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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**INDUSTRIAL DEVELOPMENT REVIEW
SERIES**

MALI

Prepared by
Regional and Country Studies

372

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The views and comments contained in this study do not necessarily reflect those of the Government of the Republic of Mali nor do they officially commit UNIDO to any particular course of action.

Preface

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

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

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

The present Review was prepared on the basis of information available at UNIDO headquarters in early 1986. It is divided into two rather distinct parts. Chapters 1 and 2 are analytical in character, giving first a brief overview of the country's economy and its manufacturing sector and then a more detailed review of the structure and development of its manufacturing industries. Chapter 3 contains various kinds of reference material on national plans and policy statements relevant to industrial development, on the more important governmental and other institutions involved in industrial development and on the country's natural, human and financial resources for industrial development. Chapter 4 attempts to examine succinctly manufacturing prospects and the role of technical cooperation in industrial development. The Review also contains relevant basic indicators and graphical presentation of manufacturing trends as well as statistical and other appendices.

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

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EXPLANATORY NOTES

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 (1984/85) indicate a crop year or a financial year. Dates divided by a hyphen (1984-85) indicate the full period, including the beginning and end years.

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

In tables:

Three dots (...) indicate that data are not available or are not separately reported;
A dash (-) indicates that the amount is nil or negligible;
A blank indicates that the item is not applicable;
One dot (.) indicates that there is insufficient data from which to calculate the figure.

Totals may not add precisely because of rounding.

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

The following abbreviations are used in this document:

BCMD	Banque Malienne de Crédits et de Dépôts
BDM	Banque de Développement du Mali
BIAO	Banque Internationale pour l'Afrique Occidentale
BNDA	Banque Nationale pour le Développement Agricole
CEPI	Centre for Industrial Promotion and Studies
CFA Fr.	African Financial Community Franc
cm	cubic metre
CHCE	Mali External Trade Centre
CHDT	Malian Company for the Development of Textile Fibre
CNRST	National Council for Scientific and Technical Research
COMATEX	Compagnie Malienne des Textiles
DM	Deutsche Mark
DMA	Agricultural Machinery Division
DNI	National Directorate for Industries
ECOWAS	Economic Community of West African States

GDP	gross domestic product
GNP	gross national product
Gwh	giga watt hours
HUILCOMA	Huilerie Cotonnière du Mali
IDA	International Development Assistance
ILO	International Labour Organization
IPGP	Institute of Productivity and Forecast Management
ISIC	International Standard Industrial Classification
ITEMA	Industrie Textile du Mali
km	kilo metre
Malian Fr.	Malian Franc
MT	metric tons
m ³	cubic metre
MVA	manufacturing value added
OECD	Organization for Economic Co-operation and Development
OMVS	Organization for the Development of the Senegal River
OPAN	Malian Office for the Marketing of Agricultural Products
OPPC	Organization of Petroleum Exporting Countries
SEPAMA	Société d'Exploitation des Produits d'Arachides du Mali
SEPOH	Société d'Exploitation des Produits Oléagineux du Mali
SITC	Standard International Trade Classification
SHECHA	Enterprise for the Production of Agricultural Machines
SWED	National Development Studies Company
SOMACI	Société Mamadou Sada-Diallo et frères
SOMASAC	Société Malienne de Sacherie
SOMIEX	Malian Company for Imports and Exports
TAMALI	State-owned Tanneries Maliennes

THE ANALYSIS CONTAINED IN THIS REVIEW IS BASED ON INFORMATION AVAILABLE AS AT THE BEGINNING OF 1986.

BASIC INDICATORS 1
The economy

GDP:	\$993 million (1984) ^{a/}						
Population:	8.0 million (1985) ^{a/}						
GDP per capita:	\$129 (1984) ^{a/}						
Labour force:	4 million (1983)						
Annual growth rate of GDP: (per cent)	<u>1960-70</u>	<u>1970-82</u>	<u>1983</u>	<u>1984</u>			
	3.3	4.3	-1.2	1.3			
GDP by sector of origin: (per cent)	<u>1960</u>	<u>1983</u>					
Agriculture:	55	46					
Manufacturing:	5	7					
Services:	35	43					
Other:	5	4					
Annual rate of inflation: (per cent)	<u>1969-70</u>	<u>1970-81</u>	<u>1981-84</u>				
	5	9.8	28				
Exchange rate: (Malian franc equivalents to \$1)	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u> ^{b/}
	428.6	422.6	543.5	657.2	762.1	873.9	
(CFA franc equivalents to \$1):	214.3	211.3	271.7	328.6	381.1	437.0	378.0
						<u>March 1986</u>	
						CFA Fr. 361.3	

^{a/} Estimates.

^{b/} The Malian franc was replaced by the CFA franc in June 1984, when Mali was readmitted into the Western African Monetary Union.

BASIC INDICATORS 2
Resources and transport infrastructure

Agricultural production: ('000 tons, 1984)	Cereals (832), root crops (121), total pulses (45), oil crops (75)
Major agricultural commodities: ('000 tons, 1984)	Cotton lint (50), rice (125), vegetables (210)
Forestry production: ('000 tons, 1983)	Fuelwood and charcoal (4,293), industrial roundwood (290), sawnwood and panels (6)
Fishery, freshwater fish and diadrom: ('000 tons)	33 (1983)
Livestock: ('000 number, 1984)	Cattle (6,000), sheep (6,300), goats (6,000), pigs (50)
Energy:	Hydro-electric power (5,000 Gwh, 1983), thermal power (11 Gwh, 1982)
Mineral resources: (1981)	Gold (48 kilograms), salt (5,000 tons)
 <u>Transport (1982)</u>	
Roads:	18,000 km
Railways:	707 km
Navigable rivers:	1,500 km
Airport:	Bamako
Aerodromes:	9 (throughout the country)

BASIC INDICATORS 3
Foreign trade and balance of payments

Exports:	Total value:	\$177 million (1984)
	Principal exports:	Cotton, live animals
	Main destinations: (in per cent)	Belgium (15), France (9), Federal Republic of Germany (6), UK (3), Netherlands (2), Ivory Coast (1)
Imports:	Total value:	\$255 million (1984)
	Principal products: (percentage share)	Food products (31.9), machines and vehicles (31.1), petroleum products (25.5), construction materials and pharmaceutical products
	Main origins: (in per cent)	France (25), Ivory Coast (23), Federal Republic of Germany (11), Senegal (9), UK (8), Japan (3)
Foreign currency reserves:		\$8.6 million (Nov. 1985)
	Balance of payments: (current account deficit)	\$127 million (1984)
	External public debt:	\$881 million (Nov. 1985)
	Debt service:	\$17.4 million (1984)
	as per cent of exports of goods and services:	3.5 per cent (1983)

BASIC INDICATORS 4
The manufacturing sector

Manufacturing value added: \$125 million (1982)

MVA per capita: \$17 (1982)

Employment in manufacturing: 20,000 (1985)
as per cent of active population: 1 per cent (1985)

**Contributions of manufacturing
sub-sectors to turnover, value
added, employment and wages (1981):
(per cent)**

	<u>Turnover</u>	<u>Value added</u>	<u>Employment</u>	<u>Wages</u>
Textiles:	44.4	50.3	48.4	47.3
Food and beverages:	27.8	15.7	23.3	21.2
Tobacco:	7.8	13.3	5.1	7.3
Chemical industries:	4.9	3.0	4.2	4.1
Transport equipment:	5.4	6.3	3.7	6.5

Average annual growth rate of MVA:

	<u>1960-70</u>	<u>1970-80</u>	<u>1981</u>	<u>1982</u>
	7.4	2.6	-9.7	-12.3

Manufactured exports: Malian Fr. 95.8 billion (1982)
as per cent of total exports: 5.4 per cent

Manufactured imports: Malian F. . 218.5 billion (1982)
as per cent of total imports: 52.2 per cent

BASIC INDICATORS 5
Trade in manufactured goods

In 1982

Manufactured exports: Malian Fr. 95.8 billion

Share of principal manufactured exports in total exports: (per cent)
Cotton fabrics (1.8), cottonseed cake (1.1), hides and leather (1.1), desiccated groundnuts (0.8), gum arabic (0.6)

Manufactured imports: Malian Fr. 218.5 (1982)

Share in total imports: (per cent)
Vehicles and tyres (28.9), petroleum products (18.8), building materials (9.7), chemical products (9.2)

Value of manufactured exports and imports (1983)
(CFA Fr. billion)

Exports: Cotton and products (63.6)
Groundnut products (28.0)
Hides and skins (0.5)

Imports: Machines and vehicles (131.2)
Food products (31.1)^{a/}
Petroleum products (25.5)
Construction materials (10.0)^{a/}

a/ 1982.

