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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INDUSTRIAL DEVELOPMENT REVIEW SERIES

LIBERIA

Resource-based industrialization and rehabilitation

Prepared by the
Regional and Country Studies Branch

5+6

V.88-22323

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PREFACE

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

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

The Reviews draw primarily on information and material available at UNIDO headquarters from national and international sources as well as data contained in the UNIDO data base. Generally, specific field surveys are not undertaken. The presentation of up-to-date information on sub-sectoral manufacturing trends are usually constrained by incomplete national data on the industrial sector. To supplement efforts under way in UNIDO to improve the data base and to monitor industrial progress and changes on a regular basis, it is hoped that the relevant national authorities and institutions and other readers will provide comments and further information. Such response will greatly assist in updating the Reviews.

The present Review was prepared on the basis of information available at UNIDO Headquarters at the end of October 1987. Chapters 1 and 2 are analytical, 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. Chapter 3 examines the role of small- and medium-scale enterprises, focussing also on the woodworking industry. Chapter 4 spells out the need for industrial rehabilitation by citing case studies of selected enterprises requiring rehabilitation assistance. Chapter 5 contains an overview and assessment of national plans and policy measures relevant to industrial development, a review of recent trends in industrial policy and details pertaining to the industrial resource base, with particular reference to the role of technical co-operation in resource-based industrial development.

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

CONTENTS

Page

Basic indicators vi

Summary xi

1. THE ECONOMY OF LIBERIA 1

1.1 Recent economic trends 1
1.2 Economic structure 2
1.3 Overview of the manufacturing sector 7

2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR 13

2.1 Growth and structural change 13
2.2 Employment and productivity 16
2.3 Trade in manufactures 19
2.4 Manufacturing problems and issues 22

3. SMALL- AND MEDIUM-SCALE MANUFACTURING ENTERPRISES 25

3.1 The scope and structure of small- and medium-scale enterprises (SME) 25
3.2 Government assistance to SMEs 28
3.3 The wood-working industry 32

4. REHABILITATION OF MANUFACTURING ENTERPRISES: SELECTED CASE STUDIES 37

4.1 The need for rehabilitation 37
4.2 Industrial establishments meriting rehabilitation assistance 39
4.3 Strategies for rehabilitation 41

5. POLICIES, INSTITUTIONS AND RESOURCES FOR INDUSTRIAL DEVELOPMENT 43

5.1 Objectives and strategies 43
5.2 Recent trends in industrial policy 44
5.3 Industrial policy instruments and institutions 46
5.4 The Investment Incentive Code 48
5.5 The industrial resource-base 51
5.6 The role of technical co-operation to industry 58

ANNEXES

Annex A: Statistical Tables 63
Annex B: Technical co-operation projects of UNIDO 71
Annex C: List of projects identified by UNIDO project formulation mission, 15-30 October 1987 75

Selected references 78

LIST OF TABLES

Table No.		Page
1.1	Economic Recovery Programme and fiscal plans, 1986/87-1988/89	3
1.2	Budgetary surplus/deficit balance, 1980-1985	4
1.3	Unit price of major exports, 1982-1985	5
1.4	Balance of payments summary, 1979-1984	6
1.5	Summary of external debt, 1970-1984, (selected years)	7
2.1	Industrial output by branch of manufacturing, 1973-1985 (selected years)	14
2.2	Manufacturing gross output by end use, 1973-1985	15
2.3	Employment in manufacturing industries, 1983	17
2.4	Employment, gross output and wages, 1984 and 1985	18
2.5	Composition of exports (value and share), 1981 and 1984	20
2.6	Conposition of imports (value and share), 1981 and 1984	20
2.7	Destination of Liberia's principal manufactured exports, 1984	21
2.8	Average apparent consumption of selected manufactures, 1981-1983	23
3.1	Existing small- and medium-scale enterprises in the South-eastern region, by type of enterprises, 1985	26
3.2	Utilization of IDA credit line, mid-1987	30
3.3	Estimated financial requirements for leasing machinery to woodworking industry, 1984-1988	33
4.1	Capacity utilization rates in Liberian manufacturing enterprises, 1985	38
5.1	Economic Recovery Programme; financial assistance to SMEs, 1986/87-1987/88	45
5.2	Proposed investments in selected branches of manufacturing and employment implications, 1982-1986	45

LIST OF TABLES
(continued)

Table No.		Page
5.3	Mineral output and exports, 1976-1985	52
5.4	Estimated agricultural production, 1977-1985	53
5.5	Regional distribution of forest area, 1985	54
5.6	Annual round log production by company (Grand Gedeh), 1980/81-1982/83	55
5.7	Some social characteristics of population, 1985	56

LIST OF STATISTICAL ANNEX TABLES

A-1	International comparisons of economic performance, 1970-1984	64
A-2	Distribution of GDP by sector of origin, 1970-1984	65
A-3	Comparative average annual rates of growth by economic sector, 1970-1984	66
A-4	Projects approved for granting incentives by NIC, 1982-1986	67
A-5	Employment by major occupational group and industry, public and private sector, 1985	68
A-6	Employment by major occupational group and industry, private sector, 1985	69

EXPLANATORY NOTE

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

Dates divided by a slash (1986/87) indicate a crop year or a financial year. Dates divided by a hyphen (1986-1987) indicate the full period, including the beginning and end years.

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

Totals may not add precisely due to roundings.

In Tables:

- Three dots (...) indicate that data are not available or not separately reported;
- Two dashes (--) indicate that the amount is nil or negligible;
- A hyphen (-) indicate that the item is not applicable.

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

The following abbreviations are used in this document:

ACDB	Agricultrual and Co-operative Development Bank
ADB	African Development Bank
BADEA	Arab Bank for Economic Development in Africa
BAS	Business Advisory Service
BSE	Bureau of State Enterprises
ECOWAS	Economic Community of West African States
ERP	Economic Recovery Programme
GDP	Gross domestic product
GNP	Gross national product
IDA	International Development Association
IFC	International Finance Corporation
IMF	International Monetary Fund
INRA	International Rubber Agreement
IPF	Indicative Planning Figure
JASPA	Jobs and Skills Programme for Africa
LBDI	Liberian Bank for Development and Investment
LPMC	Liberia Produce Marketing Corporation
LPRC	Liberian Petroleum Refinery Corporation
MPEA	Ministry of Planning and Economic Affairs
MVA	Manufacturing value added
MVTC	Monrovia Vocational Training Centre

.../

(Continued)

NATCAP	National Assessment of Technical Co-operation and Projects
NBL	National Bank of Liberia
NHSB	National Housing and Savings Bank
NIC	National Investment Commission
NIOC	National Iron Ore Company
SDR	Special drawing rights
SEFO	Small Enterprises Financing Organization
SME	Small and Medium Enterprises
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization

BASIC INDICATORS 1
The Economy

GDP (1985) : L$811.2 million

Population (mid-1986) : 2.22 million

Average annual growth rate of population (per cent) :

1970-1980	1980-1986
3.4	3.1

GNP *per capita* (1985) : L$370

Average annual growth rate of GDP (per cent) :

1970-1974	1975-1979	1980	1981	1982	1983	1984	1985	1986[a/]
4.0	4.1	-6.3	-5.7	-1.0	-4.3	-1.9	-0.9	-4.0

Distribution of GDP by sector of origin (per cent) :

	1970	1975	1980	1985
Agriculture	14.4	15.2	17.3	19.3
Industry	30.2	29.3	27.2	23.5
Manufacturing	6.3	8.2	8.4	7.5
Other	55.4	55.5	55.5	57.2

Annual rate of inflation (per cent) (Monrovia Consumer Price Index) :

1975-1980	1981	1982	1983	1984	1985	1986
9.5	5.9	6.9	2.0	0.7	-0.2	9.1

Exchange rate : The Liberian Dollar is pegged to the US dollar at L$1 equivalent to US$1. US currency is legal tender in Liberia and circulates along with Liberian coinage.

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a/ Estimate.

BASIC INDICATORS 2
Resources

Resources

Crops, leading products (1984) ('000 tonnes)	:	Rice (paddy) (230), cassava (300), bananas (79), crude rubber (76), palm oil (30), sweet potatoes (17), coffee (12)
Forestry production ('000 cubic metre)	:	Timber (800 in 1982), sawnwood (53 in 1985)
Mineral resources (1985)	:	Iron ore (8,909 thousand tonnes), diamonds (204 thousand carats), gold (134 kilos)

BASIC INDICATORS 3
Foreign trade and balance of payments

Exports		
Total value (1985)	:	L$435.63 million (fob)
Main exports	:	Iron ore, rubber, diamonds, logs, coffee and cocoa
Main destinations (1984) (per cent)	:	Fed. Rep. Germany (29.8), USA (20.2), Italy (15.2), France (8.9), The Netherlands (6.2), Belgium-Luxembourg (4.7), Spain (3.0) and Nigeria (2.0)
Imports		
Total value (1985)	:	L$284.4 million (cif)
Main imports	:	Petroleum products, transport equipment, foodstuffs, chemicals and rubber products and electrical and non-electrical machinery
Main origins (1984) (per cent)	:	USA (22.6), Fed. Rep. Germany (11.0), The Netherlands (9.6), Japan (8.2), Côte d'Ivoire (7.3) and UK (6.5)
Balance of payments (current account surplus) (1985)	:	$75 million
Foreign exchange reserve (May 1987)	:	$1.58 million
External debt outstanding disbursed (1985)	:	$873.5 million
as per cent of GNP (1985)	:	107.7
Debt service (1985)a/	:	$17.5 million
Debt service (1986)b/	:	$124.3 million
as per cent of exports (1985)	:	4.0

a/ Estimate.
b/ Projected.

BASIC INDICATORS 4
The manufacturing sector

Manufacturing value added		
(1984)	:	**L$60.0 million[a]**
(1985)		**L$58.7 million[a]**
MVA per capita (1984)	:	**L$29[a]**
Employment in manufacturing (1985)	:	**6,671**
- as percentage of total labour force (formal sector)	:	**6.5**
MVA per employee	:	**L$8,799[a]**

Composition of gross output :
(percentage share)

	1977	1985
- Mainly consumer goods	46.6	57.0
- Mainly intermediate goods	52.3	37.7
- Mainly capital goods[b]	1.1	5.3

Annual real growth rate of MVA :

1970-1974	1975-1979	1980	1981	1982	1983[a]	1984[a]	1985[a]
13.3	9.3	6.3	-10.5	-5.9	0.9	-5.1	-1.0

Trade in manufactures (1984)	:	
- Manufacturing exports		**$13.9 million**
- Manufacturing imports		**$200.4 million**
Share of manufactures (1984)	:	
- in total exports		**3.1 per cent**
- in total imports		**55.2 per cent**

a/ Estimate.

b/ Including some consumer durables.

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

	Unit	Liberia	Côte d'Ivoire	Ghana	Guinea	Senegal	Sierra Leone
I. DEMOGRAPHIC INDICATORS							
Population (mid-1985)	millions	2.2	10.1	12.7	6.2	6.6	3.7
Population growth (1980-85)	per cent per annum	3.4	3.8	3.3	2.4	2.9	2.2
Infant mortality (1985) (aged under 1 year)	per thousand	127	105	94	153	137	175
Area	'000 sq. km.	111	322	239	246	196	72
Primary school enrollment as percentage of age groups (1984)	per cent male/female	95/57	91/63	75/59	44/20	66/44	45[b]
II. ECONOMIC INDICATORS							
GDP (1985)	$ billion	1,000	5,220	4,860	1,980	2,560	1,190
GNP per capita (1985)	$	470	660	380	320	370	350
GDP growth (1980-85)	per cent/annum	-1.9	-1.7	-0.7	0.9	3.3	2.1
Agriculture (1985)	per cent of GDP	37	36	41	40	19	44
Industry (1985)	per cent of GDP	28	26	15	22	29	14
Manufacturing (1985)	per cent of GDP	5	17	11	2	18	6
Services (1985)	per cent of GDP	36	38	43	38	52	42
Exports of goods and non-factor services (1985)	per cent of GDP	43	46	13	25	31	11
Gross domestic investment (1985)	per cent of GDP	9	13	9	9	14	9
External public debt (1985) (outstanding & disbursed)	per cent of GDP	85.3	110.2	22.9[c]	59.5[c]	82.8	32.6
III. INDUSTRIAL INDICATORS							
MVA (1984) (at constant 1980 prices)	$ million	63	1,229	223	41	574	75
Share of MVA in GDP (1984)	per cent	5.	17	11	2	18	6
Growth of MVA (1980-1984) (annual average)	per cent	-5.1	--	-5.6	1.5	4.9	5.2
Share of manufactured exports in total exports (1985)	per cent	1	10	5	--	11	32
Share of manufactured imports in total imports (1985)	per cent	54	58	68	--	60	36

a/ Based on "The World Development Indicators", presented in the World Development Report 1987. It should be noted that the UNIDO data base, United Nations statistics, national statistics and World Bank data base do not always tally precisely and, therefore, discrepancies may be found between Basic Indicators 5 and the text and Tables.

b/ Total of male and female.

c/ 1984.

SUMMARY

The economy of Liberia is facing an extended period of declining economic growth. The year 1987 is expected to be the seventh consecutive year of negative growth in GDP. Growth of GDP in real terms fell by 4 per cent in 1986 and government revenue collection had fallen to an all time low of L$172.6 million. A continuing shortage of the US dollar and reluctance of traders to accept Liberian currency created a serious liquidity shortage within the economy. In the wake of mounting external arrears several foreign banks ceased operations in Liberia in early 1987. Unemployment has risen and the government has had to incur an increasingly burdensome public sector deficit. With the stagnation in the prices of Liberia's major exports, iron ore and rubber, the balance of payments situation has also worsened. Falling aid flows constitutes a major setback for the economy as domestic capital formation is heavily dependent on foreign assistance.

In order to deal with this situation the government has drawn up an Economic Recovery Programme (ERP) for 1986-87 to 1988-89. The ERP aims at reducing the budget deficit substantially by fiscal 1988/89. It estimates that domestic revenues can be increased from $193 million in 1986/87 to $237 million in 1988/89. Resources available for debt service are expected to rise from $145 million to $186 million over this period. The debt service gap is to be eliminated by that year. Foreign resource financing of the programme is expected to be of the order of $210 million (as against a domestic financing contribution of $75 million). Several administrative measures have been proposed to increase the efficiency of revenue collection and the control of public expenditures. The government is seriously considering policy for reducing external borrowing requirements, the drawing up of a priority list of debts to be paid and the establishment of audited accounts for the major public companies.

The present economic crisis has severly affected Liberian industry. The Liberian manufacturing sector grew rapidly during the 1970s and significant progress was made by the intermediate manufacturing branches during this period. An import substitution strategy was followed but emphasis was not placed on increasing domestic resource use. Import dependence of the intermediate branches increased and the foreign exchange crisis of the 1980s led to a major contraction.

During the 1980s the consumer goods and metals based industries have increased their share of a declining gross industrial output. There is thus some indication of greater concentration on domestic resource use. Declining output levels have been associated with declining productivity. Productivity growth even during the 1970s was relatively low. There is some evidence to show that it has not been easy to reduce unit labour costs and reductions in output within the manufacturing sector have generally been greater than reductions in employment.

Manufactured exports account for about 3 per cent of total Liberian export earnings. There is some scope for expanding such exports and attention could be paid to the development of long term trading arrangements with regional and other developing countries which have a high share of the Liberian

import market. There also exists very considerable scope for expanding the range of domestic demand and import substitution oriented manufacturing activity - provided that measures can be instituted to ensure the operational efficiency of domestic demand oriented firms.

The ERP identifies the small- and medium-enterprise sector as the main receipient of foreign and domestic financial assistance during the 1986/87 to 1988/89 period. This sector can play a key role in increasing domestic resource use lowering external dependence and integrating industrial growth with the rest of the economy. UNIDO has had a long standing project providing technical and institutional support to the Liberian small- and medium-scale enterprise sector (SME).

Within the Fourth UNDP Country Programming Cycle (1987-1991) multilateral technical assistance to the industrial sector is to be provided through the Ministry of Planning and Economic Affairs (MPEA), state enterprises, the private sector, as well as in the fields of upgrading technical and managerial skills and a pilot employment project. Further, UNIDO has identified a number of pipeline projects in the fields of industrial policies and planning, manpower training, food- and agro-industries, engineering industries, forest-based industries and institutional infrastructure.

Restructuring production to create a pattern of resource based industrial development is likely to be the key to revitalizing Liberian manufacturing. Multilateral and bilateral technical assistance can play an important role at this crucial juncture in Liberia's industrial development by providing resources for: strengthening the institutional base for industrial policy making; establishing an effective monitoring system for evaluating compliance by recipients of government assistance to policy objectives and also evaluating the 'delivery' capacity of industrial policy making institutions; creating an adequate sector and enterprise level statistical base in order to facilitate the monitoring of policy implementation within the industrial sector; developing a rehabilitation strategy for large-scale manufacturing enterprise; identifying such enterprises which can significantly increase domestic resource use and channelling rehabilitation assistance to them; conducting resource surveys in the different regions of the country to identify the potential for resource based industrial development; and increasing institutional and technical support of the SME sector.

Institutional reform is the key to industrial development in Liberia. It can pave the way for a major restructuring of the manufacturing sector, increasing its capacity to utilize domestic resources and for fostering the process of industrial development in Liberia.

1. THE ECONOMY OF LIBERIA

1.1 Recent economic trends

The year 1987 has been a very difficult year for the Liberian economy which has faced a continuous decline in economic activity since 1980. GDP is estimated to have declined by about 4 per cent during 1986. Government revenue collection has fallen to an all time low of $172.6 million. Capital flight has become a serious problem. Mounting external arrears and management difficulties led to the recruitment of foreign experts in key administrative posts in the Central Bank, the Ministry of Finance, Planning and Economic Affairs, the Liberia Produce Marketing Corporation (LPMC) and the Liberia Petroleum Refinery Corporation (LPRC). A continuing shortage of US dollar bills and reluctance of traders to accept Liberian currency created a serious liquidity shortage within the economy. Several foreign banks, including Chase Manhattan ceased operations in Liberia in early 1987.

There were some signs of recovery in the commodity producing sector. Despite Firestone's decision to reduce operations and cut employment by about a third, rubber production in 1986 was provisionally estimated to have increased by about 10 per cent over the 1984 level and by about 1 per cent over the level of that achieved in 1985. The successful negotiation of a new International Rubber Agreement (INRA) in early 1987 and the likely prevalence of a rough balance in the demand and supply of rubber in the world market3 augurs well for Liberia. The international price of rubber was expected to increase by about 2 per cent during 1987. No such improvement was expected in the price of Liberia's other major export - iron ore. Despite an increase in the level of exports during 1986, the balance of payments situation is unlikely to have improved significantly due to growing outflow of company remittances and increased debt servicing obligations. Export growth during 1987 has most likely been restrained by the government's decision to restrict exports from firms which had not paid the 25 per cent export tax introduced in 1986. The government estimates that only about 40 per cent of the revenue due from this tax was collected in fiscal 1986.

The balance of payments is under increased pressure from the growing debt servicing obligations. Total external debt stood at about $874 million in 1985 - representing 108 per cent of GDP. External debt has grown at the rate of 7 per cent per annum over 1980-1986. Short-term debt represents only 5 per cent of the total, much of which is in the form of publicly guaranteed credits. $225.7 million are owed to the IMF. The debt service ratio has been kept low - at about 6 per cent in 1986 - by a series of successive reschedulings. In 1986, the Federal Republic of Germany agreed to a four year rescheduling of debt repayments totalling DM7.8 million in order to finalize a DM11.9 million technical co-operation programme. During 1986, aid agreements were signed with Rumania, Canada and the EEC under Lomé III. Aid from the Arab Bank for Economic Development in Africa (BADEA), the IMF and the United States remained suspended, but negotiations were underway for a resumption of this aid. The placement of United States experts in the Central Bank and the economic ministries was an important step towards clearing up past arrears and the resumption of aid.

Liberia's donors have argued that an increase in external resources on a significant scale must be preceded by the formulation of a comprehensive recovery programme. Such a programme was prepared by the government in September 1986. This followed the general strategy outlined in the budget for 1986/87, in which governement expenditure is to be reduced by 5 per cent - mainly through a reduction in government salaries and public sector staff - while revenue is to be raised marginally. The 1986/87 budget anticipated that 80 per cent of development expenditure will be met from external sources and the total budget deficit estimated for the year was $131.5 million (equal to 12 per cent of GNP).

The 1986 recovery programme seeks to reduce the budget deficit substantially by fiscal 1988/89. As Table 1.1 shows it estimates that current revenue can be increased from $193 million in 1986/87 to $237 million in 1988/89. Resources available for debt service are expected to rise from $145 million to $186 million over this period. The debt service gap is to be eliminated by that year. Foreign resource financing of the programme is expected to be of the order of $210 million (as against a domestic financing contribution of $75 million). Several administrative measures have been proposed to increase the efficiency of revenue collection and the control of public expenditure. The government is seriously considering policies for reducing external borrowing requirements; the drawing up of a priority list of debts to be paid and the establishment of audited accounts for the major public companies. Revitalizing the Liberian economy is a major task which requires significant economic restructuring.

1.2. Economic structure

With a population of 2.2 million in mid-1986, and a GDP equal to $1 billion (1985)[1/], Liberia has an economy (measured in GDP) roughly the size of the economy of Sierra Leone, half that of Guinea and about a fifth of the size of the economy of Côte d'Ivoire. Liberia had a per capita ($470 in 1985) which was higher than that of neighbouring Guinea and Sierra Leone. But, whereas Guinea and Sierra Leone experienced positive per capita GDP growth during 1980-1985, per capita in Liberia fell by 1.9 per cent per annum over this period. In 1984, Liberian GDP per capita was 30 per cent lower than the 1970 level (see Annex Table A-1) The Liberian economy has, thus, experienced very serious economic set backs over an extended time period.

