Arusha District	2.5 million tons proven.

Source: Ministry of Mining and STAMICO.

<sup>a/</sup> Gemstone.

**Appendix B**

The approved and/or operational technical co-operation projects of UNIDO

**United Republic of TANZANIA**

Project Number	Backstopping Responsibility (Spec.Act.Code)	Project Title
DP/URT/77/013*	IO/CHEM (32.1.D)	Assistance in the establishment of a pharmaceutical plant in Zanzibar
DP/URT/78/016**	IO/AGRO (31.7.B)	Strengthening of the National Textile Corporation (TEXCO)
US/URT/79/240*	IO/AGRO (31.7.D)	Assistance to the leather and leather products industry pilot plant
DP/URT/80/022*	IO/MET (31.8.D)	Establishment of a Small Industries Development Organization (SIDO) foundry with integrated mechanical workshops
UC/URT/80/093	IO/TRNG (31.5.B)	Industrial training (multifund to UD/URT/80/093)
UD/URT/80/093	IO/TRNG (31.5.B)	Industrial training (multifund to UC/URT/80/093)
DP/URT/81/026*	IO/CHEM (32.1.D)	Assistance for the production of plant derived pharmaceuticals
DP/URT/81/037*	IO/INFR (31.3.J)	Establishment of the Tanzania Industrial Research and Development Organization (TIRDO) (phase II) (multifund to SM/URT/81/037)
DP/URT/81/038*	IO/INFR (31.3.O)	Assistance to the industrial estate in Zanzibar
US/URT/81/200*	IO/INFR (31.3.L)	Development of industrial co-operatives (phase II)
IW/URT/82/002	IO/AGRO (31.7.D)	Establishment of a leather goods unit, Isanga, Mbeya
IW/URT/83/001	IO/CHEM (32.1.B)	Preparatory assistance for the development of ceramic technologies for rural areas
IW/URT/84/001	IO/AGRO (31.7.B)	Assistance to Kurasini Women Tailoring Society
SI/URT/84/801	IO/CHEM (32.1.G)	Expert assistance for the establishment of a pesticide pilot plant under a soft loan advance from the Italian Government
TF/URT/85/001	IO/CHEM (32.1.B)	Associate expert (Mr. Starita)
RP/URT/85/606*	IO/CHEM (32.1.B)	Temporary 1985 IDDA allotments (ex RP/URT/84/006 - Introduction of mobile brickmaking technology (continued under XA/URT/86/606) (IDDA)
SI/URT/85/801	IO/MET (31.8.D)	Foundry performance improvement programme
XA/URT/86/606	IO/CHEM (32.1.B)	Temporary 1986 IDDA allotments (ex RP/URT/84/006 - Introduction of mobile brickmaking technology (ex RP/URT/85/606) (IDDA)

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

\*\* Total allotment \$1 million or above.

Appendix C

Leading Industrial Companies in Tanzania, 1984  
(all values in millions of US dollars)

Rank	Company	Type of Business	Sales/ Turnover	Net profit/ (Loss)	Net Assets	Employees	Ownership (Public or private shares) <sup>a/</sup>
1	National Textile Corporation <sup>b/</sup>	Textiles	628.4	17.7	134.7	21,000	S=majority s/holding
2	Board of Internal Trade (BIT) <sup>a/</sup>	Imports, wholesale, marketing	450.0	11.7	144.4	7,323	S=100 per cent (see footnote <u>b/</u> )
3	Tanzania Breweries <sup>**c/</sup>	Brewery	254.9	3		2,872	
4	Aluminium Africa	Aluminium	52.5	9.7	18.2	1,406	
5	Friendship Textiles <sup>**/</sup>	Textiles	30.4	(4.8) <sup>c/</sup>	43.8		S=100 per cent
6	Tanzania Fertilizer Co. <sup>d/</sup>	Chemical Fertilizer	25.6	0.5	10.7	760	S=95 per cent
7	General Tyres East Africa <sup>**/</sup>	Tyres	20.5	0.5	7.9	850	
8	Tanzania Elimu Supplies	Office Equipment	16.2	0.4	4.3 <sup>d/</sup>	660	
9	Ubungu Farm Implements <sup>a/</sup>	Farm Equipment	15.8	3.0 <sup>c/</sup>	6.5	652	S=100 per cent
10	Brooke Bond	Tea	12.5	2.5	8.4	3,300	F=Unilever (UK/ Netherlands)
11	Kilimanjaro <sup>**/</sup>	Textiles	11.1	0.5 <sup>c/</sup>	4.5		S=100 per cent
12	Tanzania Tea Authority	Tea	10.2	(0.7)	10.7		S=100 per cent
13	Lake Soap Industries	Soap, detergent mfg.	8.4	0.2	2.5	250	
14	Tanzania Bag Corp. <sup>**/</sup>	Bags	5.2	0.7 <sup>c/</sup>	5.0		S=100 per cent
15	Steel Rolling Mills <sup>a/</sup>	Steel	4.8	0.4 <sup>c/</sup>	5.5	349	S=100 per cent
16	Tanzania Electrical Wood Mfg. <sup>a/</sup>	Wood	4.0	0.4 <sup>c/</sup>	3.7	142	S=100 per cent
17	Tanzania Oxygen <sup>a/</sup>	Oxygen	3.5	0.9 <sup>c/</sup>	3.2	116	S=60 per cent; F=40 per cent (British Oxygen)
18	Blanket Mfg. <sup>**/</sup>	Textiles	2.7	0.6	1.0		S=100 per cent
19	National Engineering <sup>a/</sup>	Engineering	2.7	0.4 <sup>c/</sup>	1.3	391	S=100 per cent
20	Tanzania Cables <sup>a/</sup>	Cables	2.1	0.5 <sup>c/</sup>	5.5	85	S=100 per cent