BASIC INDICATORS 6

Inter-country comparison of selected indicators

Indicator	Unit	Chad	Côte d'Ivoire	<u>Mali</u>	Niger	Senegal	Zaire
I. Demographic indicators							
Population (mid-1983)	millions	4.8	9.5	<u>7.2</u>	6.1	6.2	29.7
Population growth (1970-83)	per cent per annum	2.1	4.6	<u>2.5</u>	3.0	2.8	2.5
Infant mortality (1983)	per 1,000	142	121	<u>31</u>	139	140	20
Area	'000 km ²	1,284	322	<u>1,240</u>	1,267	196	2,345
Density (1983)	persons/km ²	4	30	<u>6</u>	5	32	13
II. Economic indicators							
GDP (1983)	\$ million	320	7,090	<u>980</u>	1,340	2,570	5,440
GDP per capita (1983)	\$	...	710	<u>160</u>	240	440	170
GDP growth (1973-83)	per cent/annum	-5.8	4.7	<u>4.1</u>	5.2	2.6	-1.0
Agriculture (1983)	per cent of GDP	...	27	<u>46</u>	33	21	36
Industry (1983)	per cent of GDP	...	24	<u>11</u>	31	26	20
Manufacturing (1983)	per cent of GDP	...	13	<u>7</u>	...	17	2
Services (1983)	per cent of GDP	...	50	<u>43</u>	37	54	44
Exports of goods and non-factor services (1983)	per cent of GDP	...	34	<u>23</u>	22	28	33
Gross domestic investment (1983)	per cent of GDP	...	18	<u>17</u>	25	17	24
External public debt (1983)	per cent of GNP	43.5	78.8	<u>89.3</u>	48.7	61.2	91.5
III. Industrial indicators							
NVA (1982)	millions of constant 1975 dollars	21	705	<u>123</u>	158	443	253
Growth of NVA (1973-83)	average annual per cent	...	4.5	<u>...</u>	...	...	...
Share in world NVA (1981)	per cent	-	0.04	<u>-</u>	-	0.01	0.01
Share of manufactured exports in total exports (1982) ^{g/}	per cent	7.7 ^{h/}	9.8	<u>1.2^{g/}</u>	2.1 ^{g/}	19.6 ^{g/}	3.2 ^{g/}

g/ SITC 5-8 less (67 + 68). h/ 1975. g/ 1978. g/ 1981. g/ 1981. g/ 1979.

Executive Summary

Mali is emerging from the effects of intermittent drought that persisted over more than a decade. Real GDP suffered a negative growth rate of 1.2 per cent in 1983, and recorded a sluggish growth rate of 1.3 per cent in 1984. A new drive towards reviving economic growth coincides with good rains and an era of liberalization efforts and reforms. Mali is off the 'critical' list for emergency aid, but remains a paradigm of drought-hit least developed countries in Africa.

In the face of the appalling weakness stemming from drought-prone position and structural rigidities in the economy, Mali has shown unprecedented willingness to implement IMF programmes in the past three years. Progressive liberalization of the country's cereals marketing policy and reform of public sector companies seem to have been endorsed by the IMF which agreed to a series of standby arrangements in support of reforms that encourage private sector activities.

Manufacturing plays a limited role in the economy, contributing about 7 per cent of GDP. Activities in the manufacturing sector cater largely to domestic needs and is concentrated on agricultural processing and production of simple consumer goods. Of the total industrial enterprises, 56 per cent belong to the agro-food and textile industries. A substantial proportion of industrial output is dependent upon agricultural performance; level of industrial output often reflects the vagaries of monsoon.

The industrial census of 1982/83 listed 116 industrial enterprises, employing more than 14,000 persons. State enterprises accounted for 30 per cent of industrial enterprises which suffered a substantial loss of Malian franc 9,800 million in 1982. Although private enterprises outnumber State and mixed enterprises, privately-owned enterprises are principally involved in small-scale operations.

From the standpoints of contributions to NVA and turnover, the textile industry ranks first. Textiles accounted for over 64 per cent of NVA in

1932. According to estimates, textile plants are operating at 50 per cent of installed capacity. The share of food products in MVA increased from 13.4 per cent in 1975 to 17.5 per cent in 1977, declined until 1981 and recovered in 1982. In the early 1980s oil mills were operating at 20 per cent of installed capacity. Transport equipment increased its share of MVA from 7.0 per cent in 1975 to 9.1 per cent in 1982, while the share of leather products registered a marginal increase during the same period. Mechanical and electrical engineering industries are of recent origin. The declining trend in the contribution of the chemical industry to MVA until 1981 seems to have been reversed due to the relatively better performance of an expanding private enterprise.

In terms of performance and efficiency the private sector has shown a relatively good performance. The index of value added increased rapidly and reached 237 in 1981 (1977 = 100) compared with 92 and 108 for the State and mixed enterprises respectively. The difficult situation in which a number of industries find themselves, particularly those in the State sector, highlights the constraints linked with the organizational system, such as price fixing, marketing, supplies, maintenance and administration.

The informal sector accounts for around 3 per cent of GDP. Artisans are often users of intermediate industrial products. Artisan activities in the rural areas are essentially based on the utilization of raw materials (weaving, pottery, processing of agricultural products, etc.). The modern artisans offering production and services are mainly located in towns (plumbers, painters, cycle repairers, etc.). The informal sector in towns employs about 30,000 persons. The reinforcement of the links between industry and the artisan sector would appear necessary for the development of these two sectors which are often complementary to each other although sometimes in competition. The artisan sector seems to constitute potential for the development of the small-scale industry in Mali. In the context of poverty alleviation and of employment creation the manufacturing sector would need to play a significant role in creating linkages with the informal manufacturing activities and services.

Note de synthèse

Le Mali sort d'une phase de sécheresse intermittente qui a duré plus d'une décennie. Le PIB réel a connu un taux de croissance négatif de 1,2 % en 1983 et a enregistré une progression médiocre (1,3 %) en 1984. Le nouvel effort de relance de la croissance économique coïncide avec une pluviométrie favorable et une période de libéralisation de réformes. Le Mali n'est plus sur la liste "critique" pour ce qui est de l'aide d'urgence, mais il reste typique des pays les moins avancés d'Afrique frappés par la sécheresse.

Malgré cette extrême faiblesse imputable aux sécheresses et à la rigidité structurelle de l'économie, le Mali a manifesté une volonté sans égale de mettre en oeuvre les programmes du FMI durant les trois dernières années. La libéralisation progressive de la commercialisation des céréales du pays et la réforme des sociétés du secteur public semblent avoir été approuvées par le FMI qui a accepté une série d'accords stand-by afin d'appuyer les réformes visant à encourager les activités du secteur privé.

Le secteur manufacturier joue un rôle limité dans l'économie (environ 7 % du PIB). Les activités de ce secteur sont avant tout axées sur les besoins intérieurs et consistent avant tout en le traitement des produits agricoles et en la production de biens de consommation simples. Cinquante-six pour cent des entreprises industrielles appartiennent aux secteurs de l'agro-alimentaire et des textiles. Une partie substantielle du secteur industriel est soumise aux fluctuations de l'agriculture : le niveau de la production industrielle dépend souvent des caprices de la mousson.

Le recensement industriel de 1982/83 a dénombré 116 entreprises industrielles, employant plus de 14 000 personnes. Les entreprises d'Etat représentaient 30 % des entreprises industrielles, qui avaient subi une perte importante s'élevant à 9,8 milliards de francs maliens en 1982. Les entreprises privées sont certes plus nombreuses que les entreprises d'Etat et les entreprises mixtes, mais il s'agit essentiellement de petites entreprises.

Pour ce qui est de la contribution à la VAN et du chiffre d'affaires, l'industrie textile vient au premier rang. Les textiles représentaient plus de 64 % de la VAN en 1982. Selon des estimations, les usines textiles fonctionnent à 50 % de leur capacité installée. La part des produits alimentaires dans la VAN, qui était passée de 13,4 % en 1975 à 17,5 % en 1977, a baissé jusqu'en 1981 et est remontée en 1982. Au début des années 80, les huileries fonctionnaient à 20 % de leur capacité installée. La part des équipements de transports dans la VAN est passée de 7 % en 1975 à 9,1 % en 1982 et celle des articles en cuir n'a augmenté que marginalement durant cette même période. Les industries mécaniques et électriques sont d'origine récente. La tendance à la baisse, jusqu'en 1981, de la part de l'industrie chimique dans la VAN semble avoir été inversée grâce à une relative amélioration des résultats d'une entreprise privée en expansion.