GDP growth during 1965-1980 averaged 3.2 per cent per annum (higher than Sierra Leone but lower than Guinea and Côte d'Ivoire) with a particularly strong performance by agriculture which grew at an annual average rate of 5.5 per cent during this period.

Agricultural production has continued to grow at an average annual rate of 1 per cent during 1980-1985, while Liberian GDP contracted at an average rate of 2 per cent per annum. Industrial production declined at the rate of 7 per cent per annum during 1981-85 and as Annex Table A-2 shows the share of industrial activity[2/] in GDP declined from a peak of 32 per cent in 1974 to 23.5 per cent in 1984 - the share of agriculture increased from 14.4 percent

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1/ These figures are based in The World Bank, World Development Report, 1987, for reasons of comparatibility with other African countries. The United Nations estimates the GDP and per capita GDP of Liberia at L$811.2 and L$370, respectively, in 1985.

2/ Defined by UNIDO as Manufacturing + Minning + Utilities.

Table 1.1: Economic Recovery Programme and fiscal plans, 1986/87 - 1988/89
(US$ million)

Revenue Target	1986/87 $ mill.	1986/87 Share of GDP Per cent	1987/88 $ mill.	1987/88 Share of GDP Per cent	1988/89 $ mill.	1988/89 Share of GDP Per cent
1. Total own revenues:	246	22.9	275	24.3	300	25.3
a) Current revenue	193	18.0	215	19.0	237	20.0
b) LPRC/other[a/]	53	4.9	60	5.3	63	5.3
2. Less: Current expenditure[b/]	129	12.0	135	12.0	142	12.0
a) Wages	97	9.0	90	8.0	83	7.0
b) Other recurrent	32	3.0	45	5.0	59	5.0
3. Available for debt service	145		168		186	
a) Own resources (1 - 2)	117		140		158	
b) ESF grant	28		28		28	
4. Debt service due[c/]	194	18.1	187	16.6	119	10.0
5. Gap (-)/surplus (+)	-49		-19		+67	
6. Changes in arrears	-41		-94		-149	
7. Stock of arrears (6/30/86 = $281 million)	240		146		—	
Memo:						
GDP	1,073		1,129		1,187	
Annual IMF debt payment due	83.3		69.7		48.3	
IMF payment projection	175.5[d/]	69.7		48.3		

Source: Government of Liberia, Economic Recovery Programme, 1986/87-1988/89, Monrovia, 1986, p.24.

a/ Represent minimum expectations.
b/ Excluding debt service but includes maximum expectations.
c/ Including interest on new "gap financing" debt.
d/ Including IMF arreas of $92.2 million.

to 20 per cent over this period.[1/] The high agricultural growth rates are mainly concentrated in the rubber plantation sector dominated by Firestone. Whereas rubber production grew at an average annual rate of 7.7 per cent during 1970-84, subsistance agriculture (which still accounts for 58 per cent of total production) grew at the annual rate of 2 per cent.[2/] Annual cereal imports in 1985 were two and a half times larger (in volume terms) than imports in 1974. This is mainly due to stagnation in rice production, which has remained practically unchanged since the mid-1970s. There has, however, been a substantial increase in cassava output for domestic food consumption. The government aims at achieving self-sufficiency in rice production.

1/ The World Bank estimates that agriculture's share in GDP increased from 27 to 37 per cent over 1965-1985. World Development Report 1987, p.206. Both UNIDO and World Bank estimates are subject to large margins of error.
2/ Government of Liberia, Economic Recovery Programme 1986/87-1988/89, Monrovia, 1986.

The recession of the 1980s is also reflected in the structure of demand. The investment GDP ratio has been almost halved as has the savings GDP ratio over the period 1965-1985. However, in 1985 domestic savings represented 14 per cent of GDP while investment represented only 9 per cent. This may indicate the existence of a capital flight problem. Only about two-thirds of investible surplus generated within the production process is spent on fixed capital formation. Increasing accountability of financial intermedieries and of transnational corporations to repatriate funds may thus be an important priority of the Liberian authorities.

Most of the investible surplus generated within the economy is not under the direct control of the public authorities. In fact, as Table 1.2 shows, the budget deficit has continued to expand over 1980-1985. Domestic revenue has fallen persistently over the 1982-1985 period. No clear trend is evident so far as expenditure is concerned. Over the 1980-1985 period grants and loans from external sources accounted for 85.2 per cent of development expenditure incurred by the governement. This is indicative of the very high degree of external dependence exhibited by the Liberian economy.

Table 1.2: Budgetary surplus/deficit balance, 1980-1985
($ million)

Revenue	1980	1981	1982	1983	1984	1985
Total Revenue	327.7	334.2	345.9	337.4	289.9	269.8
Domestic Revenue	190.1	217.8	237.8	230.8	208.8	189.8
Grants	25.0	67.0	71.1	80.9	36.0	23.0
Disbursements (Loans)	112.6	49.4	37.0	26.5	45.1	57.0
Expenditure	376.6	294.2	471.9	451.4	419.5	441.0
Recurrent	195.4	246.5	304.3	272.8	276.7	314.3
Transfers	30.2	38.8	28.2	33.1	25.6	9.1
Development	119.8	130.7	129.5	139.5	106.1	113.7
Debt Amortization	27.7	4.9	5.6	6.0	11.1	3.9
Unallocated	3.5	3.3	4.3	-	-	-
Net Balance	-48.9	-40.0	-126.0	-114.0	-129.6	-171.2

Source: Government of Liberia, The Economic Recovery Programme, 1985/86-1988/89, 1986, p.13.

This dependence exists despite the fact that Liberia has usually produced a balance of trade surplus: this has risen from $94 million in 1982 to $184 million in 1985, despite a significant deterioration in Liberia's terms of trade. The terms of trade index stood at 91 in 1985 with a base of 1980=100. As Table 1.3 shows, the unit value of all major exports has declined over 1982-1985, execpt for cocoa - the decline in iron ore, Liberia's single most important export being about 8 per cent. Thus, while the amount of iron ore exported annually has remained roughly constant over 1982-1985, foreign exchange earned from its exports in 1985 was $249.4 million, as against $311.1 million in 1982. Over 90 per cent of Liberia's exports are destined for the markets of the developed market economies which supply an even larger proportion of Liberian imports.

Table 1.3: Unit price of major exports, 1982-1985
($)

Export	1982	1983	1984	1985
Iron ore (per ton)	18.97	17.03	16.51	17.24
Rubber (per kilo)	0.89	0.99	1.03	0.88
Diamonds (per 10000 carat)	60.7	52.1	46.0	34.15
Logs (per '000 cubit meter)	153.6	141.7	123.2	121.8
Coffee (per million kilo)	2.28	2.46	2.80	1.46
Cocoa (per kilo)	1.91	2.02	2.51	2.24

Source: Government of Liberia: Economic Recovery Programme 1985/86 - 1988/87, Monrovia, 1986, p.10.

As Table 1.4 shows, Liberia's trade balance has been positive for all years during 1980-1985. This surplus, however, has been largely offset by outflow of other goods, services and interest payments which has resulted in a much lower surplus on the current account, except for 1983. Moreover, there has been a large deficit component of net errors and omissions on the balance-of-payments, which, in many years, have exceeded the trade surplus.

Rising levels of profit repatriations from foreign companies has been a major cause of balance-of-payments difficulties. According to estimates the net direct foreign investment in Liberia during 1985 was negative $16 million. Moreover, earnings from maritime registration are also threatened because of an expected ban on Liberian registered vessels in Arab ports following the acceptance of military aid from Israel. Balance-of-payments difficulties are further compounded by the growing debt burden.

As noted earlier, total outstanding debt currently equals $874 million. Table 1.5 presents the structure of Liberian debt over the period 1970-1985. It can be seen that the share of private creditors in outstanding debt declined from 20 per cent in 1970 to 15.8 per cent in 1985. As Liberia's creditworthiness declines, this share is unlikely to increase. Concessional loans represent roughly half of Liberia's disbursed debt and the share of loans subject to variable interest rates now stands at a little under 18 per cent. Interest payments now constitute the main component of debt servicing, reflecting the high volume of debt arrears. If these arrears are settled, debt services can decline rapidly. Debt service payment obligations

Table 1.4: Balance of payments summary, 1979-1984
($ million)

Balance of Payments	1980	1981	1982	1983	1984	1985
Current account	46	69	2	-84	13	75
Merchandise: Exports fob	600	529	477	428	452	436
Merchandise: Imports fob	-478	-424	-382	-366	-320	-251
Trade balance	122	105	94	61	132	184
Other goods, services and income: credit	13	12	35	40	40	38
Other goods, services and income: debit	-97	-86	-173	-259	-218	-210
Private unrequited transfers	-29	-30	-45	-39	-44	-28
Official unrequited transfers nie[a/]	36	68	92	113	103	90
Direct investment	-	-	35	49	39	-16
Portfolio investment, nie[a/]	-	-	-	5	7	7
Other long-term capital, nie[a/]	70	44	143	28	40	-95
Other short-term capital, nie[a/]	5	8	2	-60	-41	-32
Net errors and omissions	-168	-170	-258	-13	-152	-131
Counterpart to SDR allocation	5	5	-	-	-	-
Counterpart to valuation changes	-27	4	4	9	14	-25

Source: IMF, International Financial Statistics, October 1987

a/ Not included elsewhere.

are estimated at $124 million in 1986, but only $63.4 million for 1993, provided added debt is not accumulated and arrears are settled. The Economic Recovery Programme has targeted for the elimination of arrears by fiscal 1988/89.

The Economic Recovery Programme envisages a substantial increase in aid disbursement and has evolved an elaborate investment strategy for dealing with the very serious economic problems which confront Liberia. This requires a major restructuring of the key sectors of the Liberian economy.

The Liberian economy consists structurally of a modern sector and a traditional sector. The former, which accounts for about 70 per cent of export earnings and nearly 50 per cent of real GDP, is geared primarily towards the production of iron ore, rubber and forest pruducts and a few non-agricultural activities. The traditional sector, on the other hand, accommodates nearly 70 per cent of the population and relies mainly on primary agricultural technology.

Linkages between the two sectors are generally weak, and whatever exists between the modern sector and the rest of the economy is mainly in the form of profit sharing with the government and payment of royalties, income tax levied on employees and import duty. In addition, there is a structural imbalance between the modern and the traditional sectors, not only in terms of population distribution, but also in terms of the distribution and allocation of social and economic facilities. The combined effect of these two factors has constrained government's objectives to raise the living standards of the Liberian people.

Table 1.5: Summary of external debt, 1970-1984, (selected years)
($ million)

Public & Publicly Guaranted Long-Term Debt	1970	1975	1980	1981	1982	1983	1984	1985
Debt Outstanding Undisbursed	178.7	278.8	801.0	836.7	907.2	936.0	989.5	1,082.2
Official Creditors	142.7	254.8	632.3	675.5	757.8	768.2	827.3	911.0
Multilateral	16.6	89.8	277.8	293.4	365.6	360.3	426.7	471.5
-IBRD	15.3	57.0	123.1	120.3	136.5	121.6	126.1	115.8
-IDA	0.0	17.0	44.0	47.7	85.8	85.3	99.3	114.2
Bilateral	126.1	165.0	354.5	382.1	392.2	407.9	400.6	439.4
Private Creditors	35.9	24.0	168.7	161.2	149.4	167.9	162.2	171.2
Suppliers	25.3	11.6	20.9	19.0	15.0	4.4	4.5	4.8
Financial Markets	10.7	12.4	147.9	142.2	134.4	163.4	157.7	156.4
Debt Outstanding Disbursed	158.4	178.6	566.8	635.2	636.9	715.0	780.5	873.5
Official Creditors	124.5	160.3	405.3	481.2	494.7	547.1	618.3	702.3
Multilateral	7.7	34.1	164.6	189.9	203.6	234.3	265.8	319.6
-IBRD	7.4	22.2	69.3	84.5	90.5	94.7	99.7	100.3
-IDA	0.0	4.7	22.9	28.8	36.4	46.9	60.4	75.7
Bilateral	116.8	126.3	240.7	291.3	291.2	312.9	352.5	382.7
Private Creditors	33.9	18.3	161.5	154.0	142.1	167.9	162.2	171.2
Suppliers	25.3	8.6	14.4	12.6	8.5	4.4	4.5	4.8
Financial Markets	8.6	9.7	147.1	141.4	133.6	163.4	157.7	166.4
Total Debt Service	17.6	32.4	38.5	26.8	34.2	30.6	21.2	17.5
Official Creditors	8.0	25.4	11.2	10.6	21.9	20.1	21.0	17.5
Multilateral	0.4	3.6	7.7	8.4	13.6	14.7	19.6	16.4
-IBRD	0.4	3.3	5.7	5.9	7.4	10.6	12.8	14.3
-IDA	0.0	0.0	0.1	0.1	0.2	0.5	0.5	0.8
Bilateral	7.7	21.8	3.6	2.3	8.4	5.5	1.3	1.1
Private Creditors	9.5	7.0	27.3	12.6	12.2	10.4	0.2	0.0
Suppliers	7.8	4.2	5.4	1.6	1.5	0.9	0.2	0.0
Financial Markets	1.7	2.8	21.9	14.6	10.8	9.5	0.0	0.0

Source: World Bank, World Debt Tables, Second Supplement, 1985-1986 Edition, August 1986.

1.3. Overview of the manufacturing sector

The manufacturing sector reflects the dualistic character of the Liberian economy. Iron ore and rubber processing branches are dominated by transnationals such as Firestone and Third World Shipbreakers Company. Most manufacturing enterprises are relatively small, employment intensive and use simple production technology. The recession of the 1980s has seriously affected the manufacturing sector leading to a contraction of both output and employment. Manufacturing share in GDP was estimated at 7.5 per cent in 1984 by UNIDO[1/] and at 5 per cent in 1985 by the World Bank. There is significant overlap between the manufacturing sector on the one hand and the mining and agricultural sector on the other, since the main manufacturing activities revolve around the processing of rubber and iron ore: hence MVA/GDP ratio estimates are only approximate.

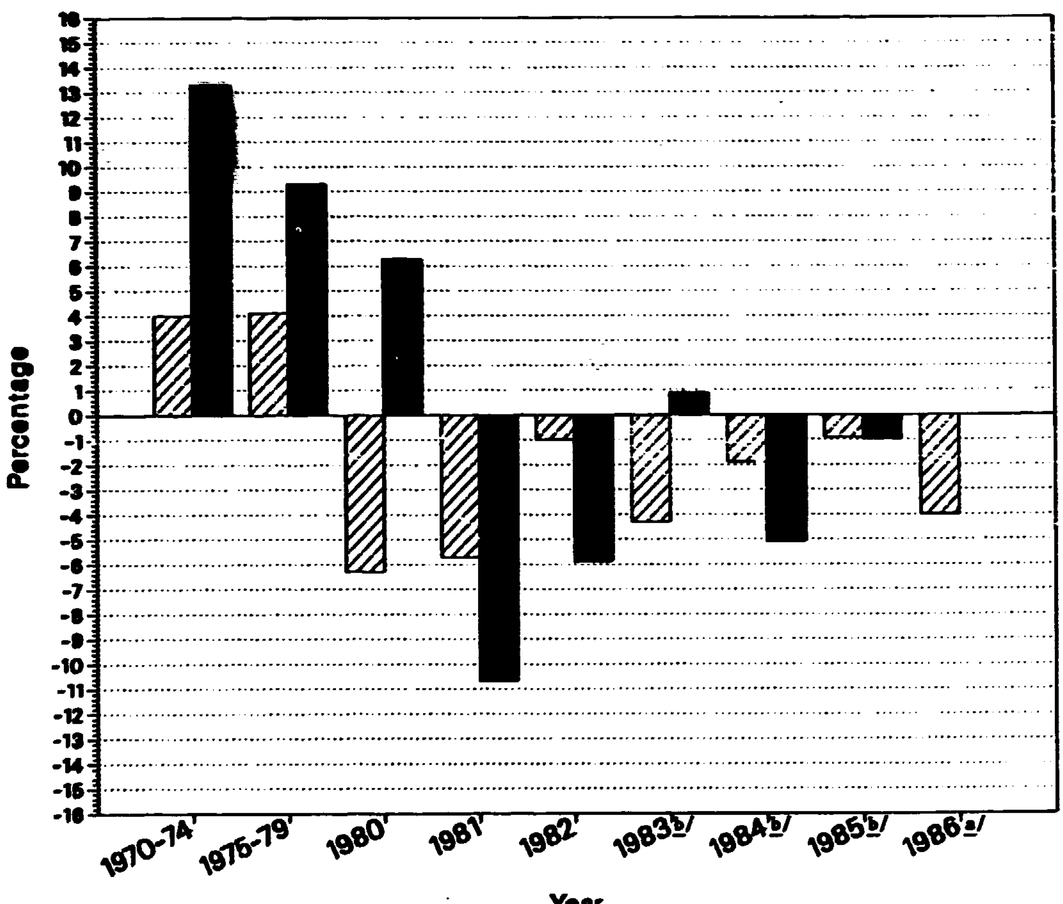
Annex Table A-3 presents comparative information on the performance of the manufacturing sector in Liberia. MVA grew more rapidly in Liberia than in Africa or in the total developing country group during 1970-1980, but during 1981-1984 MVA contracted at the rate of minus 4 per cent annum in Liberia while it grew at the annual rate of of 2.3 per cent in Africa as a whole. Consequently, MVA per capita in Liberia fell from $43 in 1975 to $29 in 1984.

Eighty per cent of manufacturing enterprises in Liberia employ less than 10 workers each. The large enterprises are concentrated in rubber processing, shipbreaking and beverages. There is also an oil refinery with a capacity of 650,000 tonnes at Gardensville, and a cement factory in Monrovia. The principal Liberian manufacturing enterprise is the Mesurado Group with interests in soap, detergents, fishing, industrial gases and animal food. A chemical factory was also established near Robertsfield in 1964. Small- and medium-sized firms predominate in slaughtering, dairy products, vegetable and animal oils and fat, grain milling, bakeries, tobacco manufacture, clothing, sawmills, furniture and fixtures, printing, publishing, basic industrial chemicals, soaps, perfumes, etc., miscellaneous chemical products, plastic products, and cement.

The government has been trying to stimulate manufacturing growth by establishing industrial free zone areas and by revising the investment code to attract direct foreign investment. In the late 1970s it also established state enterprises within the manufacturing sector but the performance has not been satisfactory and the current economic recovery programme envisages a total overhaul of these entities. In view of the government's large outstanding deficit it is clear that restructuring these enterprises requires an expansion of private sector investment and multilaterial financial co-operation. The main focus for manufacturing growth and restructuring in Liberia will continue to be private enterprise both domestic and foreign.

1/ See Annex Table A-2.

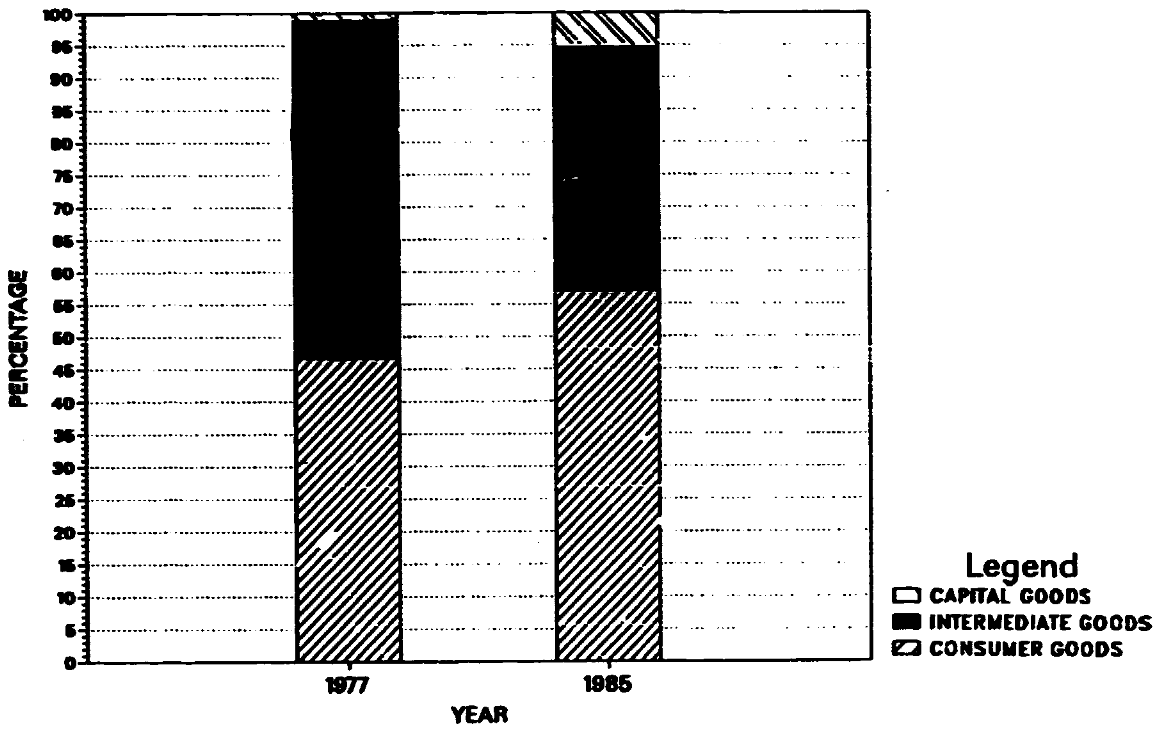
REAL GROWTH RATES OF GDP AND MVA, 1970-1986



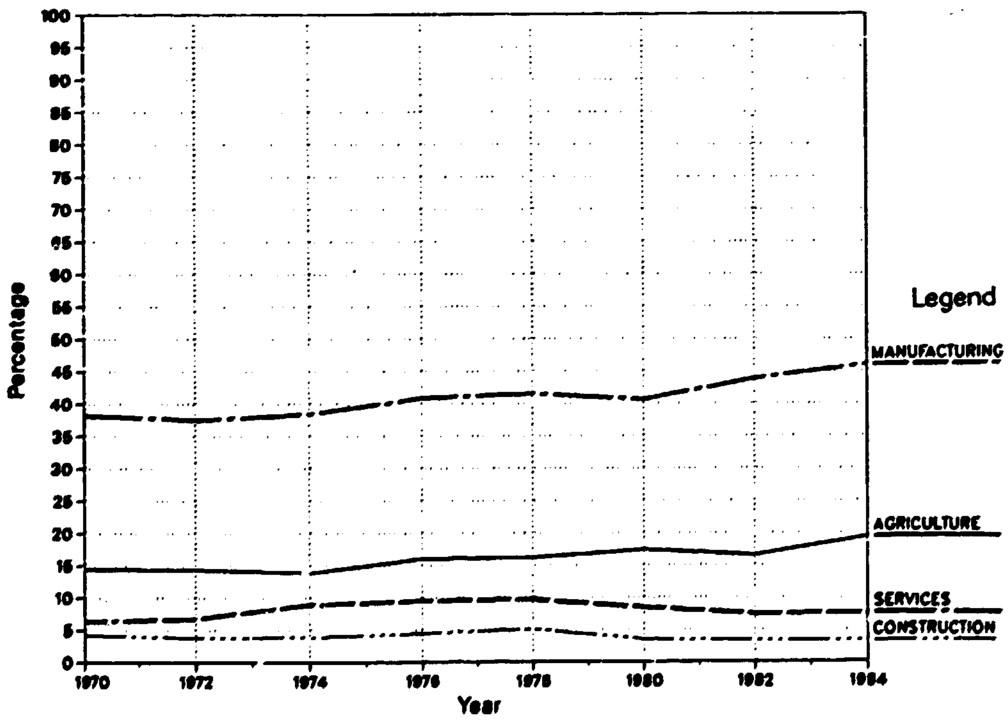
a/ = GDP estimate.

b/ = MVA estimate.