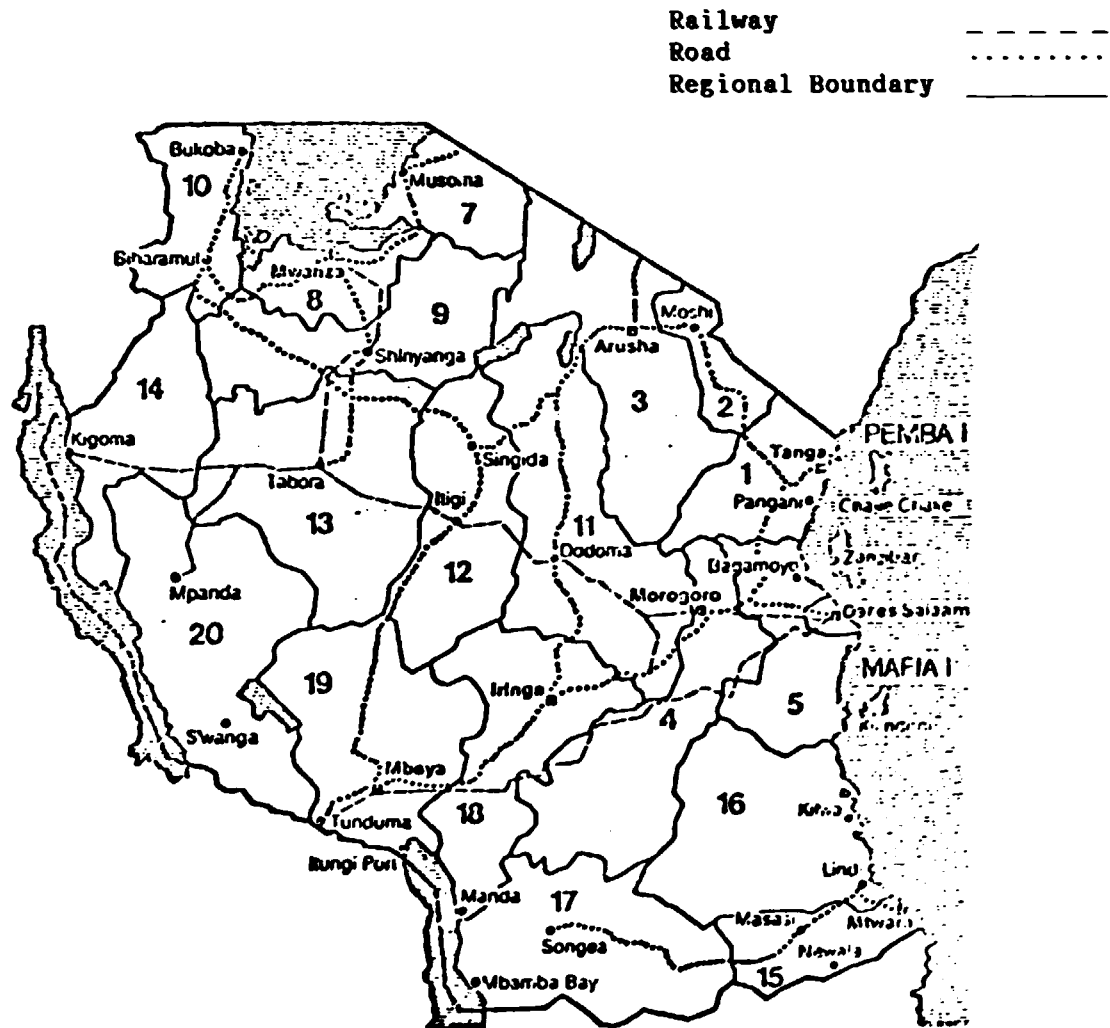
Source: South, March 1986.

- a/ S (State), F (Foreign ownership).  
b/ BIT comprises 30 public companies.  
c/ Pretax profit.  
d/ Net fixed assets.

\* 1984.  
 \*\* 1983.

Appendix D

Map: Industrial Growth Zones in Tanzania



Northern Zone

- 1 Tanga Region
- 2 Kilimanjaro Region
- 3 Arusha Region

Lake Zone

- 7 Mara Region
- 8 Mwanza Region
- 9 Shinyanga Region
- 10 West Lake Region

South Eastern Zone

- 15 Mtwara Region
- 16 Lindi Region
- 17 Ruvuma Region

Eastern Zone

- 4 Morogoro Region
- 5 Coast Region
- 6 Dar es Salaam Region

Central Zone

- 11 Dodoma Region
- 12 Singida Region
- 13 Tabora Region
- 14 Kigoma Region

South Western Zone

- 18 Iringa Region
- 19 Mbeya Region
- 20 Rukwa Region



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