Pour ce qui est du rendement et de l'efficacité, le secteur privé a enregistré des résultats relativement bons. L'indice de la valeur ajoutée a augmenté rapidement et a atteint 237 en 1981 (1977 = 100), contre 92 et 108 pour les entreprises publiques et les entreprises mixtes respectivement. Les problèmes que connaissent un certain nombre d'entreprises, notamment dans le secteur public, mettent en lumière les obstacles imputables à l'organisation commerciale (fixation des prix, commercialisation, fournitures, entretien et gestion).

Le secteur non structuré représente environ 3 % du PIB. Les artisans sont souvent utilisateurs de produits industriels intermédiaires. Les activités artisanales dans les zones rurales se fondent essentiellement sur l'utilisation de matières premières (tissage, poterie, traitement des produits agricoles, etc.). Les artisans modernes producteurs et fournisseurs de services se rencontrent avant tout dans les villes (plombiers, peintres, réparateurs de bicyclettes, etc.). Le secteur non structuré emploie dans les villes environ 30 000 personnes. Le renforcement des liens entre l'industrie et le secteur artisanal semble nécessaire si l'on veut assurer le développement de ces deux secteurs qui sont souvent complémentaires, bien que parfois concurrents. Le secteur artisanal semble riche de perspectives pour le développement de la petite industrie au Mali. Dans le contexte de la lutte contre la pauvreté et de la création d'emplois, le secteur manufacturier a un rôle important à jouer en établissant des liens avec les activités et services manufacturiers du secteur non structuré.

1. THE ECONOMY OF MALI

1.1 Recent economic trends

After more than a decade of recurrent drought, good rains during 1985/86 season brightened the prospects for a new drive towards food self-sufficiency. Mali is off the 'critical' list for emergency aid, but donors have been requested to extend their food aid programme into 1986. In 1985 France provided 15,000 tonnes of cereals to help relieve shortages. Real GDP registered a negative growth rate of 1.2 per cent in 1983 and the sluggish growth trend coupled with the resultant effects of intermittent drought persisted in 1984, with GDP growing at 1.3 per cent.

Mali is no exception to the problems common to most drought-hit African economies. The country's current economic problems are intractable. Declining revenues, rising debts and budgetary deficits are in a way tied to structural rigidities in the economy. In recent years the Malian Government has been trying to promote economic growth through liberalization of agricultural marketing and reorganization of public sector industries.

The 1985 budget estimated expenditure at \$153.6 million against revenue of \$148.2 million. Expenditure in the original budget for 1986 was put at \$182.7 million against receipts of \$182.9 million, leaving a small surplus of \$265,000. According to revised estimates, the budgetary deficit during 1986 will be between \$52.9 million and \$66.2 million. The fall of more than 40 per cent in the prices of cotton, Mali's principal export item, in the international market in early 1986 appears to be the main cause of deficit in the 1986 budget. Cotton production is expected to reach 70,000 tons of cotton fibre in 1985/86 compared with 55,000 tons during the previous harvest. But the benefits of surplus output is liable to be cancelled out because of falling prices and glut in the world market.

The balance of payments showed a disturbing deficit of \$127 million in 1984. The external public debt was around \$960 million in 1984, representing

79 per cent of GDP against 41 per cent in 1979. As a proportion of GDP, Mali's external debt increased significantly, but the debt-servicing burden has remained modest at 3.5 per cent of exports of goods and services. Compared with Mali's level of indebtedness, the level of servicing is fairly low due to the long maturity profile of much of the debt and the concessionary interest terms attached to loans. The World Bank projects a rapid increase in debt service from \$77 million in 1985 to \$99 million in 1988.

With the readmission of Mali into the West African Monetary Union (UMOA) in June 1984, the Malian franc was replaced by the African Financial Community (CFA) franc, at a rate of Malien Fr. 2 equal to CFA Fr. 1. Foreign aid from bilateral and multilateral sources totalled \$994.9 million during 1981-84. Bilateral aid accounted for 56.1 per cent of total aid during the same period. The system of direct financial support from France ended in June 1984. However, French financial backing continues in different forms.

Donors are now looking to encourage wide-ranging reforms designed to reorganize the public sector companies and to adopt price-sensitive strategies in the marketing of agricultural commodities. Mali is seen as a test case for the kind of conditionality often suggested by the IMF and other agencies. The Government of Mali managed to implement IMF programmes in the past three years. The prescriptions to cure the country's economic problems as put forward in the IMF package are to: trim the budgetary deficit and revitalize public finances as a means of correcting structural economic imbalances; reduce domestic and external arrears to restore confidence in the economy; liberalize the trading sector, particularly trade in cereals; and radically curtail the dimensions of the State sector.

In recent years the IMF agreed to a series of standby arrangements in pursuit of supporting reforms of public finances and enterprises and encouraging private sector activities. The IMF-inspired reforms resulted in a sharp "U-turn" towards economic liberalism. An agreement reached in 1982 between the Government and food donors dismantled the monopoly of the Malian Office for the Marketing of Agricultural Products (OPAM) and approved the licensing of private traders. The purpose was to restore incentives by establishing the free market for cereals which was supposed to increase

producer prices. The Government restricted the activities of the Malian Company for Imports and Exports (SONIEX) to just seven basic commodities, and encouraged private activities in trading, banking and transport. Little progress has been made in absorbing the balance-of-payments deficit.

Mali represents a critical test case for the economic reforms suggested by the IMF. In November 1985 a new IMF standby facility of \$24.6 million was announced. It will run until April 1987. Although it reflects IMF approval of Mali's recent efforts to promote economic growth through liberalization of agricultural marketing and reform of State-sector industries, the IMF remains critical of what it calls "structural rigidities" in the Malian economy which continue to constrain growth prospects.

1.2 Economic structure

While Mali registered an acceptable growth rate of 4.3 per cent during 1973-82, it remains one of the least developed countries and represents a paradigm of the problems associated with drought-hit African economies. According to international statistics, Mali is the twelfth poorest country in the world and the fourth poorest in Africa in terms of gross domestic product per capita. Its GNP per capita stood at \$160 in 1983.

Mali is a land-locked country with territory extending over 1,240,000 km² and surrounded by seven countries. Little variation in the relief of the country allows the river Niger to branch out along its total length of 1700 km: with its extensive basin stretching from the west to the east of the country the river Niger plays a predominant role in regard to agriculture, communications and energy from barrages. The river Senegal and its tributaries irrigate the east of the country.

Total population was around 8 million in 1985. The extent of the desert makes any calculation of the mean density of population (6 persons/km² in 1984) of little significance; differences between the regions are very considerable. The western part of the country, accounting for a quarter of the territory, has three-quarters of the population, giving a mean density of 12 which rises to 14 in the Ségou region. Even within the same region the

differences in population density may be large. For example in the region of Gao, in the north-west, where the density is 0.8, this figure rises to 500 persons/km² along the river Niger. The population is thus concentrated in "arable" Mali, in those zones where the rainfall and/or the presence of a river, either the Niger or the Senegal, ensures relative security of water supplies.

Of the estimated total population of around 8 million in 1985, the active population has been estimated at 4 million persons and more than 900,000 live in the urban areas. The distribution of the active population by area and by sector of activity shows the still largely determinant importance of the primary sector for employment and the weakness of the secondary sector. In the urban environment it is the tertiary sector (commerce and services) which provides most of the employment.

According to the Central Bank of Mali the total number of wage-earners in the modern sector is less than 135,000. The young urban population, which is increasing rapidly (because of rural exodus), is particularly affected by the problem of under-employment, the more so since the level of dependence of the non-active population (mainly children) on the active population is tending to rise. Productive employment in agriculture is tending to fall, so it is mainly the younger persons who leave and are reluctant to accept the harsh working conditions which prevail in the fields - far from becoming better, the standard of living in the rural zones today is tending to fall even further.