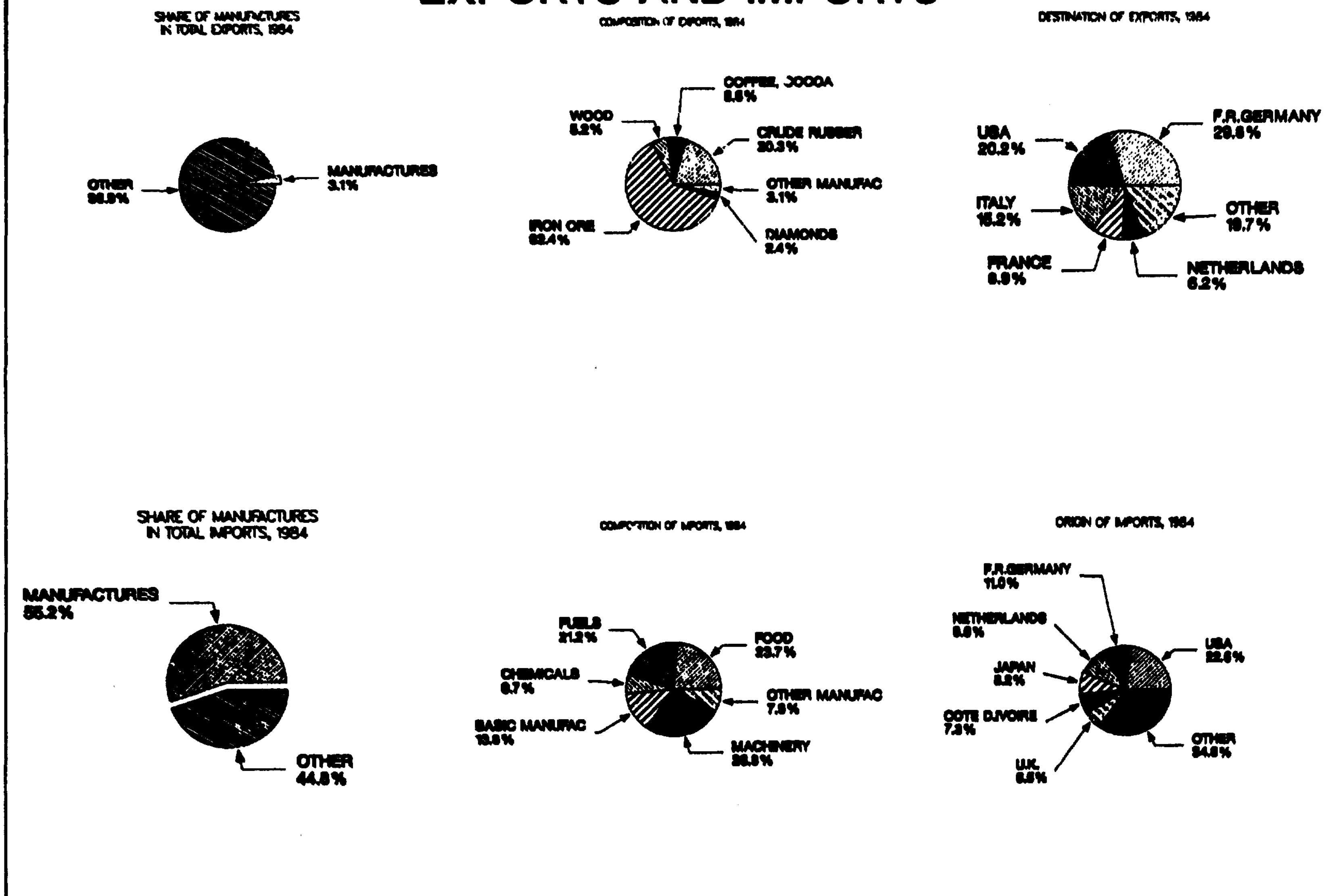
COMPOSITION OF GROSS OUTPUT, 1977 AND 1985



DISTRIBUTION OF GDP BY SECTOR OF ORIGIN, 1970-1984
(at constant 1980 prices)



EXPORTS AND IMPORTS



2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

2.1 Growth and structural change

During the 1970s the manufacturing sector grew at an average rate of 7 per cent per annum in terms of gross output.1/ The government pursued a vigorous import substitution strategy and manufacturing was regarded as a key dynamic sector. Manufacturing output had tripled in value (at current prices) over the period 1960-1973 2/. On the basis of constant price data the share of manufacturing in GDP increased from 6.3 per cent to 10 per cent between 1970-1979. The manufacturing sector grew more rapidly than any other sector of the Liberian economy during the 1970s.

This trend has been reversed in the present decade. Output has contracted at the rate of 4 per cent and the share of the manufacturing sector in GDP has declined significantly. A detailed picture of the relative impact of the crisis on different branches cannot be constructed but Table 2.1 provides data on output levels of most manufacturing branches in Liberia. The major omissions from the table are rubber products (probably due to inclusion in statistics in the agricultural sector and produced mainly by Firestone), textiles, metal products (for the years before 1984), iron and steel, petroleum refineries (before 1975) 3/ and other manufactures. Of these petroleum refineries represent the most serious exclusion. In view hereof it is clearly unjustifiable to attempt to assess the rate and form of structural change in Liberia over the previous decade - the development of comprehensive time series data on manufacturing production and value added must remain an important priority.

The information on ten manufacturing branches is comparable over the period 1973-1977. The five leading branches in 1973 were: beverages, food manufacturing, other chemicals, 4/ other non-metallic mineral products 5/ and tobacco in that rank order. By 1979 the rank order had changed to: other chemicals, beverages, food manufacturing, other non-metallic minerals and wood products (which had taken the place of tobacco). The only industry which contracted during this period was tobacco which faced severe financial crisis during 1975 and 1976 - but signs of a revival were already apparent in 1977. Comparable data exist for 9 branches over the 1977-1984 period. The leading branches in 1984 are beverages, other non-metallic minerals, tobacco, other chemical and non-metallic furniture. Gross output value contracted signifi-

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1/ Value added estimates are not provided in national sources.

2/ E. Himen and R. Keppel, Dependence, Underdevelopment and Persistent Conflict, Liberia, Bremen, 1980, p. 304.

3/ Petroleum refineries was the leading branch in 1973 but this cannot be compared with the 1979 listing since no figures are given for that branch in that year.

4/ Other chemicals (ISIC 352) consist of pharmaceutical products, paints, detergents and cosmetic products.

5/ Other non-metalic mineral products (ISIC 369) consist of building materials.

Table 2.1: Industrial output by branch of manufacturing, 1973-1985 (selected years)
(L$ '000)

		1973	1974	1975	1976	1977	1984	1985
3000	TOTAL MANUFACTURING	...	...	...	...	...	...	...
3110	Food products	5,170	5,591	7,376	8,113	9,300	3,936	6,933
3130	Beverages	5,869	7,478	8,832	10,891	11,980	29,262	27,322
3140	Tobacco	1,090	605	440	63	68	5,937	
3210	Textiles	...	...	...	...	...	...	...
3220	Wearing apparel, except footwear	...	...	...	...	...	...	...
3230	Leather products	...	...	...	...	...	...	...
3240	Footwear, except rubber or plastic	513	296	352	366	715	...	185
3310	Wood products, except furniture	694	1,435	2,650	3,176	3,658	654	...
3320	Furniture, except metal	564	710	696	797	876	4,400	2,911
3410	Paper and products	...	...	...	...	...	433	413
3420	Printing and publishing	...	...	...	...	...	946	830
3510	Industrial chemicals	...	...	...	...	...	701	285
3520	Other chemicals	3,814	4,064	9,632	12,180	13,330	5,931	4,585
3530	Petroleum refineries	20,293	33,188	54,629	...	...	...	...
3540	Misc. petroleum and coal products	...	...	...	...	...	...	...
3550	Rubber products	...	...	...	...	...	...	...
3560	Plastic products	168	232	193	526	773	653	365
3610	Pottery, china, earthenware	...	...	...	...	...	...	...
3620	Glass and products	...	...	...	...	...	168	143
3690	Other non-metallic mineral products	2,425	4,078	5,097	5,806	6,087	11,131	13,283
3710	Iron and steel	...	...	...	...	...	...	...
3720	Non-ferrous metals	...	...	...	...	...	...	...
3810	Fabricated metal products	251	382	442	486	502	659	2,540
3820	Machinery, except electrical	...	...	...	...	...	311	215
3830	Machinery electric	...	...	...	...	...	655	455
3840	Transport equipment	...	...	...	...	...	...	...
3850	Professional & scientific equipment	...	...	...	...	...	...	...
3900	Other manufactured products	...	...	...	...	...	...	...

Source: UNIDO data base.

cantly for the food manufacturing, wood products,[1] other chemicals and plastic products branches, and the highest increase in output recorded was by the tobacco, furniture, beverages and other non-metallic mineral products branches. The development of an embryonic engineering goods producing subsector is also evident in the 1984 and 1985 listing.

Production levels in 13 branches are directly comparable in 1984 and 1985. The later branch rank ordering is broadly similar to the former,[2] but there is a marked increase in food manufacturing output and an equally pronounced decline in the output level of the industrial chemical branch indicating significant production level variations on an annual basis. Although ten of the thirteen branches for which comparable data exists had negative growth of production over 1984-1985, the very large increase in cement, metal products and food manufacturing production (the latter almost doubled gross output while metal products output increased four-fold) meant that the gross output level for the comparable branches in 1985 was 2 per cent higher than in 1984.

Table 2.2 presents the end use classification of manufacturing output on the basis of the figures given in Table 2.1. The figures for 1973 and 1977

Table 2.2: Manufacturing gross output[a] by end use, 1973-1985
(percentage)

		(1973)	1977	1984	1985
Consumer industries	(ISIC 3110-3240)	30.95	46.65	59.45	56.95
Intermediate industries	(ISIC 3310-3690)	68.43	52.28	38.08	37.73
Capital goods industries[b]	(ISIC 3710-3950)	0.60	1.06	2.46	5.30

Source: UNIDO data base.

a/ Excluding petroleum refineries, rubber processing and others for 1977, 1984 and 1985 (see Table 2.1).
b/ Including some consumer durables.

are not comparable since the former include production figures from the petroleum refinery - and all subsequent data do not. If the petroleum refinery figures are excluded from the 1973 data, the relative shares of the consumer and intermediate industries are 65.5 per cent and 33.2 per cent respectively. This would indicate that the mid-1970s - the period of relatively vigorous manufacturing growth was characterized by a significantly rapid expansion of the mineral-based intermediate goods producing branches -

1/ It is conceivable that a larger proportion of the output of the wood industry was classified within the furniture branch in 1984.

2/ The value of Spearman's rank correlation coefficient is 0.78. One would have expected a significantly higher value for adjacent years.

which are highly import-intensive. The foreign exchange scarcity which the economy experienced during the 1980s led to a relative contraction of these branches. Natural resource based branches have expanded their share of manufacturing production. The consumer goods share has increased from 47 per cent in 1977 to 57 per cent in 1985.[1/] The share of capital goods (based upon an increased processing of domestically produced iron ore) has increased over four-fold during this period - although it still accounts for only about 5 per cent of total manufacturing activity. The picture presented in Table 2.2 remains incomplete because of two crucial omisions. These are, as mentioned earlier, no production figures available for either the petroleum refinery or Firestone operations processing natural rubber. Production figures on both these branches may well show that the decline in the share of intermediate branches is confined to the industries included in Table 2.1. Data on the production of rubber products is particularly needed because this branch represents the second most important natural resource based industry, an industry containing product areas in which Liberia either already posseses or is likely to rapidly develop an internationally competetive position.

2.2 Employment and productivity

Time series data on employment within the manufacturing branches are not available. On the basis of incomplete and partial industrial census results it is possible to estimate employment trends within the manufacturing sector over the period 1981-1985. Manufacturing employment is estimated to have contracted by 36 per cent over this period. This compares with a 51 per cent contraction in mining, a 96 per cent contraction in construction and a 22 per cent contraction in agriculture. On the other hand service sector employment grew by 53 per cent over this period.[2/] Manufacturing employment growth is unlikely to have accelerated significantly in the subsequent two years. The manufacturing sector currently accounts for about 6.5 per cent of total employment - roughly equivalent to its share in GDP. As shown in Table 2.3 manufacturing employment is concentrated in tailoring,[3/] wood processing, food manufacturing and chemical establishments which together account for 82 per cent of total manufacturing employment. Metal manufacturing establishments account for another 2 per cent. The share of the rubber products branch is small - probably due to the inclusion of rubber processing activities (undertaken almost exclusively by Firestone) within the agricultural sector. Branches with the highest establishment concentration are cigarettes, matches (one establishment each), chemicals, food manufacturing, and metal manufacturing units. The first four of these branches have an employment establishment ratio which is more than twice the total manufacturing average. This indicates the existence of a relatively high degree of industrial concentration and/or labour-intensity. Textiles and jewellery, on the other hand, have relatively small establishment sizes.

1/ The reduction of consumer goods total in 1985 relative to 1984 is almost entirely due to the absence of production figures for the beverages industries.

2/ Root M., Manpower Demand and Supply, USAID/Monrovia and Liberian Ministry of Planning and Economic Affairs, December 1985 (mimeo).

3/ Tailoring is usually not considered manufacturing unless characterized as clothing manufactures.

Table 2.3: Employment in manufacturing industries,[a] 1983

Manufacturing industries	Employment	Per cent of total	Establish-ments	Number of employees per establishment
Tailoring	1,583	26.64	194	8.19
Wood, furniture & matresses	1,402	23.59	74	18.94
Chemicals,paint,soap & drugs	741	12.47	18	41.16
Metal manufacturing batteries	401	6.74	20	20.05
Paper cartoons	13	0.21	1	13.00
Blocks, tiles & glass	223	3.75	17	13.11
Bakery,beverages,food & flour	1,143	19.23	33	34.36
Plastics & rubber	35	0.58	3	11.66
Jewelry & ivory	53	0.89	8	6.62
Cigarettes	61	1.02	1	61.00
Matches	48	0.80	1	48.00
Printing & publishing	225	3.78	14	16.07
Miscellaneous recordings	9	0.15	1	9.00
Sandals	5	0.02	1	5.00
TOTAL	5,942	-	386	15.39

Source: Root M., Manpower Demand and Supply, USAID/Monrovia and Liberian Ministry of Planning and Economic Affairs, December 1985 (mimeo).

a/ Employing five or more employees.

Table 2.4 presents data on employment, gross output and wages for 17 industrial branches during 1984 and 1985. On aggregate, the value of gross output declined by 9 per cent. Employment, on the other hand, rose by 6.5 per cent and wages and salaries increased by as much as 22 per cent. Whereas the employment and wage data is comparable in that all branches report figures for each year,[1] this is not the case with the output figures. If non-comparable branches are removed, output is seen to have increased by 1 per cent only. Nevertheless, it is evident that in the recession, shedding workers and reducing unit wage costs have not been easy and it may be assumed that for the entire manufacturing sector output contraction has been significantly greater than contraction in employment. Productivity and efficiency levels may have been falling, therefore, and it is likely that the significant productivity growth recorded in industries such as beverages and other chemicals during the 1970s has now ceased.[2] Improving industrial efficiency and cost competitiveness should remain an important policy concern. Such an improvement can lead to an expansion of manufactured exports from Liberia.

1/ With the exception of footwear.

2/ UNIDO estimates that value added per employee grew at the rate of 7 per cent in beverages and 5 per cent in other chemicals during the 1970s in Liberia (UNIDO data base).

Table 2.4: Employment, gross output and wages, 1984 and 1985
(output and wages in L$'000)

		Employment		Gross Output		Wages	
		1984	1985	1984	1985	1984	1985
3000	TOTAL MANUFACTURING	2,066	2,202	63,976	60,451	7,907	6,084
3110	Food products	248	307	3,936	6,933	447	559
3130	Beverages	681	708	29,262	27,322	3,422	3,685
3140	Tobacco	68	68	3,937	...	...	...
3210	Textiles	...	...	...	...	...	...
3220	Wearing apparel, except footwear	...	...	...	...	...	...
3230	Leather products	...	...	...	...	...	...
3240	Footwear, except rubber or plastic	...	28	...	165	...	69
3310	Wood products, except furniture	158	...	954	...	336	...
3320	Furniture, except metal	246	296	4,400	2,911	789	745
3410	Paper and products	14	14	433	413	55	51
3420	Printing and publishing	77	76	945	830	312	232
3510	Industrial chemicals	28	14	701	289	79	58
3520	Other chemicals	202	262	5,931	4,584	823	508
3530	Petroleum refineries	...	...	...	...	...	...
3540	Misc. petroleum and coal products	...	...	...	...	...	...
3610	Pottery, china, earthenware	...	...	...	...	...	...
3620	Glass and glass products	25	27	653	368	104	105
3690	Other non-metallic mineral products	207	193	11,131	13,283	711	829
3710	Iron and steel	...	...	...	...	...	...
3720	Non-ferrous metals	...	...	...	...	...	...
3810	Fabricated metal products	53	139	659	2,540	85	128
3820	Machinery, except electrical	17	19	211	215	40	34
3830	Machinery electric	30	39	655	455	82	158
3840	Transport equipment	...	...	...	...	...	...
3850	Professional & scientific equipment	...	...	...	...	...	...
3900	Other manufactured products	...	...	...	...	...	...

Source: UNIDO data base.

2.3 Trade in manufactures

Table 2.5 and Table 2.6 present data on the composition of Liberian exports and imports in 1981 and 1984, respectively. It is seen that manufacturing exports accounted for a mere 3.1 per cent of the total export value in 1984, while its share in 1981 was 4.2 per cent. The export value in 1984 had declined to two-thirds of the 1981 value. This was mainly due to a substantial reduction of wood products and transport equipment exports. Major export goods are crude rubber and iron ore which account for around 80 per cent of total export values.[1/]

Although the government is taking an interest in increasing the value added content of production in these branches, projects designed for this purpose are basically domestic demand oriented. The main manufactured exports are likely to remain products of the vegetable oil and wood producing industries.

More than a half of the imports is composed of manufacturing goods. Among manufacturing imports, chemicals, basic manufactures, machines and transport equipment are major importing goods. It should be noted, however, that the decline of foreign exchange reserve earnings forced the country to significantly reduce importing the industrial sources of chemical and capital goods (Table 2.6).

Table 2.7 lists the destinations of Liberia's manufactured exports in 1984. Both developed and developing countries are important markets for Liberian manufactures. The developing countries have a hundred per cent share of Liberian exports of a wide range of manufactured products ranging from pharmaceuticals to machine parts. The developed markets economies are major buyers of wood and rubber products. They dominate Liberian exports in the aggregate and provide more than 90 per cent of the country's export earnings. Due to the relatively low level of processing Liberian export growth has not been particularly constrained by protectionist barriers. Nevertheless, the stimulus provided by trade agreements and regional schemes, such as the Lomé Convention and the Mano River Union, has been important.

Whereas developing countries are important markets for only a small range of Liberian manufactured exports, their share in Liberian imports (both manufactures and primary goods) is not insignificant. UNIDO estimates that manufactured imports from developing countries accounted for 30.3 per cent, but the share is higher than 30 per cent in the following product groups: petroleum products, veneers, plywood and improved wood, wood manufactures, paper and paper board, articles of pulp and paper, synthetic and regenerated fabrics, textile yarn and thread, woven cotton fabrics, made up articles of

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1/ It should be noted that both iron ore and rubber exports include some portion of processed products. However, it is difficult to determine the proportion of processed to non- or semi-processed products from the given statistics, though it is likely to be very low.