Table 1 presents the sectoral origin of GDP during 1960-83. It reveals the declining share of agriculture, which accounted for 55 per cent of GDP in 1960 and 46 per cent in 1983. It should be noted that virtually all production values of non-monetized nature occurs in agriculture, particularly in stock breeding and fishing, and it is only possible to produce broad estimates for such values. Referring strictly to the figures presented in Table 1, it is clear that agricultural production has been affected by the persistent drought. While the cereal production declined sharply, cash crops seem to have risen appreciably. Production of cotton lint increased from 11,000 tons in 1965 to 50,000 tons in 1984. Output of oil crops reached 75,000 tons in 1984, compared with 58,000 tons in 1961. It reflected

government development programmes and external capital support. Cotton and groundnut fared badly in the early 1980s due to the renewed drought. A good recovery in the production of cotton is under way. The production of groundnuts, formerly important, has undergone a rapid decline in recent years. Output fell from 159,000 tons in 1979 to 91,000 tons in 1982 and 20,000 tons in 1984. Drought has also taken its toll of livestock. Stock breeding is a principal economic activity in the northern regions of Mali. Livestock products constitute the country's second most important export, after cotton. Fishing activity is significant in the Niger river delta area. The fishing sector currently accounts for 3 per cent of GDP and employs 200,000 persons in production and marketing.

Table 1. Distribution of GDP by sector of origin, 1960-83 (selected years)

Year	<u>Agriculture</u>	<u>Industry</u>	<u>Manufac- turing</u>	<u>Services</u>
	<u>(P e r c e n t a g e)</u>			
1960	55	10	5	35
1977	38	17	11	45
1978	37	18	12	45
1979	42	11	6	47
1980	42	10	6	48
1981	42	11	6	47
1982	43	10	5	47
1983	46	11	7	43

Source: World Bank, World Development Report, various issues.

Cotton fibre and live animals in the primary sector accounted for over 75 per cent of the total value of exports in 1982. The contribution of the manufacturing sector to exports does not exceed 5.4 per cent, and involves only processed agricultural products.

A substantial proportion of industrial output depends upon agricultural performance. Sharp declines in agricultural output had direct repercussions on Mali's manufacturing sector. The contribution of manufacturing to GDP

declined sharply in the 1970s, from 12 per cent in 1978 to 6 per cent in 1979. The service sector in Mali seems to have grown rapidly. Its share of GDP increased from 35 per cent in 1960 to 43 per cent in 1983. A large government sector at low level of development poses difficulties and the government revenues are hardly sufficient to maintain these services - much less to yield savings for capital formation.

While public consumption and private consumption as a percentage of GDP grew significantly during 1965-83, gross domestic investment as a percentage of GDP fell from 23 per cent in 1965 to 17 per cent in 1983 and that of saving fell sharply during the same period.

1.3 Overview of the manufacturing sector

Manufacturing activity, largely directed to meet domestic demand, is mainly taking the form of agricultural processing, such as rice milling, groundnut oil extraction, sugar refining, cotton milling, fruit preservation, etc., and the manufacture of simple consumer goods. In addition there are a cement plant, brickworks, marble factory, industrial gas plant and metal working installations. Other leading industrial units include a pharmaceuticals plant, which had temporarily ceased production in 1985 due to lack of imported inputs, a cigarette factory, a plastics factory, a confectionery plant and a factory that produces soap and soap powder.

The industrial census of 1982/83 listed 116 industrial enterprises, employing more than 14,000 persons. State enterprises accounted for 30 per cent of industrial enterprises. The share of mixed enterprises was 11 per cent and of private enterprises was 59 per cent. Over 75 per cent of industrial turnover is accounted for by the State and mixed enterprises, which operate 21 major food-sector plants. The public companies recorded an overall loss of Malian Fr. 9,800 million in 1982. New policies envisage reorganization of public enterprises and encouragement of private participation in manufacturing activities.

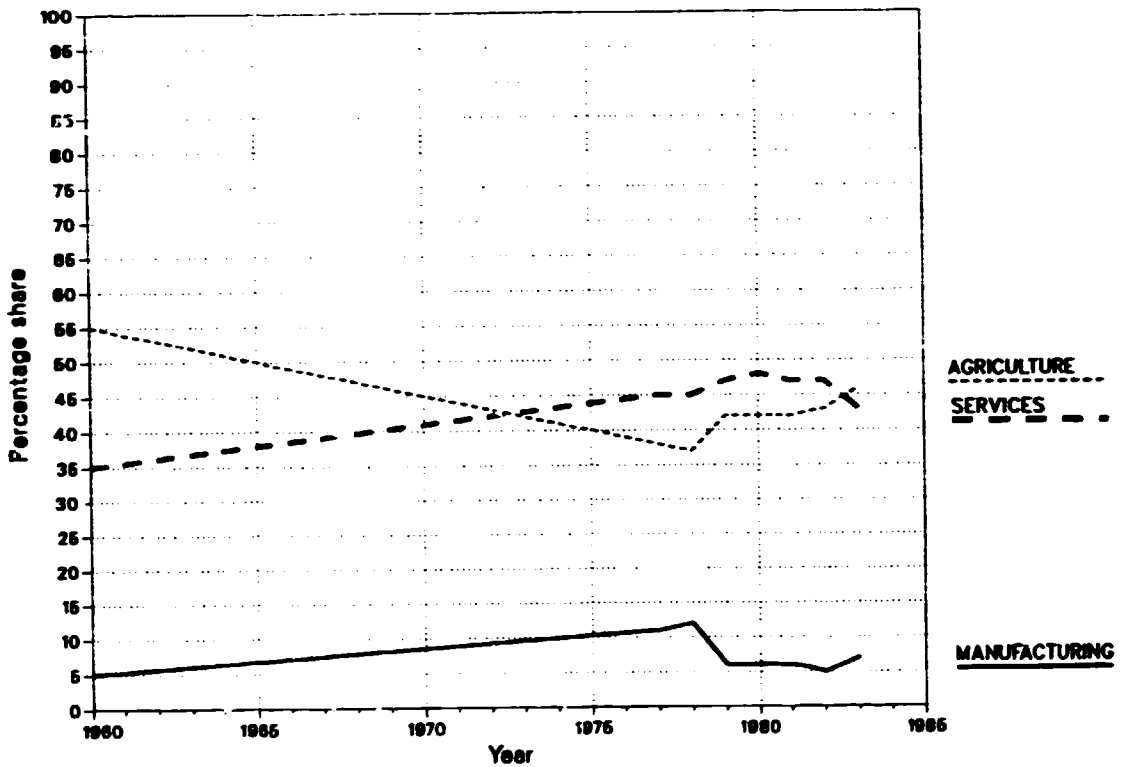
Although the private sector accounts for 59 per cent of total number of industrial enterprises, it represents only 19.7 per cent of employment in

industry. The situation in the mixed enterprises is different. Although fewer in number (11 per cent of all establishments) they account for 29 per cent of industrial jobs, and represented 47 per cent of the total turnover from all industrial enterprises in 1981. Industrial employment in the formal sector is fairly small, representing only 10.3 per cent of all wage-earning employment (estimated at 130,000 by the Central Bank of Mali). The modern industrial sector does not therefore provide, and in the near future could only partly provide, an answer to the unemployment problem which is posed particularly in the urban environments.

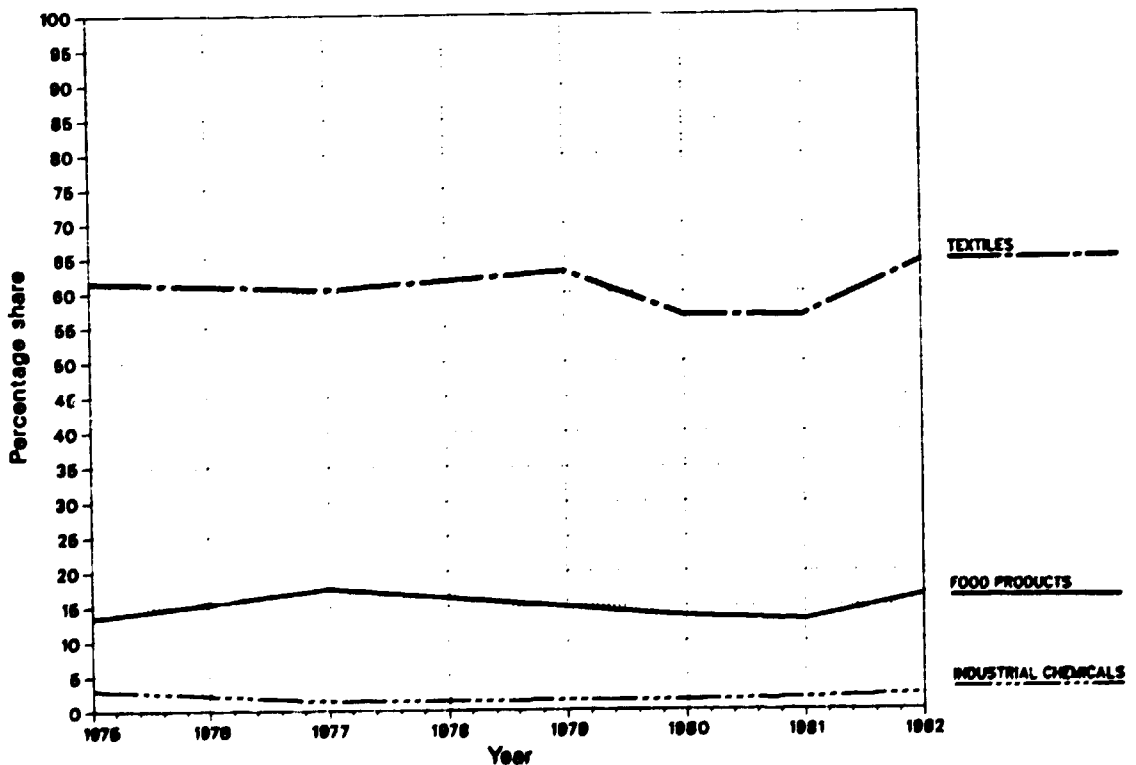
Of the total industrial branches, 56 per cent belong to the food (including food-related industries) and textiles industries. If one ignores the two building materials enterprises (two public enterprises, representing 2 per cent of the industrial enterprises) it is in the food and related industries sector that the public sector is most important, with 32 per cent public enterprises out of a total of 53 enterprises in this branch.

MANUFACTURING TRENDS

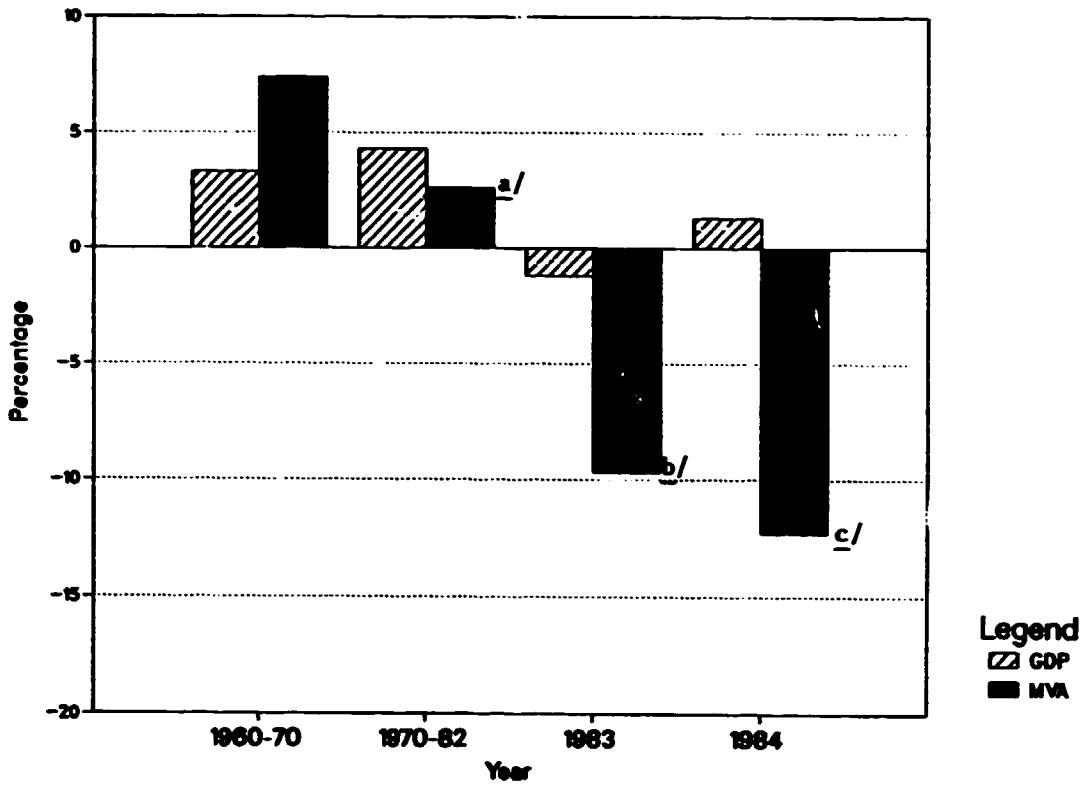
DISTRIBUTION OF GDP BY SECTOR OF ORIGIN, 1960-1983 (at constant 1975 prices)



COMPOSITION OF MVA, SELECTED SUB-SECTORS, 1975-1982 (in constant 1980 prices)

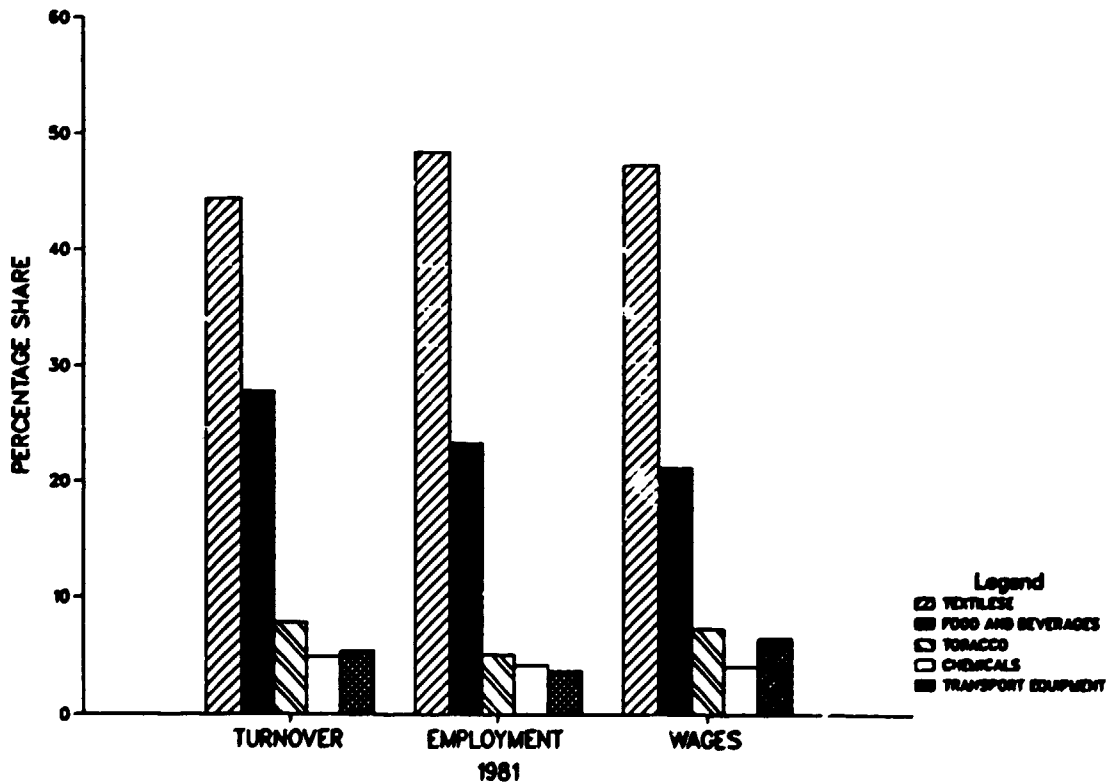


ANNUAL GROWTH RATES OF GDP AND MVA, 1960-1984 (in constant 1975 prices)