Table 2.5: Composition of exports (value and share), 1981 and 1984

	Value ($'000) 1981	Value ($'000) 1984	Share (per cent) 1981	Share (per cent) 1984
Agriculture	152,375	145,645	29.1	32.1
- Coffee	19,351	13,744	3.7	3.1
- Cocoa	13,771	15,297	2.6	3.4
- Crude rubber	86,742	91,296	16.6	20.3
- Wood	36,618	23,484	7.0	5.2
Mining quary	349,258	290,996	66.7	64.8
- Iron ore	325,916	279,900	62.2	62.3
- Industrial diamonds	23,434	10,923	4.5	2.4
Manufacturing	21,993	13,921	4.2	3.1
- Vegetable oil, fat	3,381	6,837	0.6	1.5
- Wood products	4,085	915	0.8	0.2
- Transport equipment	5,067	1,151	1.0	0.3
- Other non-classified manufacturing	5,535	3,306	1.1	0.7
Total	523,625	449,068	100.0	100.0

Source: United Nations, 1985 International Trade Statistics Yearbook, Vol.I, 1987.

Table 2.6: Composition of imports (value and share), 1981 and 1984

	Value ($ '000) 1981	Value ($ '000) 1984	Share (per cent) 1981	Share (per cent) 1984
Food, beverages and tobacco	102,811	86,119	21.5	23.7
Crude materials	6,432	4,934	1.4	1.4
Fuels	129,598	71,748	27.1	19.7
Manufacturing	238,587	200,408	50.0	55.2
- Animal and vegetable oil	3,461	4,655	0.7	1.3
- Chemicals	33,088	24,206	6.9	6.7
- Basic manufactures	61,253	50,242	12.8	13.8
- Machinery, transport equipment	118,652	97,174	24.9	26.8
- Other manufactured goods	22,133	24,131	4.7	6.6
Total	477,429	363,209	100.0	100.0

Source: United Nations, 1985 International Trade Statistics Yearbook, Vol.I, 1987.

Table 2.7: Destination of Liberia's principal manufactured exports, 1984

Manufactures	Value ($ '000)	Developing countries	EEC	USA
		(percentage)		
Pharmaceuticals	14.8	100	—	—
Petroleum products	18.7	100	—	—
Rubber products	29.5	49.2	3.4	47.4
Wood products	915.2	—	91.0	9.0
Furniture	40.3	100	—	—
Footware	52.5	100	—	—
Power machinery parts	29.4	4.5	81.3	34.2
Textil machine parts	21.6	100	—	—
Machine tools	29.0	—	100	—
Road vehical parts	100.6	100	—	—
Passanger car parts	572.9	36.2	15.7	46.9

Source: UNIDO data base.

textiles, travel bags, clothing, artificial leather, leather manufactures, glass ware, iron and steel bars, rods and shapes, agricultural hand tools, television and radio sets. Given this relatively wide range of imports there may be scope for organising long-term trade co-operation agreements with both West African neighbours and other developing countries. The establihsment of the Third World Shipbreakers Company with Pakistani investment collaboration has opened the way for a fruitful exploration of the possibility of negotiating long-term counter trade arrangements with both South Asian and Latin American developing countries.

Examining Liberia's import structure also reveals the very high degree of import dependence characteristic of Liberian manufacturing. As Table 2.8 shows, 48 of the 66 commodities for which data is available have import to apparent consumption ratios that were equal to 100 per cent during 1981-1983. Import substitution remains confined to the petroleum products, cement, sugar, vegetable oils and veneer sheets product groups. Despite the existence of large deposits of iron ore, production of metal products remains very small. The existence of rubber processing cannot be ascertained because of the absence of data and the integration of rubber processing activities within the total operations of the Firestone conglomerate.

Table 2.8 underestimates the import dependence of Liberia because it omits products in SITC category 38 - capital goods and consumer durables. It can be realistically assumed that the import-apparent consumption ratio approximates 100 per cent in almost all such product groups in Liberia. It is, therefore, likely that the import substitution process of the 1970s has remained mainly confined to small segments of the food manufacturing, petroleum refining and non-metallic mineral branches. There may be scope for extending the import substitution process. Provided that adequate attention is paid to problems of operational efficiency and viability of domestic demand oriented enterprises, increased import substitution may usefully complement an export expansion strategy.

2.4 Manufacturing problems and issues

The Liberian manufacturing sector grew rapidly during the 1970s and significant progress was made by the intermediate manufacturing branches during this period. An import substitution strategy was followed but emphasis was not placed on increasing domestic resource use. Import dependence of the intermediate branches increased and the foreign exchange crisis of the 1980s led to a major contraction.

During the 1980s the consumer goods and metal-based industries have increased their share of gross industrial output. There is, thus, some indication of a greater concentration on domestic resource use. Declining output growth has been accompanied by declining productivity. Productivity growth even during the 1970s was relatively low. There is some evidence to show that it has not been easy to reduce unit labour costs. Reductions in output within the manufacturing sector have generally been greater than reductions in employment.

Manufactured exports currently account for around 3 per cent of total Liberian export earnings. There may be some scope for expanding such exports particularly resource-based products such as iron ore, wood products, rubber, etc., provided feasability studies confirm this viability. Attention could be paid to the development of long-term trading arrangements with regional groups and developing countries which have a high share of the Liberian import market. Given the low level of MVA per capita, there also exists scope for expanding the range of domestic demand and import substitution-oriented manufacturing activity - provided that measures can be instituted to ensure the operational efficiency of domestic demand-oriented firms.

It is not possible to assess the financial performance of manufacturing enterprises due to the absence of value added, gross fixed capital formation and financing structure statistics. Priority could be accorded to developing and effective statistical base for monitoring the performance of manufacturing enterprises. Measures could also be adopted to increase domestic resource use, strengthen the inter-sectoral linkages of the manufacturing sector and to foster the integration of manufacturing within the domestic economy so as to reduce the very high level of economic dualism that presently characterises the Liberian economy.

Table 2.8: Average apparent consumption of selected manufactures, 1981-1983

LIBERIA

Product grouping and commodity (ISIC)	Unit a/	Average apparent consumption per 1000 inhabitants 1981-1983	Imports: As percentage of apparent consumption 1981-1983	Exports: As percentage of apparent consumption 1981-1983	Average annual production 1981-1983	Growth rate of apparent consumption 1975-1983
FOOD PRODUCTS						
Raw sugar (311801)	W	0.48	0.9	0.0	1000	844.82
Refined sugar (311804)	W	4.86	53.8	0.2	4800	4.37
Cocoa powder (311907)	W	0.00	100.0	0.0	0	-20.20
Cocoa butter (311910)	W	0.00	100.0	0.0	0	...
Chocolate and chocolate products (311913)	W	...	...	...	...	...
Prepared animal feeds (312201)	W	...	...	...	...	...
OILS AND FATS						
Oils and fats of animals, unprocessed (311507)	W	0.03	100.0	0.0	0	5.49
Oils of vegetable origin (311510*)	W	12.81	17.7	21.9	28333	5.90
TEXTILES						
Wool yarn, pure and mixed (321103)	W	0.00	100.0	0.0	0	-11.87
Cotton yarn, pure and mixed (321109)	W	0.04	100.2	0.2	0	88.95
Cotton woven fabrics (321128)	S	...	...	...	...	...
Woollen woven fabrics (321134)	S	1.78	100.0	0.0	0	-21.80
Knitted fabrics (321301)	W	...	...	...	...	...
FOOTWEAR						
Footwear, excluding rubber footwear (324000)	P	...	...	...	...	...
WOOD AND WOOD PRODUCTS						
Veneer sheets (331110)	V	0.84	1.3	49.9	2000	-37.23
Particle board (331122)	V	...	...	...	...	...
PAPER AND PAPER PRODUCTS						
Wood pulp, mechanical (341101)	W	0.00	...	...	0	...
Pulp of fibres other than wood (341104)	W	0.00	100.0	0.0	0	-68.66
Wood pulp, dissolving grades (341107)	W	0.00	...	...	0	...
Wood pulp, sulphate and soda (341110)	W	0.00	100.0	0.0	0	-18.84
Wood pulp, sulphite (341113)	W	0.00	...	...	0	...
Wood pulp, semi-chemical (341116)	W	0.00	...	...	0	...
Newsprint (341119)	W	0.08	100.0	0.0	0	125.14
Other printing and writing paper (341122)	W	0.10	100.0	0.0	0	-9.10
Kraft paper and kraft paperboard (341125)	W	0.02	100.0	0.0	0	-5.42
Other paper and paperboard (341131)	W	0.07	100.0	0.0	0	-23.18
INDUSTRIAL CHEMICALS						
Methanol (methyl alcohol) (351121)	W	...	...	...	...	...
Glycerine (glycerol) (351125)	W	0.00	100.0	0.0	0	85.49
Chlorine (351145)	W	...	...	...	...	14.57
Sulphuric acid (351147)	W	0.09	100.0	0.0	0	-3.38
Nitric acid (351149)	W	0.00	100.0	0.0	0	-10.44
Zinc oxide (351154)	W	...	...	...	...	22.84
Titanium oxides (351155)	W	0.00	100.0	0.0	0	-7.19
Lead oxides (351157) a/	W	0.00	100.0	0.0	0	-19.82
Ammonia (351158)	W	0.53	100.0	0.0	0	-9.20
Caustic soda (351159)	W	...	...	...	...	-1.81
Soda ash (351166)	W	0.05	100.0	0.0	0	-0.08
Hydrogen peroxide (351171)	W	0.01	100.0	0.0	0	4.80
Calcium carbide (351173)	W	0.11	100.0	0.0	0	-12.88
Dyestuffs, synthetic (351174)	W	0.00	100.0	0.0	0	-1.30
Vegetable tanning extracts (351175) a/	W	0.00	100.0	0.0	0	988.32
Nitrogenous fertilizers (351201)	W	0.59	100.1	0.1	0	-17.83
Phosphatic fertilizers (351204 + 351207)	W	0.83	100.0	0.0	0	2.98
Potassic fertilizers (351210)	W	0.28	100.0	0.0	0	-10.71
Insecticides, fungicides, etc. (351216)	W	...	...	...	...	...
Rubber, synthetic (351301)	W	0.01	100.0	0.0	0	18.31
Non-cellulosic staple and tow (351304)	W	0.00	100.0	0.0	0	-37.14
Regenerated cellulose (351331)	W	0.01	100.0	0.0	0	-7.85

.../

Table 2.8 (Continued)

LIBERIA

Product grouping and commodity (ISIC)	Unit c/	Average apparent consumption per 1000 inhabitants 1981-1983	Imports As percentage of apparent consumption 1981-1983	Exports As percentage of apparent consumption 1981-1983	Average annual production 1981-1983	Growth rate of apparent consumption 1975-1983
PETROLEUM REFINERIES						
Motor gasolene (353007A)	W	33.77	0.0	1.4	72887	0.19
Kerosene (353013A)	W	3.14	0.0	15.0	7887	-3.58
Distillate fuel oils (353019A)	W	82.20	24.6	0.4	132333	-0.05
Residual fuel oils (353022A)	W	172.45	8.5	3.5	347887	7.82
Lubricating oils (353025A)	W	3.52	104.2	4.2	0	-9.82
Liquefied petroleum gas (353037A)	W	...	...	...	...	41.42
GLASS AND CEMENT						
Glass bottles and containers (362010B)	W	...	...	...	...	...
Cement (369704)	W	75.10	44.3	0.1	89000	2.07
IRON AND STEEL						
Pig iron (371007 + 371010)	W	2.28	100.0	0.0	0	70.35
Wire rods (371028)	W	0.38	100.0	0.0	0	38.30
Angles, shapes and sections (371035) a/	W	0.21	100.0	0.0	0	-12.88
Plates(heavy), over 4.75 mm. (371040)	W	1.41	100.0	0.0	0	26.37
Plates(medium), 3 to 4.75 mm. (371043)	W	...	...	...	...	-7.98
Plates and sheets, < 3 mm (371046 + 371049 + 371052)	W	...	...	...	...	-10.50
Tinplate (371055)	W	0.02	100.0	0.0	0	-13.70
Railway track material (371067)	W	1.21	100.0	0.0	0	-8.00
Wire, plain (371070)	W	...	...	...	...	...
Tubes, seamless (371076)	W	0.15	100.0	0.0	0	18.89
Tubes, welded (371079)	W	...	...	...	...	-9.52
Steel castings, in the rough state (371085)	W	...	...	...	...	...
Steel forgings (371088)	W	...	...	...	...	...
NON-FERROUS METALS						
Copper, refined, unwrought (372004)	W	0.00	100.0	0.0	0	57.84
Copper bars, rods, angles, etc (372010 + 372013)	W	0.01	100.0	0.0	0	-5.28
Copper plates, sheets, strip and foil (372016)	W	0.00	100.0	0.0	0	-1.89
Copper tubes and pipes (372019)	W	0.00	100.0	0.0	0	-16.85
Aluminium, unwrought (372022)	W	0.03	100.0	0.0	0	21.44
Aluminium bars, rods, angles, etc. (372025 + 372028)	W	0.02	100.6	0.6	0	1.46
Aluminium plates, sheets, strip etc (372031)	W	0.18	100.2	0.2	0	1.34
Aluminium tubes and pipes (372034)	W	0.01	100.0	0.0	0	4.23
Lead, refined, unwrought (372037)	W	...	...	...	...	45.08
Zinc, unwrought (372043)	W	0.00	100.0	0.0	0	-26.65
Zinc plates, sheets, strip and foil (372048)	W	0.00	130.0	0.0	0	14.81
Tin, unwrought (372049) b/	W	0.03	100.0	0.0	0	337.84

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

Note: ISIC 311510* consists of 311510 + 311513 + 311518 + 311522 + 311525 + 311528 + 311531 + 311534 + 311537. Growth rates have been calculated on the basis of available annual data over the period indicated.

a/ Data for 1983 not available.
b/ Data for 1981 only.
c/ W = Metric tonnes
S = Square metres.
P = Pairs.
V = Cubic metres.

3. SMALL- AND MEDIUM-SCALE MANUFACTURING ENTERPRISES

3.1 The scope and structure of small- and medium-scale enterprises (SME)

A national survey[1/] conducted in 1985 showed that SMEs are mainly located within the wearing apparel, woodworking and metal-based industrial branches. The Development Plan for SMEs[2/] identifies 560 SMEs in Monrovia and 360 in the rest of the country. Estimates of the contribution of SME to total manufacturing employment or production have not been provided. However, the share in manufacturing employment is clearly significant, since an expenditure of $33.61 million over these four years within the SME sector is expected to generate 5,430 jobs. For 1980-1981, the Liberian Ministry of Planning and Economy estimated that 54.4 per cent of all jobs in manufacturing establishments in the Greater Monrovia Area was provided by Liberian owned firms most of which were classified as SMEs.

SME development has been constrained by lack of skill resources - both financial and managerial. Access to institutional credit remains very limited as do sales to large-scale enterprises within the manufacturing sector. Criteria for credit elegibility are strictly enforced by governmental and financial institutions. Most SMEs remain dependent on the informal money lender operators to finance their SME business and face serious problems in ensuring regularity in supply and in developing business contacts within the formal sector which can lead to dependable marketing arrangements. Marketability of SME products is uncertain due to the absence of effective procedures for quality control and product standardization.

Despite these problems there is general recognition both within Liberia and among the bilateral and multilateral agencies involved in extending technical co-operation to that country that SMEs have an increasingly important role to play in industrial regeneration in Liberia. SMEs represent a potential resevoir of entrepreneur talent. Domestic resource content of production within this sector is relatively high and the sector is - at least potentially - more resistant to foreign exchange shocks than the larger enterprises. Moreover, the development of the SMEs is of importance in stimulating integration between the rural and the urban sectors and in enhancing the "Green Revolution"; a clear policy priority of the present Administration. The SMEs have a key role in providing agricultural tools and in processing agricultural products particularly for the local market. The development of the SME sector can complement the development of both agriculture and large industry and can serve as an important conduct for the transfer of both products and technology between these two sectors.

Detailed information on the SME sector is scarce. In 1985, UNIDO sponsored a survey of SMEs located in the South Eastern region of Liberia (Grand Gedeh, Sinoe, Maryland and Grand Kru counties). Table 3.1 lists the branch location of the 508 establishments for which data could be procured. It was estimated in 1979 that the South Eastern region accounted for about 12 per cent of the total number of Liberian SMEs. Of these establishments 152

1/ Government of Liberia, Industrial Extension Services for Small and Medium Sector Enterprises, 1985. (unpublished).

2/ Government of Liberia, Development Plan for the SMEs 1987-1991, Monrovia, 1986.

Table 3.1: Existing small- and medium-scale enterprises in the South-eastern region, by type of enterprises, 1985

Type of Enterprise	Grand Gedeh	Sinoe	Maryland	Grand Kru	Total
1. Tailoring	33	17	19	2	71
2. Rice mill	4	-	-	-	4
3. Wood-work	4	3	2	-	9
4. Block factory	1	-	1	3 a/	5
5. Welding	1	1	2	1 b/	5
6. General merchandise	2	2	2	-	6
7. Gas station & kerosene c/	7	6	5	-	18
8. Meat shop (Butchery)	1	2	-	-	3
9. Auto-parts sale	3	-	-	-	3
10. Retail trade	60 d/	88 d/	72 d/	26 d/	246
11. Cook shop/restaurant	5	4	4	-	13
12. Drinking spots	16	13	17	-	46
13. Night clubs	4	3	1	-	8
14. Motels	2	1	1	-	4
15. Shoe repair	1	1	-	-	2
16. Electrical repair	3	-	-	-	3
17. Auto repair/garage	4	3	1	-	8
18. Watch repair	1	-	-	-	1
19 Phono studio	2	1	-	-	3
20. Distillery (Cane juice)	2	-	-	-	2
21. Charcoal	2	3	-	-	5
22. Bakery	4	1	-	-	5
23. Barber shop	3	1	1	-	5
24. Cattle ranch e/	1	-	-	-	1
25. Drug stores	12	4	4	-	20
26. Legal services f/	-	-	1	-	1
27. Accounting services	-	-	1	-	1
28. Engineering/land survey	-	-	1	-	1
29. Tyre repair	-	2	2	-	4
30. Radio/TV repair	-	2	1	-	3
31. Book store	-	-	1	-	1
32 Sawmill	-	-	-	1	1
Total	178	158	139	33	508

Source: UNIDO Survey.

a/ Dirt block making.
b/ An old type blacksmith shop to sharpen imported cultlasses.
c/ The Gas Station in Sinoe had kerosene, while those of Grand Gedeh and Maryland were only gas sales.
d/ About 36 out of a total of 52 retail facilities in Zwedru were simple market stalls or booths.
e/ This cattle ranch is in the Webbo area of Grand Gedeh; information on it was given by the National Investment Commission (NIC) Office in Zwedru.
f/ There were lawyers in Zwedru, the capital city, but hardly any registered law firms could be located there.

could be classified as manufacturing operations.[1] Roughly half of these were tailoring. They were mainly owned by non-Liberian Africans. The rate of enterprise establishment and closure throughout the region was very high - reflector of the essentially temporary character of much SME activity and its close relationship to the informal, subsistence sector. Employment within the sector is not usually full time and is often of a non-wage character - the worker being compensated by meals and other payments in kind. Many employees had friendship relations with the owners of the SMEs. Skill levels are very low - but the entrepreneurs themselves had significant technical know-how - 32 per cent of SME owners in Grand Gedeh county possesed industrial skills. Average employment per establishment within the region ranges between 1 and 5 - with over three-fourths of the enterprises having only one or two employees (excluding the owner). The value of fixed assets (including inventories) ranges from $1,000 to $25,000 with over 80 per cent of the enterprises possesing assets of less than $5,000. Tailoring and wood work establishments had the smallest investments: most SMEs were owned by a single owner but about 10 per cent represented partnerships among two or more persons. Significantly no SMEs were co-operative establishments - this is a surprising and somewhat disturbing finding in view of the well documented wide-spread role of traditional rural co-operatives in Liberia. In Eastern Liberia both work and sewing co-operatives are known to have flourished among the Basa, Kru, Sapo, Krun and ethnic groupings in the early 1970s. It is somewhat surprising that the UNIDO survey found no evidence of their existence in the mid-1980s. Evidence was cited of the recent closure of co-operative enterprises in Grand Gedeh county.[2]

The Survey found that about 20 per cent of the enterprises were in need of modernization. Such modernization would typically involve an investment of about $20,000. Most entrepreneurs were found willing to contribute towards modernisation expenses but the entrepreneurial contribution in this respect was typically unlikely to exceed 30 per cent.

A major constraint on the expansion of SMEs in the North Eastern region is the lack of marketing facilities. No organized markets exist. There is a serious shortage of infrastructural facilities such as roads, electricity and water supply. There exist very simple channels of distribution. Contract based production systems were virtually non-existent, as were commercial ties with enterprises in other regions of Liberia. In the absence of a market network, variations in price were necessarily large and standardization and product quality control virtually impossible.

Expansion of the SMEs was also seriously constrained by lack of investment financing, frequent machinery breakdown (and inadequate repair facilities) and raw material shortages at critical junctures in the production cycle. Interestingly most enterprises did not anticipate that shortage of skilled manpower was a serious constraint on the upgrading of production activities. The enterprises could, however, benefit significantly from an improvement in record keeping and general accountancy skills.

1/ This classification includes repair operations.

2/ See H. Seibel and A. Massing, Traditional Organization and Economic Development: Indigeneous Co-operatives in Liberia, Prager, New York, 1974, pp. 111-139.

Policy support from government to SMEs in the North Eastern region was relatively inconsequential. Credit extended remained limited and the decision to reserve certain industries for exclusively Liberian owned enterprises (which in effect would have meant SMEs) was reversed in 1985. Incentives for the development of sub-contracting links between large and small enterprises were generally regarded as inadequate by the management of the major firms which argued that the development of such links was impeded by the absence of infrastructural and organisational deficiencies. The revitalization of the policy support programme to SMEs as envisaged in the ERP 1986/1987 to 1988/1989 can have a major impact on the expansion and modernization of the SME sector in North Eastern Liberia.

3.2 Goverment assistance to SMEs

The Government of Liberia has since 1981 undertaken a number of initiatives to foster the expansion of the SME sector. Such assistance is of vital importance because of the absence of an institutional infrastructure - particularly organized marketing and financial arrangements - to facilitate SME development.

Several Liberian public sector organizations are involved in the provision of assistance to the SME sector. Two major multilateral co-operation initiatives have also been focussed in this field. In 1981 the government obtained an IDA credit line (No. 1074-LBR) worth SDR 3.2 million for institutional credit and technical assistance to the SME sector. In the same year a UNIDO/UNDP project (LIB/80/007) was also initiated which was concerned both with the provision of technical assistance and with an institution building. In 1984 the IDA and UNIDO/UNDP projects were merged to achieve greater co-ordination and speed up disbursement under the IDA credit line. This had remained extremely limited and amounted to only $0.32 million by mid-1984. Thereafter, the disbursement rate accelerated and about 65 per cent of the funds had been committed by end 1985. Disbursements, however, constituted only 30 per cent of sanctioned loans during 1984 and 1985.

Disbursements have been constrained by a number of factors. IDA credit allocations require equity participation of 10 per cent in SMEs but Liberian financial institutions usually insist on an equity participation rate of 75 per cent and also require 100 per cent - which most small entrepreneurs are unable to provide. Secondly, the ability of local institutions to monitor and evaluate fund utilization remains weak. This weakness is reflected in the long delays experienced at the approval stage. Moreover, disbursement is further delayed by most vendor's insistence on being paid cash and reluctance to accept cheques.

There is little uniformity in respect to charges and commissions. In the first year the cost to the borrower can go up to 20 per cent of the loan amount. Most borrowers quickly end up in the defaulters category and have to pay penal interest and legal charges on top of the regular interest and principal repayment. It has been estimated that due to the very high operational cost in handling the IDA credit functions, the Small Enterprises Financing Organization (SEFO) made a net loss of 16.2 per cent in 1984. It is not surprising, therefore, that extending funds to the SME sector is not seen as a profitable venture by the commercial banks. Over 80 per cent of commercial bank ownership remains in foreign hands and they are traditionally not concerned with the provision of long-term finance to the commodity producing sectors.

Credit allocations under the IDA Scheme until mid-June 1987 are presented in Table 3.2. Although there exists an agreement in principle to open a Second IDA Credit Line to SMEs in Liberia, payments under the present credit line are suspended - pending satisfactory settlement of Liberian arrears with the World Bank.

Table 3.2 also shows that the total sanction equals $2.2 million (68 per cent of the total credit line). Manufacturing accounts for 36 per cent of total allocations.[1/] The largest shares are those for the furniture and wood products enterprises (3 per cent of total allocation to manufacturing enterprises). Out of the 43 manufacturing enterprises which have received loans under the IDA credit line 14 are wood processing establishments.

Credit allocations - other than those under the IDA credit line - made by national financial institutions and their distribution by product group are not presently available. As noted earlier commercial bank lending to the SME sector is virtually non-existent. Over the period 1982-1984 loan allocations by commerical banks to the entire manufacturing sector represented only about 0.3 per cent of their total loans.[2/] It was estimated in the early 1980s that no credit facilities were available to about 85 per cent of SMEs in the Greater Monrovia Area. It is unlikely that this situation has changed significantly during the present decade.

The Government of Liberia has also expressed a commitment to increasing the provision of extension services to the SME sector. The national institutions involved in the provision of extension services to SMEs are the Small- and Medium-Sector Enterprise Department of the NIC and SEFO. Extension services are provided for speeding up factory establishment, reducing costs, improving project quality and productivity etc. Assistance is offered for project evaluation, market identification, selection of appropriate technology, plant location and design, product standardization and training of workforce. The programme is also concerned to upgrade management quality. SEFO, on the other hand, remains principally concerned with developing an expertise in project evaluation and in mobilizing investment resources for the SME sector.

A UNIDO/UNDP project for strengthening institutional capacity for the provision of extension services to SMEs has recently been extended for a period of four years. During its period of operation assistance has been provided to the SME department of NIC and SEFO.

The SME Department of NIC has developed expertise to conduct area and sub-sector studies, and to undertake activities relating to product identification, project preparation and industrial extension services to

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1/ Manufacturing is defined as items under "Industry" in Table 3.2 except "Construction" and "Piggery/Poultry" (although the latter might involve some processing units.

2/ Government of Liberia, Economic Survey 1985, p.129.

Table 3.2: Utilization of IDA Credit Line, mid-1987

Nature of activity	Number of Projects	Investment ($000)	Annual production ($000)	Loan sanctioned ($000)	Employment created
Industry					
Furniture wood based	14	524	793	308	97
Upholstery	1	13	40	8	3
Charcoal making	3	55	114	38	15
Rice/coffee milling	4	63	91	43	19
Bakeries	4	106	139	52	25
Cane juice	4	156	152	91	56
Ice cream	1	27	99	14	2
Poultry/piggery	34	937	1,290	559	83
Slaughtering	1	90	276	50	12
Steel building	1	23	25	16	5
Cement block making	2	49	159	21	16
Ready-made garments	3	84	110	51	24
Electrical/billboard	3	88	174	49	20
Palm nut cracking	1	33	50	23	10
Office stationery	1	82	161	50	11
Construction	2	200	242	65	35
Sub-total	79	2,530	3,915	1,438	433
Service					
Restaurants	6	135	215	61	29
Garages	8	342	243	192	43
Fisheries cold storage	3	179	656	107	21
Plantation	5	280	43	78	106
Garbage collection	2	80	124	53	20
School nursery	3	63	124	29	18
Beauty saloon	-	-	-	-	-
Shipping	1	154	240	76	5
Recreation centre	1	67	63	40	3
Computer Service	1	50	70	20	3
Sub-total	30	1,350	1,778	656	248
Trade					
Drugs/optical sales	4	162	358	72	21
Gas distrubution	1	51	2,162	40	13
Jewels/shoes, etc.	4	23	66	15	13
Sub-total	9	236	2,586	127	47
GRAND TOTAL	118	4,116	8,279	2,221	728

Source: UNIDO data files.

woodworking and metalworking industries (welding and garages). Although technicians are now able to provide assistance in the latter areas, the SME Department is still not adequately equipped in the engineering and technical field.

The capability of the SME Department to provide assistance to the priority sub-sectors of agro-processing and agro-related industries as well as the maintenance of machinery and equipment have not yet been established. The SME Department also needs to upgrade its capacity to provide advice for SMEs on general management and marketing problems.

The information base, as needed for effective planning and implementation of programmes for SMEs development, is inadequate, and needs to be institutionalized and strengthened.

It was expected by the end of 1987 that SEFO would be developed to a high level of capability in the appraisal, monitoring and supervision of financed projects. However, in view of the small loan volume and the high risk involved, SEFO would not remain financially viable, and must be supported substantially from the government's development budget or other sources of funds.

Linkages have been established between NIC as a nucleus institution for promoting, introducing and monitoring the implementation of programmes for SMEs development, and SEFO as the financing institution. The Business Advisory Service (BAS), a promotional institution established through USAID is being merged with SEFO in order to readjust the scale of operations of SEFO and BAS to the real size of their target market, making them more viable under stringent resource conditions. Links have been established with the Agricultural and Co-operative Development Bank (ACDB) for financing agro-based industries, and with the National Bank of Liberia (NBL) as the apex organization for financing SMEs development.

So far, linkages with training institutions such as the Monrovia Vocational Training Centre (MVTC) are not adequate to enable them to respond effectively to the training needs, examine the functional relationships of these and other institutions and to establish a mechanism for effective coordination among them.

The second phase of the project will address itself to some of the above problems. The institutional infrastructure would be strengthened further, and linkages established to enable it to function more effectively in response to the needs for SMEs development. NIC would have developed its capability in support of SMEs in matters of policy, plans and programmes, as well as providing extension services, particularly in the priority areas. It would have strengthened its regional offices to promote a balanced development throughout the country. It would also have developed closer linkages with NBL and SEFO. Further it would have developed closer ties with other government departments, public and private institutions involved in planning, training and other supporting activities relating to SMEs, and similar organizations in other developing countries.

The Economic Recovery Programme (ERP) places particular emphasis on the rapid development of the SME sector. It allocates a total of $5.1 million for the direct benefit of the SME sector - with a foreign aid/loans contribution of $14 million. This represents 64.5 per cent of the total investment resources allocated to industry. The single largest component of the industrial financing programme within the ERP is the provision of finance to

SMEs. It is important to stress that the effective use of these requires (a) the development of an adequate institutional structure for monitoring the financial performance of SMEs which receive these funds and b) a reduction in the extent of concentration of loans to the medium-sized enterprises and a closer association between the type and form of assistance granted and the further contribution which a specific project may make. Thus, the provision of finance might be linked to the revival of the old co-operative property form and for the creation of common services by a group of beneficiary firms. If these conditions are met the expansion of the SME sector can play a crucially important role in revitalizing and restructuring industrial growth in Liberia.

3.3 The woodworking industry

The woodworking industry is second only to the wearing apparel branch as a locus of small- and medium-scale enterprises in Liberia.

The woodworking industry is considered the second largest industry in terms of number of enterprises (about 167 units) based on a study made by the Ministry of Planning and Economic Affairs (MPEA) in 1981. The industry has an estimated employment of 3,000 persons with 90 per cent of investment owned by Liberians.

In November 1983, the National Investment Commission (NIC) in collaboration with the Small Enterprises Financing Organization (SEFO), and the MPEA completed an Industry Analysis and Planning Study for the woodworking industry in Greater Monrovia. This report entitled, "Woodworking Industry" identified the problems facing the industry, assessed its existing status and steps required for stimulating its growth, scope for its development, and stipulated the role of institutions involved in the development of the industry.

The study found that the industry was highly labour-intensive. Most enterprises employed less than 5 persons and had asset values of less than L$5,000. They were mainly concerned with the manufacture of household furniture and annual production levels were lower than L$20,000. About 90 per cent of establishments are owned by single proprietors - but there is some evidence of co-operative ownership in this branch within the Greater Monrovia Area. Skilled workers represented about 15 per cent of the work force and the semi-skilled represent another 23 per cent. Many semi-skilled and other workers accept non-wage payments and labour turnover is high. Equipment employed is generally outdated. The 1983 study estimated that total investment required for modernization of the woodworking sector in the Greater Monrovia Area equalled L$279,000 - of which L$97,000 was required to meet short-term needs and avoid major disruption of production.[1/] The study recomended the introduction of a leasing scheme for the provision of machinery to the woodworking industry and estimated that over the 1984-1988 period a total sum of L$952,8000 (in constant 1983 prices) was required for this scheme. Details for machinery to be provided under the scheme are presented in Table 3.3.

Most of the sawmills in Liberia are small- and labour-intensive industries, and mainly concentrates on round logs for export. Slabs and

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1/ National Investment Commission, Woodworking Industry, Monrovia, 1983, p. 12.

Table 3.3. Estimated financial requirements for leasing machinery to woodworking industry, 1984-1988
(L$ '000)

Type of machine	1984	1985	1986	1987	1988	Total
Universal woodworking	11.0	11.0	22.0	33.0	44.0	121.0
Circular saws	7.7	7.7	15.4	23.1	30.8	34.7
Band saws	5.5	11.0	22.0	27.5	33.0	99.0
Redial arm sawa	-	5.5	-	5.5	-	11.0
Frit saws	2.2	2.2	2.2	4.4	4.4	15.4
Planers	8.8	17.6	26.4	35.2	44.0	132.0
Moulders	7.7	15.4	15.4	23.1	23.1	84.7
Mortizers	4.4	8.8	8.8	13.2	13.2	48.4
Wood lathes	13.2	19.8	26.4	33.0	118.8	
Sanders	4.4	8.8	13.2	17.6	22.0	66.0
Grinders	2.2	4.4	4.4	6.6	6.6	24.2
Tenoners	-	9.9	-	9.9	-	15.4
Brazers	2.2	2.2	2.2	4.4	4.4	15.4
Air compressors	3.3	5.0	8.3	11.6	13.2	41.4
Hydraulic pressess	-	12.1	-	12.1	-	24.2
Glueing	-	8.8	-	8.8	-	17.6
Portable electrical						
a) Drills	0.7	1.0	1.3	2.0	2.3	7.3
b) Planers	0.7	1.0	1.3	2.0	2.3	7.3
c) Saws	0.7	1.0	1.3	2.0	2.3	7.3
d) Sanders	0.7	1.0	1.3	2.0	2.3	7.3
TOTAL	75.4	154.2	171.9	270.4	280.9	952.8
Commulative	75.4	229.6	401.5	671.9	952.8	

Source: NIC, Woodworking Industry, Monrovia, 1983, p. 19.

off-cuts were utilized as fuel wood and large quantitites of wood residues were left to rot. Only the high quality sawn wood is for export. As a whole, the scope for the development of the industry is large but faces the following constraints:

(a) Inadequate supply of dry wood (below 18 per cent moisture content) in the local market.

(b) Non-standard sawn wood with low quality.

(c) Lack of confidence in the utilization of less-known wood species.

(d) Very low productivity of saw mills.

Secondary wood processing industries are those which utilise the primary products (sawn wood, panel products) for further manufacturing and/or assembly of products for various end uses. The main groups of secondary wood processing products are:

(a) Standard - which includes form work, scaffolding, roof trusses, portal frames, beams, walls, engineered products.

(b) Non-Standard - which includes furniture, and building components, e.g. doors, windows, floorings, partitions, mouldings.

(b) Others - which includes crates, boxes, pallets, boats, matches, sporting goods, toys, wooden wares and vehicles parts.

The secondary wood processing sector in Liberia consists mostly of small firms which mainly produce non-standardized wood products. These firms are mainly concentrated in the Greater Monrovia area. As stated earlier they form, as a whole, the second largest industry in terms of number of units, about 90 per cent of these are small-scale units owned by Liberians while the large-scale units are foreign owned. The industry mainly caters to the needs of the local market. Two large-scale woodworking factories attempted to enter the export market rather unsuccessfully.

The industry is labour-intensive and all of the enterprises produce a wide range of products. Even the large-scale enterprises do not have serial production; instead, they produce many different product lines and this also applies most especially to small- and medium-scale woodworking enterprises.

Large-scale units sell their products to institutions including the government, private companies and the upper- and middle-income groups. The design of the products, the workmanship and quality of finished products of the large-scale units is much better compared to those manufactured by the small-scale units. The small-scale units cater to the middle- and lower-income groups and their products are comprised mainly of domestic furniture and building components, i.e. wooden doors, windows and wood strips for ceiling and architraves.

Generally, the product designs within the industry are still mediocre. Although some products of the large-scale units are comparable to imported furniture items, there is still a significant difference in the quality of imported furniture. The imported goods have at times become cheaper than those manufactured by local woodworking enterprises. The Liberian preference for imported items adds to this trend.

Large-scale woodworking units are equipped with woodworking machinery necessary to carry out their production activities. The medium-scale units are also equipped with some woodworking machines, although in some case these are obsolete and poorly maintained. The problems of poor main- tenance was aggravated by the local suppliers habit of introducing and selling to entrepreneurs carbide tools without provision for equipment to sharpen these special "cutting tools" and also without training personnel to properly maintain them. This problem is being severly felt in the small-scale sector. Through provision of institutional finance to the small-scale units, many of them were transformed from an artisan level, to a semi-mechanized level of production but there are some that failed to get technical advice on machinery selection before and during the preparation of project proposals. As a result, equipment was purchased without considering the availability of spare parts from local suppliers and the equipment to maintain these parts and accessories. Also there are very few local suppliers of woodworking equipment, of very limited types and models, which hinders a wider selection of machines that appropriately meet the requirements of each enterprise in terms of equipment. Local suppliers also charge exorbitant prices for the imported machines.

The specific development needs of the industry which can be attained through provision of technical assistances are:

a) training of personnel (technical level) in such areas as machinery operation and maintenance;

b) product development - this includes assistance in developing better standards of designs for wood products through proper use of raw materials of improved quality;

c) reviewing training programs in woodworking trades and recommendantions for such training courses if required in order to meet the manpower requirements of the industry; and

d) improving the production process through proper selection and operation of appropriate machinery, improved technique on the use of jigs and improved finishing technology for manufactured products.

The scope for the development of the woodworking industry is large. It is a raw material-based and labour-intensive industry which could generate employment and income for local people. The following industrial facilities and possibilities merit attention in promoting the woodworking industry:

a) Establishing common service facilities:

   i. Raw material depot for small-scale woodworking units.

   ii. Repair and servicing of woodworking machines and cutting tools. These facilities can be operated as cooperatives or as independent firms, either privately owned or government owned.

b) Introducing specialized services such as facilities providing for timber preservations and wood drying facilities.

c) Encouraging sub-contracting and ancillarization as a way of conducting business. Co-operation within the industry might lead to identification of suitable designs, and common market outlets. Sometimes trade associations play a role in training personnel (technical and managerial).

d) Conducting feasibility and special studies on:

   i. The development of low-cost prefabricated wooden houses. In Liberia, prejudice exists against wooden houses. They are considered second class compared to cement block houses, and a wooden house enjoys a low status. This is the result of lack of experience in the technology for wood preservation and construction of low-cost wooden houses.

   ii. The development and use of wood preservatives in wooden structures, i.e. electric poles, piles, posts for small jettys and bridges. Great effort is needed to promote the advantages derived from treated wood. This might be done in the form of full-scale demonstration projects, to educate agencies/companies, financing institutions and individual consumers about treated lumber.

iii. Development of pre-fabricated timber bridge for rural roads in remote areas. In many parts of Africa, UNIDO projects have been very successful in developing low cost timber bridges suitable for rural roads with many small rivers and creeks.

iv. Utilization of retired rubber trees for furniture making and in the manufacture of particle board and fibre boards.

v. Development of timber solar kilns which can be operated by one small-scale unit and with a capacity suitable to the sawnwood requirement of a small-scale woodworking unit.

vi. Developing and promoting designs of modular/knock-down furniture for local and foreign markets.

4. REHABILITATION OF MANUFACTURING ENTERPRISES: SELECTED CASE STUDIES

4.1 The need for rehabilitation

The Liberian manufacturing sector has been facing very serious economic and financial difficulties during the 1980s. Many establishments have closed down particularly since 1985, and manufacturing employment is estimated to have declined significantly during the last three years.

In early 1985 UNIDO fielded a mission at the request of the Government of Liberia to identity establishments which could benefit from rehabilitation. The general need for rehabilitation in the Liberian context is indicated by the very low levels of capacity utilization reported in Table 4.1. For the manufacturing sector as a whole, the average capacity utilization rate was estimated at almost 36 per cent in 1985. The main causes of this low level of capacity utilization may be enumerated as follow:

- Frequent power cuts without any warning, during the 3 to 4 months of the dry season, resulting in wasted materials, man-hours and a lower output. Only companies with very large margins of capacity or financial resources can survive these conditions.

- Shortage of raw materials due to the lack of foreign exchange and the increasing difficulty experienced in arranging payments for imported raw materials is causing alarm and despondency amongst the manufacturing community. This was the most frequently mentioned problem facing management and could well be the cause of further shut-downs.

- The banking system is inadequately developed and not functioning properly, resulting in inefficiencies and lack of liquidity. Overdraft facilities which most business needs in order to utilize their capital resources to the full are not available, even when warranted.

- Lack of or inadequate management information such as budgetary control, production planning and control, product costing, marketing forecast, break-even point analyses, etc. Without these tools, management can only grope in the dark and base decisions on guesses with often disastrous results.

- Limited market possibilities, non-realization of export potential due to either poor conception of the project or a change in economic circumstances. The market is also lost in some cases to competition from imported goods which are not subject to excise tax.

- Poor maintenance of equipment, absence of preventive maintenance and lack of spare parts. This is sometimes aggravated by overloading and/or abuse of the equipment e.g. using it for purposes for which it was not intended.

Table 4.1: Capacity utilization rates in Liberian manufacturing enterprises, 1985

Establishment	Capacity utilization rate
J.B.T. Carpentry Shop - Tubman Blvd., Monrovia	20 per cent
Nimba Woolen Industrial Co. Congo Town	20 per cent
BADDOO Poultry, Somalia Drive	Nil
LEVAN Steel, Somalia Drive	40 per cent
Parker Industries Ltd. (Paints)	33 per cent
Liberia Glue and Latex Foam Industries Inc.	Closed
LP Industries (PVC pipes)	25 per cent
Mesurado Oxygen and Acetylene Plant	Closed
Mesurado Soap Plant	Closed
Mesurado Detergent Plant	Closed
Mesurado Aluminium Fabrication Plant	No activity
Mesurado Garment Industries/Domestic Appliances	Closed
MODALCO - Food Processing	Closed
M.I.C	20 per cent
Mesurado Fishing Compound and LIFAICO	10 per cent
LIPCO	45 per cent
METALUM	80 per cent
MEZBAU	70 per cent
Liberian Steel Products Corporation	70 per cent
National Food Manufacturing Corporation	80 per cent
Metalloplastica (Liberia) Ltd.	50 per cent
Industrial and Chemical Corporation	25 per cent
LIMACO (Match Manufacturers)	80 per cent
Liberia Battery Manufacturers Corporation	40 per cent
Monrovia Breweries 1 shift (capacity 3 times higher)	70 per cent
ERA Industries Complex Inc.	50 per cent
MANO MFG Co. (MANCO) (Bleach, candles, insecticides)	60 per cent
LIPLAFCO - Liberia Plastic Footwear Corporation	45 per cent
Liberia General Industries (Cosmetics and Soap)	40 per cent
MOTIFCO - Tile Factory	70 per cent
LUNA Nail Factory	No activity
Monrovia Tobacco Corporation	60 per cent
UNIPAC Corugated Carton Manufacturers	40 per cent
VAANG-AHN Enterprises Ltd. (Toilet paper & napkins manufacturers)	50 per cent
CEMENCO Liberia Cement Corporation	40 per cent
Monrovia Slaughter House	40 per cent
Italian - Liberian Fishing Enterprise	60 per cent
C.F. Wilhelm Jantzen (Furniture) Ltd.	50 per cent
Union Glass Corporation	-
Rainbow Industries	40 per cent
Firestone Rubber Plantation, Latex Plant	...
Firestone Brick Manufacturing Plant	...
A.Z. Corporation Cube Sugar Plant	-
Average	36 per cent

Source: UNIDO.