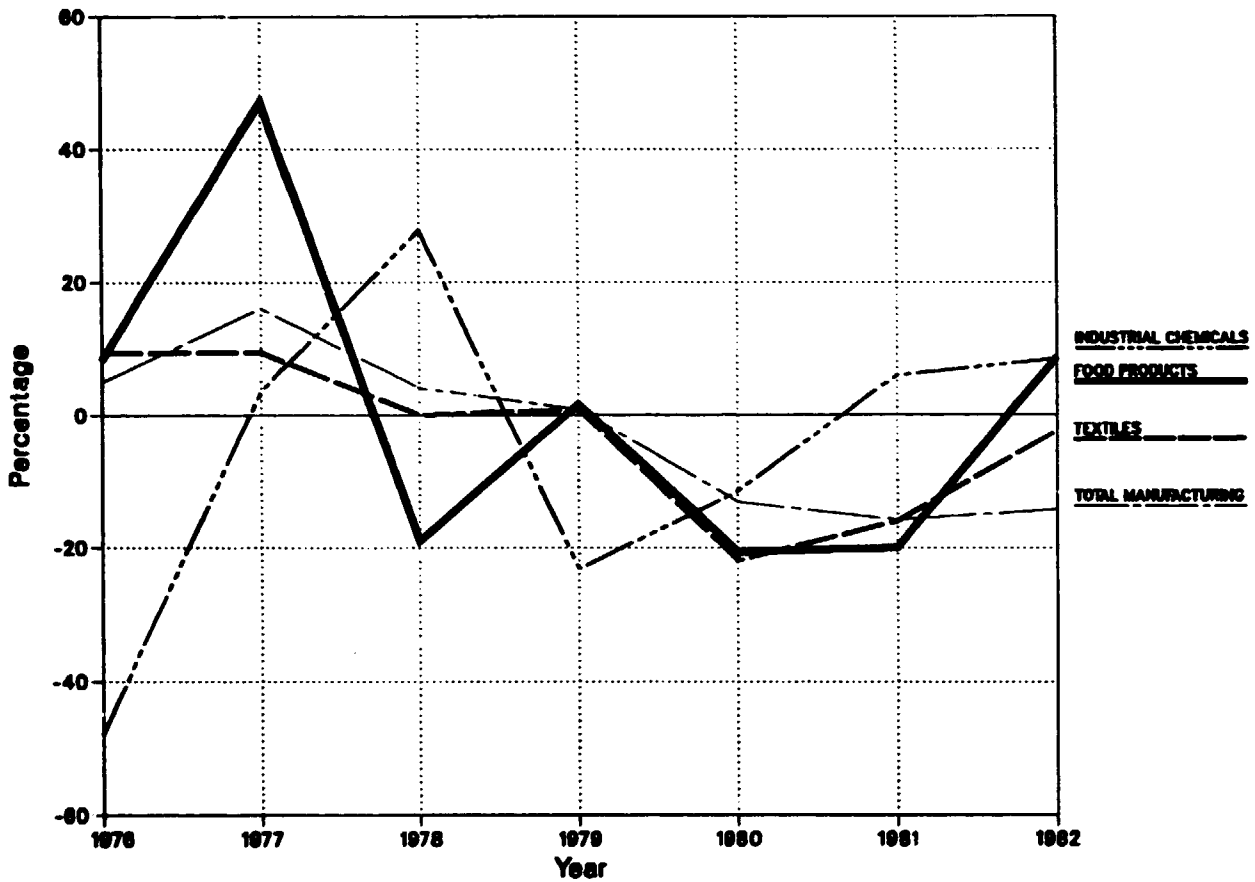


- a/ Average annual growth rate of MVA for 1970-80.
- b/ MVA growth rate for 1981.
- c/ MVA growth rate for 1982.

SUB-SECTORS' CONTRIBUTION TO TURNOVER, EMPLOYMENT AND WAGES, 1981

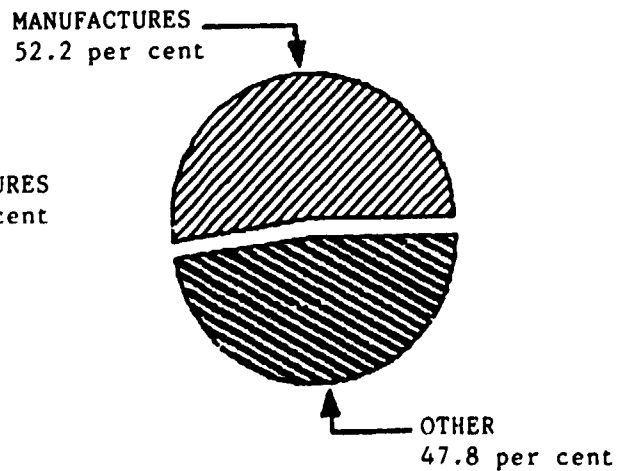
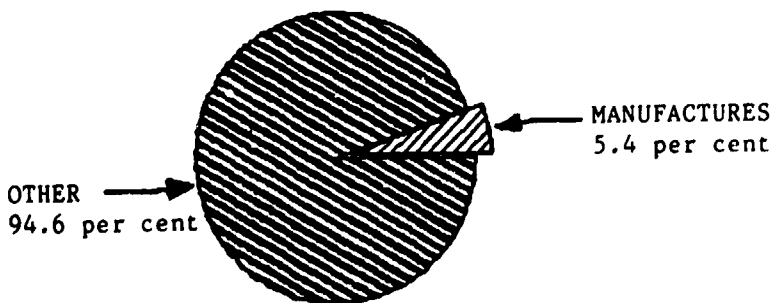


**ANNUAL GROWTH RATES OF MVA, SELECTED INDUSTRIES, 1976-1982
(at constant 1980 prices)**

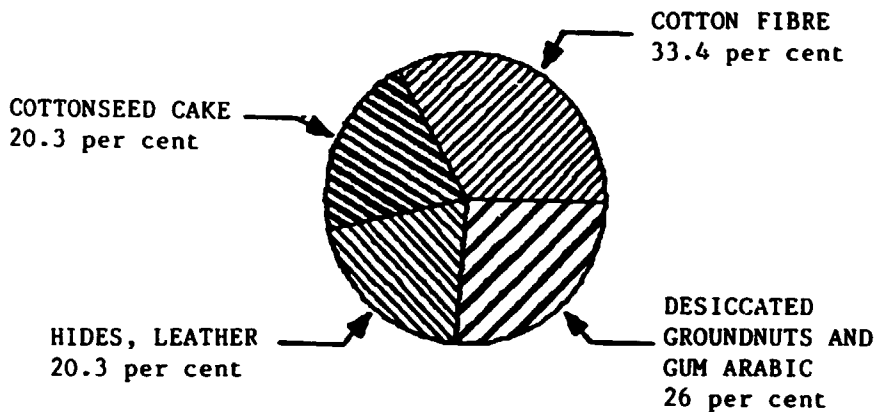


**SHARE OF MANUFACTURES
IN TOTAL EXPORTS**

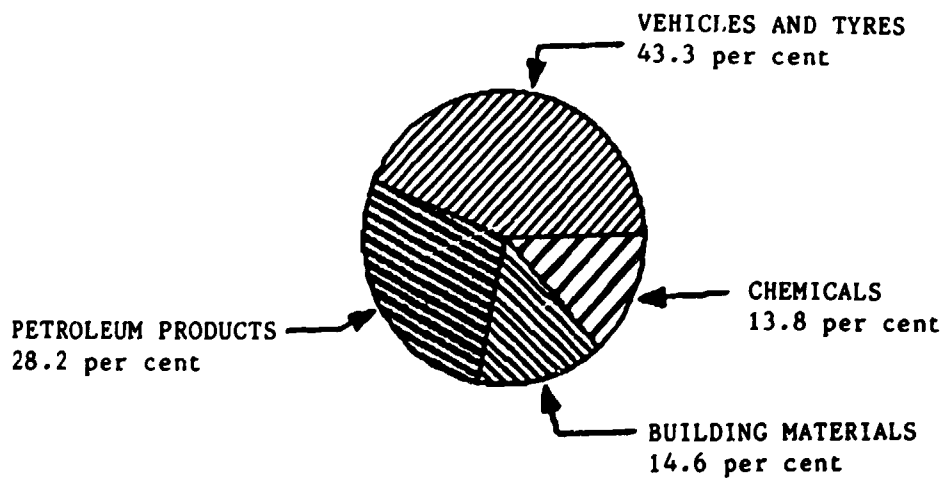
**SHARE OF MANUFACTURES
IN TOTAL IMPORTS**



COMPOSITION OF MANUFACTURED EXPORTS



COMPOSITION OF MANUFACTURED IMPORTS



2. STRUCTURE AND PERFORMANCE OF THE MANUFACTURING SECTOR

2.1 Growth and structural change

Since the manufacturing sector in Mali is essentially based on the processing of agricultural raw materials, growth rates of manufacturing value added considerably reflect fluctuations in the local harvest. A pattern of recurrent peaks and downturns is shown in those sectors which heavily depend on supplies of agricultural raw materials.