- Overstaffing resulting in poor performance by international standards is most common reason for cases of low productivity in developing countries. Even with lower wages, the cost of labour can be higher through overstaffing. The situation is made even worse when selection of personnel is based on favours rather than merit or suitability for the job. This lowers the morale of the qualified work-force and staff.

The decline in the manufacturing sector's share of GDP has been continuous during the 1980s. This de-industrialization of Liberia will have a high long-run cost because industrial expansion is a specially suitable mechanism for transmitting the skills of the working force and for increasing productive efficiency. A de-industrialized Liberia will on the one hand be increasingly sensitive to conflicts between town and country, the employed and the unemployed, the privileged and the under-privileged. On the other hand it will be vulnerable to external pressure and be entirely dependent on movements in the world price of iron ore and rubber and on the availability of concessional finance. It is, therefore, of considerable importance that manufacturing enterprises facing difficulties at present but displaying significant economic potential be rehabilitated with the help of governmental and financial support. The re-emergence of such enterprise can pave the way for a general revival of manufacturing activity in Liberia.

4.2 Industrial establishments meriting rehabilitation assistance

Following a detailed survey of 42 manufacturing enterprises, the UNIDO study[1/] identified the following companies as requiring rehabilitation assistance and as capable of benefiting from regenerating initiatives:

Parker Industries Ltd., employing 60 employees, is engaged in the production of paint and tin containers with a monthly sales turnover of around L$100,000. The firm's operational efficiency fell sharply during 1980-1984 but revived in April 1985 when the state ownership was reverted back to the original owners. The firm uses lacquered tin plated cans for the emulsion (water-based) paints. The firm, however, tends to use plastic containers. The capacity of the factory is 30,000 gallons per month, but the current production level of 10,000 gallons per month represents a capacity utilization rate of 33.3 per cent. A 66.7 per cent idle capacity is partly on account of difficulties in obtaining input supplies. Raw materials are imported through a commercial house in London with which the firm has a long established relationship, but credit facilities are exhausted. In the wake of banks refusing to extend credit facilties to the enterprise, provision of institutional credit should be treated as a matter of priority with a view to rehabilitating the industry.

Liberia Glue and Latex Foam Industries Ltd. was established in 1977. The firm employs 25 employees. Financial difficulties led to the closure of this factory. Currently the owners are looking for new premises to reinstall equipment consisting of mixing tanks, weighing and filling devices and storage drums. Revitalization of the industry depends on substantial financial support.

1/ M. Gabbay, UNIDO Consultant, "Management Diagnosis and Industrial Rehabilitation in Liberia", Terminal Report prepared for the Government of Liberia, National Investment Commission, March 1986. (Restricted)

Liberia Polyvinyl Industries Ltd. has an extruder designed for extruding 1/2 inch to 6 inch pipes and a grinder for recovering scrap pipes. The firm operates at 25 per cent of its installed capacity due to market limitations. Marketing problems could be solved by sharpening the price competitiveness of its products. The factory is not able to compete with the factory at Abidjan, and the weak currency of Sierra Léone makes exports to that country unattractive.

Mesurado Oxygen Supply Co. is in deep crisis. Output had dropped to 5 cylinders per month in 1985. However, the plant has resumed production and deliveries are being made by order of priority. A French firm owing a gas plant at Abidjan is studying the possibility of extending their activities to Liberia. The rehabilitation of the oxygen and acetylene plants should be treated as a matter of top priority.

Mondalco-Moses L. Davis and Company Ltd. was engaged in food processing. The factory has been closed down owing to financial and other difficulties. The firm's main products were farina and fufu made from Liberian cassava, rice meal, baby cereals, snacks, etc. Rehabilitation initiatives should begin with market study and product costing.

M.I.C. Furniture Manufacturers used to be one of the largest furniture manufacturers in Liberia. In the wake of frequent power cuts the effective work hours are restricted to 06:00 p.m. and 11:00 p.m. The factory is likely to be liquidated in consequence of falling demand. Large contracts from institutions and hotels expired recently and there is sign of these contracts being renewed. Rationalization of the system of tax levied on wood products could pave the way for a viable rehabilitation of the factory.

Lifaico-Liberia Food and Agriculture Industrial Corporation is the company that had taken over what used to be the Mesurado Fishing Complex. The factory is engaged in sorting by size (shrimps), weighing and packing prior to quick-freezing. Only one of the ice-making plants is in operation. A major problem posing the factory is the primitive equipment used for low degree of industrial processing of shrimps. This project is of vital importance to the country's endeavour to achieve import-substitution in fish products. Further investments could concentrate on the purchase of modern shrimp trawlers and on efficient equipment needed for shrimp processing.

Mezbau manufacturers electrodes, roofing sheets, and aluminium doors and windows. Aluminium sliding doors and windows are made from imported anodized aluminium plates. The raw materials for the electrode factory are rolls of wire of various gauges, powders for coating and electrodes and packaging materials. The main customers for the welding rods are the mines. The quality of products is strictly controlled and conforms to international standards. Although the factory is well managed, its credit worthiness has been questioned due to less successful experience with European banks which have withheld credit facilities.

Liberian Steel Products Corporation manufacturers galvanized sheet steel culverts and corrugated roofing sheets. The firm imports galvanized sheet, steel rods and uses bitumen to coat some of the culverts. The obsolete machinery is to be replaced in order to increase the factory's efficiency. The factory needs help and encouragement, particularly in view of the fact that the firm has recently signed a contract for a road construction project. Of the four blow moulding machines for making bottles, only one is in operation.

Metalloplastica (Liberia) Ltd. was established in 1965 for producing plastic products (injection, moulding, blow moulding and extrusion). The factory went into bankruptcy twice. The factory is currently operating at 50 per cent of its installed capacity. Of the 4 blow-moulding machines for making bottles only one is in use. The main problem facing the factory is the shrinking market and the difficulty in making transfers for buying raw materials. If the situation does not improve, the factory will be closed down.

Liplafco - Liberia Plastic Footwear Corporation is equiped with two French injection moulding machines designed to produce plastic slippers, sandals and straps from rubber foam. Currently the plant manufactures 3,000-4,000 pairs a day as against its installed capacity of 7,000 pairs a day. One of the major problems facing the factory is fierce competition from Côte d'Ivoire where 46 plastic footwear factories are located. Rehabilitation initiatives are to be focussed on the possibilities for bringing out new models constantly in novel designs and colours and on protecting this factory from cut-throat competition.

4.3 Strategies for rehabilitation

There are several Liberian manufacturing enterprises in need of and deserving rehabilitation assistance. Such assistance ought to be provided within the framework of a comprehensive rehabilitation programmes which:

(a) establishes criteria for the extension of rehabilitation assistance;

(b) identifies the level of rehabilitation required over the short- and medium-term, its composition (technical assistance, import financing, access to credit etc.) and the domestic and foreign components of this assistance;

(c) establishes appropriate channels for the selection of manufacturing units considered worthy of rehabilitation;

(d) sets up an institutional network for the delivery of rehabilitation assistance and for monitoring its use; and

(e) considers the early establishment of a technical unit within National Investment Commission (NIC).

A technical unit could be set up within NIC to provide advisory services, consultancy and training for selected companies in need of assistance. The functions of the technical unit could be to:

- assist Liberian management in the installation of modern management techniques in their enterprises such as production programming and control, product costing, budgetary cost control, break-even analysis, sales analysis and forecasting, worker motivation and the introduction of incentive schemes;

- provide consultancy services to firms in need of it and using the technique known as "Action Learning". This would give managers specific tasks or projects to undertake themselves with regular visits and on-the-spot consultancy and allow them to learn by 'doing'. Periodic monitoring by the consultant can prevent mistakes from becoming too costly.

- provide courses and seminars on the above topics so as to have the greatest impact on Liberian management, and in particular, providing courses in entrepreneurship to help and encourage Liberians to set up their own business. A number of donor countries or agencies are very interested in contributing to such programmes as a small input can have a great impact.

There is a great shortage of qualified Liberian technicians for machine shops, maintenance, cold-room operation and maintenance, saw-milling and saw-doctoring. Taking the long view, the greatest impact on the future development of Liberian industry could be made by providing necessary support to the Monrovia Vocational Training Institute and by arranging training schemes for these technicians. The general crises of Liberian manufacturing can best be addressed by the development of appropriate industrial strategies and policies to deal with the present difficulties.

5. POLICIES, INSTITUTIONS AND RESOURCES FOR INDUSTRIAL DEVELOPMENT

5.1 Objectives and strategies

Liberian industrial policy has passed through three distinct phases. Until about 1971 the government adopted a relatively "neutral" stance towards the industrial sector and the growth that occurred was mainly in response to the massive expansion of the primary exporting sector dominated by foreign companies. The major part of this phase has been aptly described as "growth without development"[1/] during which increasing production surpluses were transferred abroad but the domestic economy stagnated and few institutional changes were made to capture the benefits of growth for the population. During the 1970s the Tolbert Administration placed strong emphasis on import-substitution and on expanding the role of the public sector within the national economy. During the period 1973-1980 despite falling export revenues, the economy continued to expand and as noted earlier manufacturing was one of the most rapidly growing sectors. The import intensity of manufacturing production increased sharply within this period and generous incentives were provided for attracting foreign investment and protecting its interests. Most large-scale manufacturing enterprises were foreign owned either wholly or in partnership with minority Liberian interests. The Socio Economic Development Plan 1976-79, however, provided for a public sector investment of L$13.3 million within the manufacturing sector (representing about 3 per cent of the total investment allocation under the Plan) and a small number of state-owned production enterprises were established in 1978/79. The Tolbert Administration remained committed to an "open door" policy and enacted an investment incentive code which provided generous tax exemption and extensive facilities for the repatriation of profits.

The Doe Administration in its early days signalled that it would reverse the policy priorities of its predecessor regime. It placed primary emphasis on fostering what it described as "a green revolution" in Liberian agriculture and in creating a wider diffusion of the benefits of growth within the formal monetized economy. As far as the manufacturing sector was concerned emphasis was placed on rapid indigenization and some leading - mainly Liberia owned - large-scale manufacturing enterprises were confiscated. The inability of public sector management to effectively replace the private owners led to the closure of most of the confiscated factories. Since 1983/84 the Doe government has gradually reversed its policy stance. It has become more responsive to advice from multilateral agencies and has drastically reduced its public investment programme. Within the manufacturing sector it has embarked on a massive privatization programme - whereby most state-owned concerns are to be returned or sold to the private sector. It has further liberalized the investment incentive code - perhaps the most generous in Africa - to increase the flow of foreign direct investment. The concern with a wider diffusion of the fruits of industrial growth has, however, not been abandoned. It finds expression in the top priority that is accorded to the expansion of investment within the SME sector in the Economic Recovery Programme (ERP) for the period 1986/87-1988/89. The ERP also allocates funds for the development of two growth centres. It is hoped that these will

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1/ R. Clower, R. Dalton, M. Harwitz, and A. Walters, Growth Without Development, Evanston, USA, 1966.

increase ancillary and subcontracting linkage within the manufacturing sector on the one hand and will reduce the concentration of manufacturing enterprises in the greater Monrovia Area on the other. There is also a concern to reduce the import intensity of manufacturing enterprises and if possible to accelerate the growth of manufacturing exports particularly within the West African region. Special emphasis is also placed on the development of rural industries and on increasing the linkages between the agricultural and the manufacturing sectors.

5.2 Recent trends in industrial policy

Allocations within the Economic Recovery Programme for the manufacturing sector are presented in Table 5.1. Total planned allocations to the manufacturing sector equal L$7.9 million of which the external contribution is expected to be as high as 77 per cent. A contingency plan has also been drawn for this period - in which the manufacturing sector's share is L$2 million allocated wholly to the SME sector. Selection of projects within the ERP has been highly influenced by prospects of attracting multilateral assistance and the priority projects indicated in Table 5.1 are broadly in line with the policy advice of multilateral technical co-operation agencies including UNIDO. It is clear from Table 5.1 that the three major concerns of the ERP within the manufacturing sector are (a) revitalizing the SME sector; (b) strengthening inter-sectoral linkages within manufacturing and its integration with the rest of the national economy - this is evident in the allocation made to rural industries and for the development of the growth centres; and (c) the development of the metal-based industries and the achievement of technological upgrading within existing enterprises.

Manufacturing growth is also likely to be stimulated by allocations made within the Economic Recovery Programme and in the contingency plan to several other sectors within agriculture there are projects for revitalizing rubber processing, improving the production machinery for the Decons Oil Palm Corporation and of wood processing plants. In the energy sector allocations are made to power generation and petroleum refining enterprises. Technical training facilities are to be improved and the Liberian Industrial Opportunities Centre is to be upgraded. Allocations have also been made to improve administrative skills with central ministries and to extend State Enterprise Reform. Finally the transportation and communications network is also to be improved. It is, therefore, clear that an effective implementation of the ERP will go a considerable distance towards relieving the infrastructural bottlenecks which are at present a principal constraint on expanding capacity utilization within the manufacturing sector.

Increasing capacity utilization rates and facilitating the rehabilitation of potentially viable projects is another important aim of Liberian industrial policy. The strategy of the government has been to grant generous incentives to private investors interested in the rehabilitation of manufacturing units. Table 5.2 lists the projects for which incentives have been granted by the National Investment Corporation (NIC) over the period 1982-1986. It can be seen that the total number of such projects reached a peak of 39 in 1983 (Annex Table A-4) but have declined in 1984, 1985 and 1986 - in 1986 only 12 projects are in the metal-based sector but agro-based and wood processing projects are also important. The preponderance of the metal-based projects has increased in recent years. Average investment levels per project remained small throughout the period.

Table 5.1: Economic Recovery Programme; financial assistance to SMEs, 1986/87-1987/88 (L$ million)

Programmes in order of priority	Source	1986/87	1987/88	Total
1. Small & Medium Scale Enterprises Financing	GOL	0.4	0.4	0.8
	FOR	1.8	2.0	3.3
	TOT	1.7	2.4	4.1
2. Development of Two Growth Centres	GOL	0.1	0.3	0.4
	FOR	0.2	0.7	0.9
	TOT	0.3	1.0	1.3
3. Establishment of Technological Centres for Metal Casting	GOL	0.1	0.2	0.3
	FOR	0.2	1.0	1.2
	TOT	0.3	1.2	1.5
4. Study on Development Rural Industries	GOL	0.2	0.0	0.2
	FOR	0.6	0.0	0.6
	TOT	0.8	0.0	0.8
5. Study on the Supply of Machinery for the Hire Purchases to SMEs	GOL	0.1	0.0	0.1
	FOR	0.1	0.0	0.1
	TOT	0.2	0.0	0.2
Total for the Five Priority Programmes and Projects	GOL	0.9	0.9	1.8
	FOR	2.4	3.7	6.1
	TOT	3.3	4.6	7.9

Source: Economic Recovery Programme 1986/87-1988/89, 1986.

GOL: Government of Liberia.
FOR: Foreign sources.
TOT: Total.

Table 5.2: Proposed investments in selected branches of manufacturing and employment implications, 1982-1986

Sector	No. of projects	Proposed Investment ($ million)	Employment
Agro-based	24	73.76	1,674
Forest-based	10	63.07	1,571
Animal husbandry	11	18.06	619
Engineering	15	26.72	557
Non-engineering (metal)	38	41.46	1,429
Services and trade	4	6.01	174
Total	102	229.08	6,024

Source: UNIDO.

As far as the large-scale industries are concerned, there are some indications of the beginning of a revival in 1987. Following the signing of the International Rubber Agreement, Firestone speeded up the process of installing a new block rubber production line bringing total capacity to 2,000 tonnes a month and 15 new centrifuges in its latex processing plant with a capacity of 5,000 tonnes a month. In 1987, the African Development Bank agreed to finance feasibility studies for establishing small mobile palm oil mills in the three member states of the Mano River Union.

A most important new joint venture - Third World Shipbreakers Company - involving equity participation by a Pakistani firm Meimar Altijurat has been established with an initial investment cost of about $10 million. The re-usable and re-rolled steel is to be used locally, while the non-ferrous metal is to be exported to other West African countries. The ship plates are to be exported to South East Asia for smelting. The enterprise will provide 500 jobs. The establishment of the project has involved the contracting of a loan worth about $6 million from European banks. The first ship to be dismantled was a fire-damaged 4,160 tonne government cargo vessel. The company has also signed an agreement with the Liberian Free Zone Authority to construct a steel rolling mill in Monrovia, costing about $2.5 million.

While some signs of a revival are clearly evident, the strengthening of these trends depends crucially upon improving the process of industrial policy formulation and implementation. The next section briefly reviews this process and identifies the major instruments used for the pursuit of industrial policy targets in Liberia.

5.3 Industrial policy instruments and institutions

Several government institutions are involved in the formulation and implementation of industrial policy. These include:

- Ministry of Planning and Economic Affairs, for matters relating to the preparation and implementation of plans, policies and programmes for industrial development.

- Ministry of Commerce, Industry and Transportation, for trade and general industrial policies in support of the manufacturing sector.

- Ministry of Finance, for matters relating to sources of financing and investment control.

- Ministry of Agriculture, in relation to the efficient utilization of agricultural production, and agricultural waste by SMEs to meet the demand for processed food products, energy and other needs; as well as the provision of agricultural tools and implements, and other inputs to agriculture.

- Ministry of Rural Development, deals with matters relating to the creation of employment and industrial investment opportunities in the rural areas.

- National Bank of Liberia (NBL), the Small Enterprises Financing Organization (SEFO), the Liberia Bank for Development and Investment (LBDI), the Agricultural and Co-operative Development Bank (ACDB), the National Housing and Savings Bank (NHSB), on all matters relating to the financing of industry.

- The Monrovia Vocational Training Centre (MVTC), and other training institutions on all matters relating to training of entrepreneurs and workers for industrial development.

One of the most important focuses of industrial policy-making and implementation is the National Investment Commission (NIC). It was established by legislative act in 1979 and is concerned with the promotion of industrial growth and the provision of technical and financial assistance to Liberian entrepreneurs to ensure their greater participation within the manufacturing sector. A SME Department has been created within NIC to mobilize financial resources for small-scale investors and to assist at the pre-investment, as well as at the operational stages. This department provides a range of extension service to SME. NIC now possesses regional offices at Gbarnga and Zwedru. UNIDO/UNDP technical assistance has been channelled through NIC and attention has been focused by these bodies on the rapid development of SEFO.

Policy intervention has been sporadic and relatively ineffective in Liberia. Most of the targets established by the Second Five-Year Plan were not met and the strategy outlined therein has been largely subsumed by the Economic Recovery Programme drawn up in 1986. The government budget deficit has been increasing over the years and its ability to collect revenues has declined. In fiscal 1986/87 government revenue amounted to only L$172.6 million - the lowest level in the last five years. Tax evasion has increased and the government has found it very difficult to collect taxes due to it from major exporters and large estate holders. Capital flight has been accelerated and the government response to this - the minting of large quantities of Liberian five dollar coins - has thrown the monetary system out of gear. There is a growing shortage of US dollars and an increasing reluctance on the part of traders to accept Liberian dollars. The de-industrialization of the 1980s has been accompanied by a demonetization of the national economy and a corresponding growth of the subsistence sector. The government's ability to regulate the flow of credit - for example through interest rate manipulation - has become increasingly restricted.

There has also been a significant decline in the availability of foreign aid as Liberia's ability to meet its existing obligations has fallen. During 1987 United States officials were stationed in the Central Bank and in key ministeries to improve financial administration. Some headway was also made towards reaching rescheduling settlements with the IMF and the World Bank. The ERP was drawn up with the explicit intention of revitalizing aid flows by outlining an economic strategy that could win the approval of prospective donors. Some limited success has been achieved in this direction.

As far as the manufacturing sector is concerned, the present administration has reverted to the laissez-faire policies of the 1960s and 1970s. Confiscated units have been returned to former owners. The government has also sought to reduce and simplify the procedures for licensing, import control, taxation and the allocation of credit to manufacturing enterprises. During 1986 the procedures involving appraisal of projects for financing through the IDA credit line LBR-1076 were simplified. This led to a significant reduction in the time-lag between project preparation and approval. Most bureaucratic administrative procedures have developed without reference to developmental needs and a systematic rationalization of these procedures and controls is an important necessity.

The attempt to rationalize administrative controls has been accompanied by measures to attract private sector and foreign direct investment to Liberia. The principal legal instrument covering investment inducements is the Investment Incentive Code, which came into force in 1977. It was revised in 1982 and is currently being further revised. Its main features are described as follows:

5.4. The Investment Incentive Code

The Code seeks to establish and encourage the establishment of industrial units which:

(a) utilize to the highest possible extent, Liberian manpower at all levels and contribute to advancing their skills through training schemes (on-the-job and otherwise);

(b) utilize raw materials and products of Liberian origin to the maximum possible extent;

(c) utilize, to a maximum extent, ancillary activities available in the productive and service sectors of Liberia;

(d) contribute to making Liberia independent of importation of basic necessities as far as it is economically feasible;

(e) contribute to the expansion and diversification of Liberia's exports;

(f) contribute to a wide distribution of employment opportunities all over the country.

In pursuance of these policy objectives, the amended Investment Incentive Code lays down broad guidelines, the main points of which are:

Conditions for the award of an investment incentive contract

No incentive shall be granted to an enterprise unless it satisfies the following conditions:

(a) falls within the overall priority as established by the government;

(b) ensures the permanent employment of Liberians at all levels, and carries out appropriate training schemes and, in case of expansion, increases employment and augments training activities in harmony with the volume of expansion;

(c) leaves an option open for Liberians to contribute to the enterprise by purchasing shares or otherwise participating in the ownership;

(d) produces a local value added amounting to not less than 25 per cent of the value of gross output;

(e) takes its raw materials and other supplies of Liberian origin and imports only such items of which the local product is not available in sufficient quantity and/or its quality or price is not approximately equal with the intended imports as determined by the government.

Incentives

1. Enterprises that are granted investment incentive contracts shall be entitled to the following customs duty benefits in respect of the approved investment project:

   (a) Approved imports of machinery and equipment to be used in establishing the approved investment project shall be exempt from import duty up to 90 per cent of the dutiable value of such imports. No exemption shall be made for construction materials, and spare parts on non-capital equipment. Any equipment with less than a three-year life may be considered non-capital;

   (b) Approved imports of raw materials, semi-finished products and other supplies used in the productive operations of approved investment projects shall be exempt from import duty of up to 90 per cent of the dutiable value of such imports;

   (c) Approved imports listed under paragraphs (a) and (b), above, shall not be exempt from consular fees.

2. Enterprises that are granted investment incentive contracts shall be entitled to the following income tax benefits in respect of the approved investment project:

   (a) Profits re-invested into fixed assets shall be exempt from income tax; exemption for reinvestment into housing for employees must receive prior approval from the Concession and Investment Commission;

   (b) All the remaining profits of the enterprise shall be exempt from 50 per cent of the income tax that would be otherwise payable.

3. Enterprises that are granted investment incentive contracts shall be entitled to full rebate on import duties and full refund of income tax as well as excise tax paid by them in respect of manufactured goods exported from the production of the approved investment project.

4. Sponsors of enterprises having investment incentive contracts in respect of an approved investment project may be granted by the government, upon application by the sponsor in the project proposal, one or more of the following additional benefits:

(a) The lease of available land for plant site in a government owned industrial park at a preferential rate during the term of lease together with all possible assitance by government in making available other necessary infrastructural facilities;

(b) Support in securing loans and/or contribution to equity capital of pertinent government agencies with priority given in this respect to smaller entrepreneurs;

(c) Reasonable tariff protection that has to be calculated so as to protect the local ex-factory price inclusive of excise tax, if any;

(d) Loss carry-forward provisions as regulated by the income tax law of Liberia;

(e) Accelerated depreciation and an initial depreciation as regulated by the income tax law of Liberia;

(f) The government and its agencies shall purchase products from the production of the approved investment project provided the quantities are sufficient and the quality and price of the products are equal to those intended to be purchased from elsewhere. The sufficiency of quantities and similarity of quality and price of goods are to be determined by the Government of Liberia.

<u>Obligation under the investment incentive contract</u>

1. The sponsor of an approved investment project shall undertake the following obligations under an investment incentive contract:

(a) To implement the project substantially as described in the project proposal and in compliance with the terms of the investment incentive contract;

(b) To employ Liberian manpower and to select and train Liberians on a systematic basis in skills required at all levels in the operation of the approved investment projects;

(c) To ensure that at any time of the implementation and the operation of the project, the outstanding risk-bearing capital of its own shall not be less than one third of the borrowed capital; not taking into account a possible participation in capital stock by a public corporation or the Government of Liberia;

(d) To permit such audits as are necessary to ascertain compliance with the terms of the investment incentive contract;

(e) To submit, at the time of filling the annual income tax return and making application for tax refund, if any, to the Concession and Investment Commission:

(i) Such reports as make it possible to judge the compliance or otherwise with the terms of investment incentives contract and the specific obligations detailed in the present section;

(ii) A copy of the latest balance sheet;

(iii) A copy of the relevant profit and loss statement;

(iv) A statement from the chief executive officer of the approved investment project on the compliance or lack of compliance with the terms of the investment contract.

2. All reports submitted in accordance with paragraph (e) of the preceeding subsection shall be considered confidential and inviolate.

Although the Code has been in existence for over a decade and a half, no institutional machinery has been established within the government to monitor its impact or to ascertain the extent to which companies adhere to their commitments as stipulated by the Code. Any revision of the Code must be prefaced by the establishment of institutional machinery adequately equipped to perform these tasks.

A reform of the industrial policy formulation and implementation mechanisms is an important need. A coherent and rationalized public framework provides an indispensable basis for revitalizing industrial development and for effectively utilizing the vast natural resource potential of Liberia.

5.5 The industrial resource-base

Liberia has an ample mineral, agricultural and human resource-base. Much of this can be utilized for the industrialization of the country. This is particularly important at present when foreign exchange scarcity has required a reduction in import intensity and an increase in the domestic resource content of industrial products.

Mineral resources

Iron ore mining is the largest single sector of the Liberian economy. Since the closure of the Liberian Mining Company's operations in the Bomi Hills, production has been confined to three companies: the Liberian American-Swedish Mineral Company, LAMCO, operating at Mount Nimba; the West German Bong Mining Comany; and the National Iron Ore Comany (NIOC) based at the Mano River site. Combined capacity is estimated at 23 million tonnes a year. There is potential for further mining development in Liberia, given more favourable world market conditions: unexploited deposits lie at Wologisi in the north-west, the Bea Mountains (West) and the Putu Hills (south-east), and there is also scope for the joint development of the Nimba-Mifergui deposits on the border with Guinea. This latter project would complement the LAMCO operation and extend the use of its facilities when the existing orebody has been exhausted.

The depressed level of demand has delayed development of unexploited deposits at Wologisi in the north west, the Bea Mountains (west); the Putu Hills (south east) and at the Mifergui on the border with Guinea. The governments of these two countries and LAMCO have been seeking international finance for the early opening of Mifergui mines. Morgan Grenfell, a UK merchant bank has been appointed as financial advisers to the project.

Gold and diamonds are the major operations in small-scale mining. Other minerals include rutile, bauxite, copper, columbite-tantalite, corundum, lead, manganese, tin and zinc. Of economic significance are the deposits of barite in the Gibi range near Kakata, and of kyanite at Mt. Montro near Harbel. The discovery of potentially useful deposits of uranium in Bong and Lofa counties was announced in 1981. Development of other deposits has been somewhat slow. Table 5.3 presents trends in output and export level of the major mineral products over the period 1976-1985. Variations have been considerable - with the value of diamond exports falling drastically along with declining output. As noted earlier, a very large proportion of mineral resources are exported and the processing involved is minimal. In the face of continually weak world demand there is a strong need to review this policy and to increase the value added content of mineral exports. There is also a need to utilize a larger proportion of iron ore production for the domestic metal-based industries. A beginning has been made in this direction in 1987 when the Third World Shipbreakers Company announced its decision to establish a steel rolling mill in Greater Monrovia.

Table 5.3: Mineral output and export, 1976-1985

	Iron ore		Diamonds	
	Output (million tonnes)	Exports (L$ million)	Output (thousand carats)	Exports (L$ million)
1976	15.2	...	325	...
1980	12.0	310.3	298	33.5
1981	12.3	328.3	336	23.4
1982	11.2	311.1	433	26.3
1983	9.7	267.4	330	17.2
1984	9.2	279.0	347	10.9
1985	8.9	279.4	204	4.7

Source: United Nations, Industrial Statistics Year Book 1985, New York, 1987 and IMF, International Financial Statistics, November 1987.

Agricultural and fishery resources

Agriculture is sharply divided into a plantation and a subsistence sector essentially non-monetized. Between 50 to 80 per cent of the population depends upon the latter and the share of the subsistence sector has grown rapidly during the recession of the 1980s. The major food crops are rice and cassava. Yams, sweet potato and okra are also grown. Food production *per capita* has fallen steadily over the last decade - the level recorded in 1984/85 was about 15 per cent below that of 1974-75. Liberia currently imports about 110,000 tonnes a year to meet its food needs. Grain imports have gone up by about 50 per cent in volume terms compared with the previous decade.

Among the cash crops produced in Liberia, rubber is the most important foreign exchange earning source. Liberia is the largest natural rubber producing country in Africa, followed by Nigeria. Its output in 1986 accounted for 2 per cent of the world's natural rubber production. Almost all the output of Liberian natural rubber is exported to the United States (two-thirds) and the rest is sold to Western Europe (20 per cent) and developing countries (8 per cent).

The Liberian rubber industry was severely affected by the significant drop of natural rubber prices in 1981, as a result of the world-wide recession. In particular, smallholder farmers, which produce 30 per cent of total output, were vulnerable to the sharp drop in the price of rubber and consequently 5,000 of them stopped rubber production. The largest natural rubber producer in Liberia is the Firestone Plantations Company, which owns the world's largest industrial rubber plantation at Harbel and at its peak, had 14,100 employees. However, even Firestone was compelled to restructure its employment scheme as a result of the drop in prices and lower demand for natural rubber. In 1983, it laid off 4,000 employees by shutting down the Cavalla plantation and subsequently, a further 5,000 employees were dismissed at the end of 1986.

The output of Liberian natural rubber has been, nevertheless, gradually rising since 1983, and in 1986 the output level reached a record high of 89 thousand tonnes. The recent steady growth of natural rubber consumption in the major importing developing countries and the successful signing of the new International Rubber Agreement (INRA) holds positive prospects for a rising trend in prices and a stimulus of higher production, particularly in the plantation sector.

Table 5.4 presents production statistics for the major crops during 1977-1985. Besides rubber, coffee, cocoa and palm oil are the major cash crops. Production has oscilated but, in general, production levels in the mid-1980s were higher than in the mid-1970s. Export earnings have remained low, however, due to weakness in international prices.

Table 5.4: Estimated agricultural production, 1977-1985
('000 tonnes)

	1977	1978	1979	1980	1981	1982	1983	1984	1985
Rice (paddy)	256	244	249	243	260	250	250	250	252
Cassava	180	295	300	310	315	320	320	320	320
Palm kernels	13	9	8	7	8	8	8	8	8
Palm oil	25	25	26	27	25	30	30	34	34
Rubber (crude)	70	73	75	78	78	68	65	76	81
Coffee	9	9	10	12	13	12	8	12	10
Pineapples	7	7	8	8	7	7	7	7	7
Bananas	67	73	72	74	75	77	78	79	80
Sweet potatoes	16	16	17	17	16	16	17	17	18
Cocoa	...	...	4	4	7	5	6	6	6

Source: The EIU, Sierra Leone, Liberia Country Report, 1986-1987, p.33 and 1987-1988, p.33.

Exports are mainly in unprocessed forms. There is significant scope for increasing processing in the rubber sector - currently dominated by Firestone - for the establishment of a local domestic demand oriented market. Prospects for increasing cocoa processing are, however, limited due to international market constraints.[1/] There is some scope, however, for processing of fruit and the development of a regional export-oriented food manufacturing industry. More important industrial development of both metal-based agricultural tools and equipment products and of the fertilizer sector is required to raise the very low yield per acre in the smallholder and non-plantation. The government is concerned of the need to integrate agricultural and industrial development and has earmarked L$ 800,000 (foreign contribution equivalent to 75 per cent) for the promotion of rural industries in the first year of the Economic Recovery Programme.

Fishing is a growing economic activity in Liberia. In addition to annual landings of marine fish and shrimp of around 15,000 tonnes, there is also potential for fresh water catches of around 4,000 tonnes a year.

Forestry resources

The importance of the forestry sector in the Liberian economy should not be underestimated. Over the period 1973 to 1983, the contribution of this sector rose from 2.4 per cent to 4.5 per cent of GNP. The exploitation of timber has been predominantly undertaken by foreign companies under concessional agreements, but the net benefits received by Liberia has been small. It has the potential to become one of the high growth industries of Liberia.

Presently, the total forest area of the nation is estimated at 12 million acres of which roughly half consists of high closed forest (Table 5.5), Liberia has important hardwood resources. Only 50 per cent of the area can be used for shifting cultivation. The forest potential is concentrated in the South-eastern region. This region encompasses 66.6 per cent of the high closed forest and almost 90 per cent of the country's commerically exploitable timbers.

Table 5.5: Regional distribution of forest area, 1985

Region	Million acres
South-eastern area (Maryland, Sinoe, Grand Gedeh)	6.80
North-western area (Bong, Grand Bassa, Nimba)	3.00
Northern area (Loffa, Grand Cape Mount)	2.05
Other	0.15
Total	12.00

Source: Second National Socio-Economic Development Plan, July 1981-June 1985, MPEA, p.80.

1/ These are discussed in detail in UNIDO, "Industrial Development Review Ghana", (PPD.18), 1986, p.71-73.

Forestry is a very promising source of revenue for Liberia if careful attention is given to this industry. Table 5.6 gives the statistics on annual round log production by company. Notably, there is a fall in the production of round log in recent years. A comprehensive survey of the potential for the development of wood and wood resource-based industries is urgently required.

Table 5.6: Annual round log production by company (Grand Gedeh), 1980/81-1982/83 (m^3)

Company	1980/81	1981/82	1982/83
Togba	5,611.830	6,237.217	12,194.949
United Logging Co.	15,639.935	20,332.000	23,080.553
LLWPC	72,468.755	46,119.773	50,120.992
SIGA	8,557.851	1,885.322	1,340.823
LIBCO	2,883.240	22,295.482	5,51.913

Source: Department of Planning, Research and Statistics.

Human resoruces

The Liberian labour force was estimated at about 1.15 million in 1985. It has been growing at an annual average rate of 2 per cent during 1980-1985 and this rate is expected to accelerate to about 3 per cent during the 1990s. Almost three quarters of this labour force - and a significantly larger proportion of the total population - is within the subsistence economy. It is likely that the share of the subsistence sector within the national economy has increased as production fell and monetization contracted during the 1980s. This has inevitably increased the extent of dualistic structure in the Liberian production and distribution system.

Table 5.7 shows that although the Liberian labour force has a higher life expectancy than that of Guinea or Sierra Leone, this is not the case as far as the Ghanian labour force is concerned, despite the fact that per capita income in Ghana is 20 per cent lower than in Liberia. The primary school enrollment rate is, however, significantly higher in Liberia than in the other Western African economies in Table 5.7 - except Côte d'Ivoire, a country with a per capita income level considerably higher than Liberia. There is some indication that the social conditions of the Liberian labour force improved signficantly during the 1970s but the present recession has halted the improvement.

The sectoral pattern of employment is presented in Annex Table A-5. Manufacturing's share of total employment is currently estimated between 5 to 7 per cent. This is a very rough figure as an accurate estimate of total employment in the SMEs sector is yet to be made. There is some indication that manufacturing employment has declined in recent years as major large-scale establishments have closed down. The present study, however, finds that output contraction has been greater than employment reduction within the large-scale manufacturing sector during the past decade. There is also some evidence to show that unit wage cost has not fallen signficantly during this period.

Table 5.7: Some social characteristics of population, 1985

	Liberia	Ghana	Guinea	Côte d'Ivoire	Sierre Leone
Life expectancy[a/]	50	53	40	53	40
Daily calorie supply per capita	2,311	1,747	1,728	2,505	1,817
Primary school enrolment[b/]	76	67	31	60	29
Urban population[c/]	37	22	32	45	25

Source: World Bank, World Development Report, 1987.

a/ Years at birth.
b/ Number enrolled in school as percentage of age group.
c/ As percentage of total population.

In 1981 and 1985 the Liberian Ministry of Planning and Economic Affairs, in association with USAID, undertook census studies of the demand and supply of labour within the industrial sector (See Annex Table A-5 and Table A-6). The most complete information is available about the private sector.[1/] The structure of the private sector labour force in 1985 is as follow:

Professional and technical workers	6.2 per cent
Administrative and managers	3.0 per cent
Clerical	9.0 per cent
Sales	3.1 per cent
Service worker	10.3 per cent
Agricultural worker	34.6 per cent
Production and related	33.8 per cent

Skilled labour is trained by local institutions. A total of 3,078 skilled workers were trained in 1984.

Forty-eight institutions and 12 secondary schools provide vocational-technical education and training below the university degree level. These programmes are defined as being terminal in nature and focused on a particular trade. They provide training in such areas as: accounting, bookkeeping, typing, agriculture, auto mechanics, masonry, and carpentry.

In 1981, over 7,300 students were enrolled in the various vocational/technical programmes. In the same year, more than 2,700 graduated. The distribution by broad areas of specialization is seen below:

1/ The findings of the survey are highly tentative. There were serious problems at both design and data collection levels and the representativeness of its data is questionable.

Specialization	Enrollments	Graduates
(per cent)	(per cent)	
Commercial	39	32
Agriculture	9	16
Engineering	20	20
Industrial arts	14	31
Home arts	18	1
Total (percentage)	100.0	100.0
Total (number)	(7,317)	(2,713)

The University of Liberia and Cuttington College provide college degree skills. Their 1984 graduates by broad specialization are as follows:

Specialization	Number
Physical sciences	67
Life and medical sciences	139
Social sciences	57
Business, economics and statistics, etc.	181
Public administration	64
Teaching	48
Law	26
Total	582

Data from the universities and those covering the various medical occupations are deemed fairly accurate. The data covering the vocational/technical occupations should be used with caution. The record keeping of the institutions in the study was found to be below average. However, as is often the case, these are the only numbers available. If nothing else, the data should indicate the potential supply of skills based on the spaces available for training.

The other note of caution relates to the level and quality of training provided. There is little evidence to show that training is geared to the demands of industry in particular or that training in the same trade areas is uniform among the various training institutions.

There are three basic sources of manpower: the existing training institutions; redundant workers from government and industry layoffs; and the growing population. Skilled manpower will be available from the first two sources. Taking the 1974 Census results (1.5 million) and the preliminary 1984 Census results (2.2 million), Liberia experienced an average annual population growth rate of 4.7 per cent. This rate of growth means that a large number of job seeking youths are being added to the labour force each year. In other words, the supply picture is bountiful.

In contrast, the demand picture gives cause for concern. Job opportunities appear to have declined sharply during the 1981-1985 period. The recent reduction in government employment further reduces job prospects for the future. New entrants to the labour force, as well as redundant workers, will be competing for fewer jobs.

In short, it appears that there will be surplus labour for some years to come. The scarcity of jobs will result in underutilized skills. It seems unlikely that technical skill shortages will be a major problem in the short to medium run. An indigenization programme aimed at the replacement of expatriates by trainees of local institutes in the technical and engineering fields can be envisaged and can generate substantial foreign exchange savings. Expatriates still account for a significant proportion of the professional work force. Increasing training opportunities, particularly in administrative, management and accountancy, is an important priority for Liberia. This is an area in which multilateral technical assistance can play a useful role.

5.6 The role of technical co-operation to industry

During its fourth country programming cycle (1987-1991), UNDP intends to provide assistance in the following areas which might be of interest to UNIDO as well as multilateral and bilateral agencies involved in technical co-operation within the industrial sector.

- Assistance to MPEA, (phase IV. LIB/87/012). Assistance is to be provided for collecting and analyzing statistical data related to the evaluation of specific projects and the performance of the economy.

- The government wishes to undertake a fundamental reform of the role of the State in the economic life of the country. One aspect of this is the intention to divest itself of 11 of the country's 26 state enterprises. In response to this initiative, UNDP will provide assistance to the Bureau of State Enterprises (BSE) through a series of short-term specialized consultancies to prepare financial audits, legal documentation, evaluation of assets and negotiations with prospective buyers.

- The objective of a project designed to meet the special training needs is to upgrade the technical and managerial skills of selected government personnel in middle-level positions. It is designed as an "umbrella" project and will be available specifically for those public institutions that do not have access to funding for overseas training from other sources.

- As the government prepares its long-term recovery plans, a detailed assessment of the country's overall technical assistance needs will be required. This will guide both the government and the aid community in evaluating future needs in the field. The country programme makes provision for a National Assessment of Technical Co-operation and Projects (NATCAP) in the course of the fourth cycle. The most appropriate timing for such an activity will be when the government is preparing its next long-term development plan. While the initial NATCAP exercise will be funded by the UNDP Special Programme Reserve, additional resources are needed for the NATCAP mission to Liberia.

- The government proposes within the fourth country programme to assist the private sector through a variety of incentive measures, including marketing support. In addition, the Project Development Facility established jointly by UNDP, the International Finance Corporation (IFC), and the ADB in 1986 to aid new private sector projects in Africa will be tapped for this purpose. UNDP will also be able to draw on short-term consultancies under the newly established short-term Advisory Services Scheme to assist selected business.

- Among the inititatives which will be encouraged in the private sector, highest priority will be given to those which will generate the largest number of new jobs. The economic recession, the growing urban migration, and the recent retrenchments in the civil service are all adding to the already serious employment situation. It is important that measures be taken to alleviate what is potentially a grave social as well as a human problem. Concrete project proposals in this field have not yet been developed, but it is the government's intention to utilize UNDP assistance for the purpose of formulating and implementing a pilot employment project aimed particularly at reducing unemployment in the urban areas. UNDP will solicit the assistance of the Jobs and Skills Programme for Africa (JASPA) towards the identification of viable proposals in this field. A sum of $700,000 has been allocated as a programmed reserve for this purpose.