At the time of independence in 1960 there were only few industrial installations in Mali. The decade 1960s witnessed the emergence of new industrial enterprises. The 1961-65 Five-Year Plan emphasized the importance given to industrialization "as the means of valorizing the production of raw materials, both to satisfy domestic consumption and also to increase exports."^{1/} The bases of a diversified and planned economy were to depend on the creation of an extensive State sector which would control the key sectors of the economy. Between 1960 and 1968 industry registered high growth rates, partly because of the low base in 1960 and also due to the inauguration of new industrial plants. The exceptional boom which occurred in 1968 was mainly due to foreign sales of cotton fibre at an extremely high price.

Table 2 shows the evolution of industrial production in Mali during 1972-82. Physical output volumes pertaining to manufacturing activities suggest that vegetable oil, oilseed cakes, sugar, soap and textile products recovered well in 1977 (after the drought in 1973-74), but suffered a sharp decline in 1981. The declining trend in the production of these products continued in 1982, excepting in the production of soap and textile fabrics. Chemical and paracheical industries showed a steady increase during 1981-82. Leather bags maintained an annual volume of more than 2 million during 1977-81. The production of cement expanded rapidly at an average annual rate of 28.4 per cent during 1972-82. Cycles and autocycles grew rapidly until 1977 and declined sharply during 1977-82. The products manufactured by

^{1/} Five-Year Plan, 1961-65, p. 24.

Table 2. Evolution of industrial production in Mali, 1972-82 (selected years)
(physical production)

Manufacturing industry	1972	1977	1981	1982
<u>Agricultural and food industries</u>				
Vegetable oil ('000 tons)	7	11.8	9.2	8.5
Oilseed cake ('000 tons)	11	25.4	15	13
Sugar ('000 tons)	4.2	14.6	11.7	6
Soap ('000 tons)	4.1	14.6	1.9	5
Cigarettes ('000 cartons)	29.4	44.4	60.7	68.2
<u>Textiles industries</u>				
Fabrics (million metres)	9.8	15.6	12.6	13.7
Bags (million units)	...	2.87	2.621	2.31
<u>Building materials</u>				
Cement ('000 tons)	0.4	0.4	7.4	4.9
<u>Engineering and electrical industries</u>				
Cycles and autcycles ('000 units)	12.9	20.4	19.1	10.3
<u>Chemical and paracheimical industries</u>				
Vinegar ('000 m ³)	...	...	573	620
Bleach ('000 m ³)	...	...	508	778
Plastic articles (tons)	...	...	1.667	2.301
<u>Wood, paper, miscellaneous</u>				
Matches ('000 boxes)	23.2	23.1	30.2	38.4
Sheets ('000 units)	120	239.8	1094	3682

Source: For 1972 and 1977: "l'Industrie en Afrique", Ediafric.
For 1981 and 1982: Afrique Industrie, No. 301, June 1984.

chemical and paracheimicals industries were on the positive growth track in the early 1980s, when the output volumes of many industrial products decelerated. Matches and sheets sustained a steady growth rate since 1972.

Annual growth rates of real manufacturing value added are presented in Table 3. Real MVA suffered a negative growth rate of 4.2 per cent during 1975-82. After recording a peak level of 16.1 per cent in 1977, MVA declined by 4.1 per cent in 1978, experienced a mild recovery in 1979, and plunged into two-digit negative growth rates thereafter. Of the 11 sub-sectors of

manufacturing, 7 suffered negative growth rates during 1975-82. Tobacco grew at an average annual rate of 17 per cent. The tobacco branch presents some special characteristics; it accounts for only 5 per cent of industrial employment, but produces nearly 8 per cent of the total industrial production and more than 13 per cent of the value added. It may be noted, however, that in recent years since national production of tobacco has not reached the expected levels, the State Tobacco and Matches Company (SOWATAM - Société d'Etat de Fabrication de Tabac et Allumettes) imports raw tobacco which it processes, and a proportion of cigarettes is imported from France. Beverages experienced a remarkable recovery in 1982, with a 66.7 per cent increase over the previous year. Food products grew at 8.7 per cent in 1982. Despite the growing divergence between the forecast annual rates of growth and the rates actually achieved in the various sectors, several new agro-industrial units were built and private enterprises multiplied in the Bamako industrial zone. The Development Plan for 1981-85 set a modest industrial growth rate of 5 per cent a year.

The first ranking industrial branch from the standpoint of its contribution to MVA and turnover is textiles which accounted for over 64 per cent of MVA in 1982. A large part of the cotton fibre produced is exported. Two local factories spin and weave it. According to estimates, textile plants are operating at around 50 per cent of installed capacity.

An analysis of the composition of total MVA, shown in Appendix Table A-1, reveals the importance accorded to the valorization of local raw materials. The share of food products in MVA increased from 13.4 per cent in 1975 to 17.5 per cent in 1977, and declined rapidly until 1981. Beverages registered a declining trend in its share of MVA, which fell from 5.3 per cent in 1975 to 3.1 per cent in 1981. However, both food products and beverages recorded a rise in their respective shares of MVA in 1982. In the food processing sector, there are three oilseed processing plants and two sugar refineries. A third one is being planned. Other industrial units include a fruit and vegetable canning plant, a modern abattoir and cannery, beer and soft drink plants, flour milling and baking plants, and a shea nut processing plant.^{1/}

^{1/} For information on number of enterprises, legal status and number of jobs in each industrial unit in the food industry, see Appendix Table A-3.

Table 3. Annual growth rates of real manufacturing value added, 1975-82

(Percentages on the basis of values in 1980 US\$ constant prices)

ISIC	ISIC-description	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	##/##
311	Food products	8.3	47.1	-19.0	1.6	-20.6	-20.0	8.7	-3.8
313	Beverages	3.4	5.7	-7.7	-1.7	-15.3	-40.0	66.7	-6.5
314	Tobacco	16.0	32.8	18.2	17.6	-6.5	35.0	...	17.0
321A	Textiles ^{a/}	9.4	9.5	0.0	0.8	-21.9	-16.0	-2.4	-4.8
323A	Leather products ^{b/}	9.5	21.7	-1.8	0.0	-9.1	-5.0	...	1.9
331A	Wood products, except furniture ^{c/}	9.5	21.7	-1.8	0.0	-9.1	-5.0	18.9	2.3
341A	Paper and products ^{d/}	9.5	21.7	-1.8	0.0	-9.1	-5.0	...	1.9
351E	Industrial chemicals ^{e/}	-47.9	3.6	27.8	-23.1	-11.5	6.0	8.5	-6.0
361A	Pottery, china, earthenware ^{f/}	3.7	-22.3	19.5	-13.5	11.1	12.0	...	-0.3
369	Other non-metallic mineral products	-9.0	-23.1	8.6	-11.9	12.4	27.0	-23.6	-2.2
371	Iron and steel	...	...	...	...	...	...	...	...
372	Non-ferrous metals	...	...	...	...	...	...	...	...
381	Fabricated metal products	...	...	...	...	...	...	...	...
382	Machinery, except electrical	...	...	...	...	...	...	...	...
383	Machinery electrical	...	...	...	...	...	...	...	...
384	Transport equipment	-12.0	51.9	-22.8	5.3	0.0	2.0	-39.2	-2.6
385	Professional & scientific equipment	...	...	...	...	...	...	...	...
390	Pottery, china, earthenware	...	...	...	...	...	...	...	...
300	TOTAL MANUFACTURING	5.0	16.1	-4.1	0.8	-13.1	-15.8	-14.2	-4.2

Source: UNIDO Data Base; Information supplied by the United Nations Statistical Office, with estimates by the UNIDO Secretariat.

##/ The initial- and/or the end-year of the trend-growth is always the first and/or the latest year shown in the year-to-year growth.

Note: TOTAL MANUFACTURING is the sum of the available components and does not necessarily correspond to ISIC 300.

^{a/} 3210 3220. ^{b/} 3230 3240. ^{c/} 3310 3320. ^{d/} 3410 3420. ^{e/} 3510 3520 3530 3540 3550 3560.
^{f/} 3610 3620.

In the early 1980s many oil mills were operating at 20 per cent of their installed capacity. The initial processing capacity of a State company, Société d'Exploitation des Produits Oléagineux du Mali (SEPOH), was 30,000 tons per year and was doubled in 1973. It is operating at 20 per cent of its capacity. The groundnut grinding capacity of Société d'Exploitation des Produits d'Arachides du Mali (SEPAMA) at Kita is 45,000 tons. At present the unit is shut down. The creation of a large refrigerated abattoir and a milk processing plant at Bamako has not resulted in the efficient valorization of products of stock raising. It is evident that under-utilization of production capacity is the main cause of the declining share of food and beverages in total MVA.