In addition to the abovementioned projects, a UNIDO Project Formulation Mission in late 1987 identified and prepared project concepts which would assist the government in the realization of one or more of the main objectives of the ERP. The UNIDO mission recommended that the following projects be considered for Indicative Planning Figure (IPF) funding during the current UNDP cycle:

- Assistance to Liberian Wood and Carpentry Industry Association (LWCIA)

- Preparatory Assistance for the Establishment of Metal Working Common Service Facility

- Pilot Production of Pumps and Spare Parts

Further, 19 other projects were identified which will constitute a portfolio of pipeline projects for possible technical assistance covering all sources of funds during 1988-1991 in the following areas:

- Industrial Policies, Programming and Planning
- Manpower Development and Training
- Food/Agro-industries
- Engineering Industries
- Forest and Forest related Industries
- Institutional Infrastructure

A complete list of all projects is included in Annex C.

Some other areas of potential interest to multilateral and bilateral assistance agencies in the industrial sector may also be identified as follows:

1. Strengthening the institutional basis for industrial policy-making. Industrial policy-making is at present dispersed among a range of institutions which sometimes seem to overlap functionally. A careful review and delineation of the role of different policy-making instructions and the establishment of a framework for inter-governmental policy co-ordination in this field can go some way towards increasing the capacity of the policy-making institutions to implement their programmes and influence the behaviour of private sector investors, traders, etc. Multilateral assistance may be provided to review the existing institutional structure of industrial policy-making and to suggest mechanisms for its improvement.

2. A key problem for existing institutions has been the absence of an effective monitoring system which can reveal the extent of compliance with policy directives and identify the processes by which policy decisions are evaded. This has led to the emergence of a large "hidden" economy which stretches from the large - both foreign and domestic - manufacturing sector which succeeded in accelerating the rate of capital flight from the country to the SME who evade taxation, quality control and regulations on ensuring health and safety at work. A policy monitoring system - with effective checks and balances - needs to be constructed to improve the effectiveness of industrial policy and upgrade the capacity of major industrial institutions to deliver services and channel resources to entrepreneurs capable of using these resources efficiently. The development of a policy monitoring system spread throughout the country is particularly important because of the emphasis the government is currently laying on privatization and on providing incentives to local entrepreneurs. It is very important to clearly identify the real beneficiaries of the privatization intitiatives and to assess the extent to which the operation of the incentive system is contributing to the actual achievement of the country's medium-term industrial sector objectives. Without an effective monitoring network the privatization programme can become a major conduit for the amassing of monopoly profits and for the transfer of these profits outside Liberia.

3. For the creation of such a monitoring system it is essential that some priority should be attached to the regular collection of industrial statistics. At present the output in this field is extremely limited - even regular production indices are not published. The industrial statistical system should be geared to the needs of the country. There are two over-riding needs in this connection. First, the system must be able to monitor the extent of processing of iron ore and rubber that takes place in the country. Second, the system must be able to accurately monitor the financial transactions within the corporate industrial sector and between this sector and the rest of the economy. There is also an urgent need for an accurate and up-to-date production, employment and capital stock census of manufacturing enterprises in Liberia.

4. Such a census can provide the basis for the development of a viable industrial rehabilitation strategy. This strategy must explicate the criteria for selecting units that are to be given rehabilitation assistance. Given the existing foreign exchange constraints it is likely that criteria will include (a) the extent of domestic resource use; (b) the contribution to a given industrial unit can make towards increasing agricultural processing and productivity; (c) the contribution it can make towards increasing employment; (d) the extent to which it represents a mobilization of local entrepreneurial talent. UNIDO can play an important part in the development of a rehabilitation strategy and in the identification of large-scale enterprises which can benefit from rehabilitation assistance - there is a particular need to focus attention on the machinery and financial requirements of large-scale enterprises that produce agricultural inputs.

5. It has been argued throughout this review that the over-riding need at the moment is to increase the linkage of industry with the rest of the domestic economy. Liberia needs to vigorously pursue a resource-based industrialization strategy. The country possesses ample natural resources, but once again up-to-date surveys of the potential for the industrial use of forest, fishery and mineral resources do not exist. Multilateral assistance needs to be provided for undertaking such surveys and for potential markets for the use of the products of these industries.

6. A major concern of multilateral donors as well as of the Liberian government - has been the development of SMEs. Greater emphasis needs to be placed on increasing the financial management and accountancy skills of the proprietors of the SMEs and to familiarizing them with the operational rules of the organized credit and marketing systems. Institutional changes within large firms and commercial banks might also be identified as a means for increasing subcontrating within the industrial sector and for improving SMEs access to institutional credit sources.

7. Finally, multilateral assistance can also play a role in identifying product areas in which an expansion of regional trade - within the framework of the Mano River Union, ECOWAS or the Lomé Convention; such an expansion will have to remain conditional on major institutional reform in Liberia.

In considering the above, institutional reform is the key to industrial development in Liberia. It can pave way to a major restructuring of the manufacturing sector, increase its capacity to utilize domestic resources and reduce its dependence on external capital transfers.

ANNEX A

STATISTICAL TABLES

Table A-1: International comparisons of economic performance, 1970-1984
(at constant 1980 prices)

LIBERIA

Indicator	Year or period	Liberia	Africa	Developing countries Total	Developed Market Economies
GDP per capita (US $)	1970	544	645	723	7910
	1975	527	708	860	8763
	1980	490	746	970	9950
	1983	398	691	942	10119
	1984	379	683	948	10516
MVA per capita (US $)	1970	34	45	111	2028
	1975	43	50	137	2145
	1980	41	58	163	2519
	1983	31	58	156	2529
	1984	29	58	161	2685
Total exports/capita (US $)	1970	493	285	221	1219
	1975	346	213	241	1552
	1980	328	246	261	2031
	1983	247	181	238	2097
	1984	251	183	243	2264
Total imports/capita (US $)	1970	469	164	130	1415
	1975	389	208	182	1650
	1980	328	232	240	2111
	1983	226	196	227	2153
	1984	184	190	226	2381
Total exports/GDP (percent)	1970	90.6	44.2	30.6	15.4
	1975	65.7	30.1	28.0	17.7
	1980	66.9	32.9	26.9	20.4
	1983	62.1	26.3	25.3	20.7
	1984	66.1	26.8	25.6	21.5
Total imports/GDP (percent)	1970	86.1	25.4	18.0	17.9
	1975	73.8	29.4	21.2	18.8
	1980	67.0	31.1	24.7	21.2
	1983	56.8	28.4	24.1	21.3
	1984	48.6	27.8	23.8	22.6
Gross fixed capital formation per capita (US $)	1970	117	98	128	1876
	1975	117	147	183	1929
	1980	105	171	221	2184
	1983	96	149	206	2125
	1984	64	150	200	2272
GFCF/GDP (percent)	1970	21.4	15.3	17.7	23.7
	1975	22.2	20.8	21.3	22.0
	1980	21.4	23.0	22.8	21.9
	1983	24.1	21.5	21.8	21.0
	1984	17.0	22.0	21.1	21.6

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

Table A-2: Distribution of GDP by sector of origin, 1970-1984
(at constant 1980 prices)

LIBERIA

Year	Agriculture	Total Industrial Activity	Manufacturing	Construction	Wholesale and retail trade, hotels etc.	Transport, storage and communication	Other services	Statistical discrepancy	GDP
	(percentage) at constant 1980 prices								(million $)
1970	14.4	30.2	6.3	4.2	9.3	6.3	22.6	13.0	742.6
1971	14.6	30.2	6.5	3.8	10.0	6.4	22.0	12.9	780.2
1972	14.3	30.8	6.7	3.8	10.3	6.5	20.7	13.7	808.3
1973	14.8	30.8	7.4	3.3	10.6	6.7	20.5	13.3	839.5
1974	13.8	32.1	8.9	3.9	10.5	6.3	21.6	11.6	868.0
1975	15.2	29.3	8.2	3.7	10.5	7.4	23.2	10.7	834.4
1976	16.0	28.9	9.5	4.4	10.0	8.0	22.8	9.9	874.5
1977	15.7	26.7	9.8	4.7	10.6	8.1	23.9	10.3	882.7
1978	16.2	25.6	9.7	5.1	10.2	8.0	23.3	11.6	933.5
1979	16.2	26.0	10.0	5.5	10.0	7.8	23.8	10.6	978.1
1980	17.3	27.2	8.4	3.5	8.6	6.7	25.3	11.4	916.6
1981	14.4	25.9	8.1	3.5	8.4	6.7	30.8	10.2	864.5
1982	16.5	25.6	7.4	3.3	7.6	6.1	30.1	10.7	856.2
1983	17.4	24.5	7.8	3.4	7.6	6.5	31.8	8.7	819.5
1984	19.3	23.5	7.5	3.3	7.2	6.3	32.5	7.9	804.3

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

Notes: i) Due to statistical discrepancies GDP may differ from the sum of its components.
ii) Total Industrial Activity includes Manufacturing.

Table A-3: <u>Comparative average annual rates of growth by economic sector, 1970-1984</u>
(at constant 1980 prices)

Sectors	Period	Liberia	Africa	Developing countries Total	Developed Market Economies
Agriculture	1970-1980	4.2	0.1	2.4	1.2
	1981-1984	6.9	2.3	2.2	0.9
	1970-1984	2.3	0.4	2.4	1.4
Total Industrial Activity(incl. MVA)	1970-1980	0.4	2.8	4.4	3.0
	1981-1984	-5.8	1.0	1.9	2.8
	1970-1984	-1.3	1.0	2.9	2.6
Manufacturing	1970-1980	7.0	5.3	6.5	3.0
	1981-1984	-4.0	2.3	2.4	2.8
	1970-1984	1.9	5.0	5.2	2.6
Construction	1970-1980	4.5	8.3	8.4	0.5
	1981-1984	-3.7	-3.3	-1.8	0.0
	1970-1984	-0.1	5.9	6.0	0.0
Wholesale & retail trade, hotels e.t.c	1970-1980	1.9	3.6	5.3	3.3
	1981-1984	-7.2	-1.0	1.4	2.3
	1970-1984	-1.7	3.0	4.4	2.8
Transport, storage and communication	1970-1980	4.4	6.5	8.2	4.1
	1981-1984	-3.9	0.8	2.5	1.6
	1970-1984	0.6	5.5	6.8	3.4
Other services	1970-1980	3.8	6.3	6.6	3.5
	1981-1984	-0.5	2.8	2.6	2.7
	1970-1984	3.9	5.8	5.6	3.4
GDP per capita	1970-1980	-0.9	1.5	3.1	2.3
	1981-1984	-5.6	-2.0	-0.6	1.5
	1970-1984	-2.5	0.4	2.0	1.9
MVA per capita	1970-1980	3.6	2.3	3.9	2.1
	1981-1984	-7.0	-0.7	0.0	2.1
	1970-1984	-1.3	2.0	2.7	1.7

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

Table A-4: Projects approved for granting incentives by NIC, 1982-1986

Year	Sector	No. of projects	Proposed investment ($ million)	Employment (Number)	Minimum production ($ million)
1982	Agro-based	3	16.87	613	17.23
	Forest-based	-	-	-	-
	Animal husbandry	3	8.08	249	13.52
	Engineering	5	10.70	448	22.97
	Non-engineering	7	4.70	203	13.47
	Services & trade	3	5.26	144	15.62
	Total:	21	45.61	1,657	82.81
1983	Agro-based	10	18.07	560	18.75
	Forest-based	6	19.52	599	14.96
	Animal husbandry	-	-	-	-
	Engineering	7	14.35	7	11.48
	Non-engineering	15	19.42	634	31.17
	Services & trade	1	0.75	30	0.88
	Total:	39	72.12	1,830	77.22
1984	Agro-based	7	9.19	251	11.73
	Forest-based	3	18.32	430	13.18
	Animal husbandry	4	8.94	306	12.20
	Engineering	1	0.30	18	0.22
	Non-engineering	2	0.25	36	0.87
	Services & trade	-	-	-	-
	Total:	17	37.00	1,041	38.20
1985	Agro-based	4	29.63	250	46.96
	Forest-based	1	25.23	542	15.10
	Animal husbandry	2	0.96	50	1.04
	Engineering	2	1.36	84	3.00
	Non-engineering	4	44.4	113	5.30
	Services & trade	-	-	-	-
	Total:	13	61.62	1,037	71.40
1986	Agro-based	-	-	-	
	Forest-based	-	-	-	
	Animal husbandry	2	0.08	14	0.92
	Engineering	-	-	-	
	Non-engineering	10	12.65	443	23.97
	Services & trade	-	-	-	
	Total:	12	12.73	457	24.89

Source: UNIDO.

Table A-5: Employment by major occupational group and industry, public and private sector, 1985

	Agriculture, fishing and forestry	Mining	Social Service	Trade	Finance	Const-ruction	Manufac-turing	Trans-port	Electricity gas & water	Total	Share (per cent)
Professional, technical and related workers	704	680	12,812	306	165	198	191	346	101	15,503	15.3
Managerial workers	248	25	3,185	621	179	55	292	239	160	5,004	4.9
Clerical workers	698	531	8,335	1,410	950	157	300	1,288	1,038	14,707	14.5
Sales workers	9	41	108	1,342	15	6	108	123	-	1,752	1.7
Service workers	519	873	8,297	974	376	299	663	786	84	12,871	12.7
Agricultural workers	23,147	1	1,060	91	1	-	206	4	-	24,510	24.2
Production and related workers	3,512	3,395	4,758	3,135	120	3,394	4,911	2,690	1,081	26,996	26.7
Total:	28,837	5,546	38,555	7,879	1,806	4,109	6,671	5,476	2,464	101,343	100.0
Per cent:	28.5	5.5	38.0	7.8	1.7	4.1	6.5	5.4	2.4		100.0

Source: M. Root, Manpower Demand and Supply, Liberia, 1985.

Table A-6: Employment by major occupational group and industry, private sector, 1985

	Agriculture, fishing and forestry	Mining	Service	Trade	Tailors	Manufac-turing	Con-struction	Transport	Total	Share (per cent)
Professional, technical and related workers	513	680	3,406	295	-	156	44	69	5,163	9.3
Managerial workers	176	25	392	585	61	196	13	73	1,521	2.7
Clerical workers	387	531	615	1,288	-	254	29	312	3,416	6.2
Sales workers	-	41	18	1,320	-	92	1	70	1,544	2.8
Service workers	383	873	7,140	891	385	233	65	38	10,008	18.1
Agricultural and related workers	17,957	1	298	90	-	178	-	2	18,526	33.5
Production and related workers	2,595	3,395	1,197	2,250	1,137	3,250	887	483	15,194	27.4
Total:	22,011	5,546	13,006	6,721	1,583	4,359	1,039	1,047	55,372	100.0
Per cent:	39.8	10.0	23.6	12.1	2.9	7.9	1.8	1.9		100.0

Source: M. Root, Manpower Demand and Supply, Liberia, 1985.

ANNEX B

TECHNICAL CO-OPERATION PROJECTS OF UNIDO

UNIDO's Approved and/or Operational Technical Co-operation Projects (approved = PAD issued)

Republic of LIBERIA

Backstopping Responsibility	Progr.Element	Project Number	Project Title
IO/IIS/INFR	J12105	TF/LIR/87/001	Associate expert
IO/IIS/INFR	J12105	TF/LIR/87/003	Associate expert
IO/IIS/INFR	J12105	DP/LIR/87/007**	Development of small and medium-scale enterprises (phase II) (continuation of DP/LIR/80/007)
IO/IIS/INFR	J12105	DP/LIR/80/007**	Extension services to small-scale industries (continued under DP/LIR/87/007) (under completion)
IO/IIS/INFR	J12105	TF/LIR/84/001*	Associate expert (multifund to DP/LIR/87/007)
IO/IIS/INFR	J12105	TF/LIR/84/002*	Associate expert (multifund to DP/LIR/87/007) (under completion)
IO/IIS/INFR	J12105	SI/LIR/85/803	Assistance to the National Bank of Liberia in support of the small-scale industries

* Large-scale project (= total allotment $150,000 or above)
** Total allotment $1 million or above

UNIDO's Completed Technical Co-operation Projects

Republic of LIBERIA
(1)
since 1972

Backstopping Responsibility	Spec.Act.Code/ Progr.Element	Project Number	Project Title
IO/IIS/INFR	31.1.02	IS/LIR/71/803	Standardization and quality control
IO/IIS/INFR	31.4.02	DP/LIR/72/012	Construction of agro-industrial estates in rural Liberia
IO/IIS/INFR	31.4.02	IS/LIR/71/801	Establishment of an industrial park
IO/IIS/INFR	32.3.04	IS/LIR/73/007	Industrial free zone at the Free Port of Monrovia
IO/IIS/INFR	31.3.E	DP/LIR/73/016	Establishment of rural industrial estates
IO/IIS/INFR	31.3.E	DP/LIR/77/006	Rural industrial services
IO/IIS/INFR	31.3.L	SI/LIR/78/801	Consultant in rural industrialization
IO/IIS/INFR	31.3.L	TF/LIR/75/002	Establishment of rural industrial estates
IO/IIS/INFR	J12105	SI/LIR/85/801	Technical evaluation of printing industry for a joint venture
IO/IIS/IMR	31.3.01	IS/LIR/74/004	Advisory services on the organization of industrial project development and financing to the LBID and to the LDC
IO/IIS/IMR	32.1.03	DP/LIR/73/022	Senior industrial adviser
IO/IIS/IMR	32.1.03	DU/LIR/70/005	Assistance to the Ministry of Planning (Executing agency: UN)
IO/IIS/IMR	31.4.A	TF/LIR/76/001	Technical assistance to the Liberian Development Corporation
IO/IIS/IMR	31.4.B	DP/LIR/75/001	Advisory and technical assistance to the Liberian Development Corporation
IO/IIS/IMR	31.4.B	TF/LIR/75/001	Technical assistance to the Liberian Development Corporation
IO/IIS/IMR	31.4.E	TF/LIR/74/003	Associate expert to senior industrial adviser
IO/IIS/IMR	31.4.E	IS/LIR/74/011	Industrial programming assistance to the Ministry of Commerce, Industry and Transportation

UNIDO's Completed Technical Co-operation Projects

Republic of LIBERIA
(2)

Backstopping Responsibility	Spec.Act.Code/ Progr.Element	Project Number	Project Title
IO/IIS/TRNG	31.5.B	RP/LIR/80/C03	Development banking course
IO/IIS/TRNG	J12310	XP/LIR/86/050	Training in project evaluation and identification
IO/IIS/PLAN	00.G	DP/LIR/72/003	Inter-disciplinary mission to review scope for co-operation between Sierra Leone and Liberia
IO/IIS/PLAN	31.2.A	DP/LIR/80/006	Assistance in industrial planning
IO/IIS/PLAN	31.2.A	SI/LIR/79/801	Assistance in view of the preparation of the second development plan
IO/IIS/PLAN	31.2.C	DP/LIR/75/002	Assistance to Liberian Bank for Development and Investment (LBDI)
IO/T/AGRO	30.6.00	IS/LIR/73/018	Assistance in rubber goods manufacturing
IO/T/AGRO	30.6.03	TS/LIR/72/001	Assistance to Liberian Development Corporation on rubber good manufacturing
IO/T/AGRO	31.7.C	SI/LIR/77/801	Assistance to Liberia in the formulation and implementation of an integrated national rural development programme
IO/T/MET	J13208	SI/LIR/85/802	Techno/economic appraisal for the establishment of mini-steel plant and development of allied industries
IO/T/CHEM	30.3.00	TS/LIR/73/001	Assistance to the construction and building materials industries
IO/T/CHEM	32.1.B	SI/LIR/74/813	Industrial ceramic adviser for the implementation of a ceramic building material industry and earthenware industry
IO/T/CHEM	32.1.D	SI/LIR/79/803	Evaluation of a quality control laboratory for pharmaceutical products
IO/T/CHEM	32.1.F	IS/LIR/74/012	Consultancy services to the Liberian Development Corporation (LDC) on agro-chemical related industries
IPCT/II	32.2.02	IS/LIR/71/802	Financial expert for the Liberian Development Corporation

ANNEX C

LIST OF PROJECTS IDENTIFIED BY UNIDO PROJECT FORMULATION MISSION 15-30 OCTOBER 1987

	Title	Estimated cost ($)
1.	Organization of National Workshop on Industrial Strategies, Policies an Programmes	65,000
2.	Strengthening the Capacity and Capabilities of the Maritime Training Institute at Marshall	302,000
3.	Strengthening of Training Capacities of Small Size Coastal Industries	32,000
4.	Training Programme on Consultancy Development Through Establishment of Joint Venture	to be determined
5.	Training Programme in the Field of Packaging	85,000
6.	Assessment of Manpower and Industrial Training Needs of the Monrovia Vocational Training Institute	-
7.	Establishment of a Fruit-Processing Pilot Plant to Produce Concentrates	110,000
8.	Assistance in Fish-Processing	113,000
9.	Processing of Agricultural Crops (Cassava)	235,000
10.	Pilot Production Programme for Pumps and Spare Parts	398,000
11.	Preparatory Assistance to a Selected Industrial Enterprise for Improved Plant Operations	37,000
12.	Preparatory Assistance for the Establishment of Metal Working Common Service Facility	21,000
13.	Rehabilitation of Parts and Components through Metal Spraying	-
14.	Assistance to the Liberian Wood Working and Carpentry Industry Association	237,600
15.	Charcoal Production using Portable Steel Kilns	13,500
16.	Liberia Industrial Free Zone Authority Revitilization Study	72,000

Title	Estimated cost ($)
17. Assistance to the National Housing and Savings Bank for Small-scale Industry Development	62,000
18. Preparation of Project Packages for Selected types of Small-Scale Enterprise Projects	31,000
19. Strengthening the Bureau of Standards	-
20. Promotion of Small- and Medium-Scale Industries with Involvement of Commercial Banks	64,500
21. Production of Wooden Warehouses for Storage of Parts	to be determined
22. Feasibility Study for Pulp and Paper Production	-

Source: UNIDO.

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