The share of tobacco in MVA increased significantly from 5.8 per cent in 1973 to 13.2 per cent in 1981. Comparison of figures related to the respective shares of leather products and a few non-metallic mineral products in 1973 with 1981 figures shows that these two products retained their original shares over a 9-year period. In fact, leather products registered a marginal increase. Transport equipment increased its share of MVA from 2.7 per cent in 1973 to 5.1 per cent in 1981. Most of the mechanical and electrical engineering enterprises are of recent creation. About fifteen enterprises employing 800 to 900 persons show the diversity of the industry - metalwork for construction, enamelled goods, assembly of cycles and motorcycles, agricultural equipment, winding motors, etc. The contribution of the private sector is considerably larger than that of the public sector. Of the seventeen enterprises, fourteen industrial units are operating in the private sector.

The contribution of industrial chemicals to MVA suffered a marginal decline during 1973-81. The trend seems to have been reversed since 1981. Physical output volumes of vinegar, bleach and plastic articles recorded an impressive growth during 1981-82 (see Table 2).

The most important enterprise in the chemicals field is Société Mamadou Sada-Diallo et frères (SOMACI). This is a private enterprise created in 1973 by a trader who had the idea of converting the alcohol produced by the Office du Niger into vinegar and subsequently extending his activities to bleaches

and plastic packagings. Support from the CCCE and the SFI in 1977 made it possible to commission a unit for the production of tubes. The success of this enterprise is often cited as an example of what is possible to achieve in the Malian manufacturing sector.

2.2 Performance and efficiency

The manufacturing sector in Mali grew at an average annual rate of 7.4 per cent in the 1960s. This fairly impressive growth rate reflected the endeavour of the newly independent country to embark on rapid industrialization. The high growth rate achieved in the 1960s could not be sustained, and growth averaged 2.6 per cent in the 1970s. Industrial production has fallen over the last few years. The slowing down of the industrialization process indicates persistence of structural obstacles. Using three parameters - turnover, manpower and value added - an attempt has been made to evaluate the performance and efficiency of industrial enterprises. Table 4 provides indices of these parameters for State, mixed and private enterprises during 1977 and 1981.

The turnover of the State enterprises is static or even falling back (apart from a slight improvement in 1980). As far as employment in the State sector is concerned growth was fairly limited up to 1979. Since that time there has been a reduction in the numbers employed. The fall in manpower shows the difficulties experienced by the State sector and the effect of the restructuring measures implemented in this sector which resulted in reductions in manpower levels and an improvement in the value added during 1980-81.

In the mixed sector, performance was rather different. The 1979 turnover was fairly higher than that in the State sector. Manpower in 1979 was slightly higher than that in the State sector, but was increasing rapidly (more than 4,000 employees in 1981). The increase in the value added is also higher than that of the State sector in 1980 and 1981.

In terms of value added, the private sector provides a striking contrast. The index of value added increased rapidly and reached 237 in 1981 (1977 = 100) compared with 92 and 108 for the State and mixed enterprises

respectively. The turnover of the private sector between 1977 and 1981 was multiplied by a factor of 2.4 and the value added by a factor of 2.3 per cent. By contrast manpower levels increased less rapidly in the private sector.

Table 4. Indices of turnover, manpower and value added by type of enterprise, 1977-81

(1977 = 100)

Parameter	Legal status	1977	1978	1979	1980	1981
Turnover	State	100	99	100	115	92
	mixed	100	110	115	111	108
	private	100	126	196	250	237
Manpower	State	100	110	115	111	108
	mixed	100	102	131	138	148
	private	100	100	127	131	123
Value added	State	100	101	122	116	123
	mixed	100	106	103	131	131
	private	100	134	202	221	228
	Total for all sectors	100	108	127	134	142

Source: Industrial Census, 1982-83.

Between 1969 and 1981 the number of enterprises in the manufacturing sector practically trebled from 37 to 106. Over the same period the manpower employed in the sector multiplied by a factor of 5.4 (see Appendix Table A-2). The increase in manpower was very considerable up to 1973, being essentially due to staff absorbed by the textiles industry (49 per cent of jobs, concentrated in 16 per cent of the enterprises). It is also this branch which is the origin of the more or less drastic fluctuations in the numbers employed in the sector - a fall between 1973 and 1974, an increase between 1975 and 1978, and stagnation, or a slight fall, thereafter. The number of wage-earners in the food and agricultural industries increased by 23 per cent

between 1977 and 1981, whereas the number of enterprises increased by 45 per cent over the same period. It was largely due to the creation of small enterprises with limited labour absorptive capacity during this period.

Table 5 provides information on industry-wise contribution to total turnover, value added, employment and wages in the Malian manufacturing sector during 1973-81. The textile industry is the major contributor to turnover, value added, employment and wages. While textiles' share in total MVA rose rapidly during 1973-81, its contribution to employment declined significantly. The textile industry recorded an average annual rate of 1.3 per cent increase in its share of turnover. Its contribution to wages increased marginally.

The performance of the leading textile enterprise, Compagnie Malienne des Textiles (COMATEX), was satisfactory until 1972, but since that time both production and productivity have fallen. Despite this fact a second unit was opened in 1975. At the present time COMATEX is operating at 50 per cent of its capacity. After considerable increases in the number of employees up to 1975 the trend is now towards a reduction in staffing levels.

Industrie Textile du Mali (ITEMA), created in 1969 in Bamako, is a mixed company (with the Agache Willot Group). Its activities are complementary to those of COMATEX: the production of printed fabrics, blankets and mattress covers. The full production capacity has not so far been achieved.

Table 5 suggests that the relative importance of food and beverages - measured in terms of their shares in total turnover, value added and wages - declined during 1973-81 excepting in terms of employment. It reflected the drought-induced sluggish environment in these agricultural resource-based industries. As mentioned earlier, many industrial enterprises were operating at 20 per cent of their installed capacities. Among the food and related industries, the oil refining sector is experiencing serious difficulties. Groundnut processing was, formerly, Mali's principal source of income, but production has fallen off due to drought and other climatic hazards. However, it is mainly at the marketing level where there has been a radical change; an

appreciable proportion of the quantities produced is consumed at the point of production or is sold outside the official circuits. The situation regarding supplies to the factories has been so catastrophic that in 1983 the SEPAMA plant at Kita was shut down. The situation of the groundnut oil mills is a delicate one; prices to the producers are too low, supplies of raw materials to the plants are deficient and the production costs are too high to allow Mali to be competitive in the world market. The supply and marketing situation with cottonseed oil is less disturbing.

Table 5. Contributions of manufacturing sub-sectors to turnover, value added, employment and wages, 1973 and 1981
(as percentage)

	<u>Turnover</u>		<u>Value added</u>		<u>Employment</u>		<u>Wages</u>	
	1973	1981	1973	1981	1973	1981	1973	1981
Textiles	39.9	44.4	36	50.3	57.9	48.4	45.4	47.3
Food and beverages	30	27.8	22.6	15.7	14.9	23.3	22.1	21.2
Tobacco	7.9	7.8	15.8	13.3	3.6	5.1	6	7.3
Chemical industries	6.4	4.9	6.3	3	4.8	4.2	5.3	4.1
Transport equipment	4.2	5.4	3.8	6.3	3.3	3.7	5.9	6.5
Miscellaneous	11.6	9.7	15.5	11.4	15.5	15.3	15.3	13.6
TOTAL	100	100	100	100	100	100	100	100

Source: Industrial Census, 1982-83.

SEPOH is a mixed enterprise producing oil, processing groundnuts, cottonseed and karite nuts. The initial processing capacity was 30,000 tonnes per year of groundnuts, and this was doubled in 1973. However, this enterprise, with more than 800 persons, is only operating at 20 per cent of its capacity and has accumulated a deficit of more than Malian Fr. 12 billion since 1975. At the present time it is refining cottonseed oil from Huilerie Cotonnière du Mali (HUICOMA). The creation of large refrigerated abattoirs

and a milk processing plant at Bamako has not resulted in the efficient valorization of the products of stock raising.

The processing of skins and leathers is another valorization of the products of stock raising. The State-owned Tanneries Maliennes (TAMALI), created with assistance from China, rapidly found itself in difficulties. Today it is still the artisan sector which accounts for almost the totality of production. The network for collecting skins and leather by the industrial sector is deficient, so that supplies of the raw materials are insufficient to allow these units to operate efficiently.

However, the importance of these branches in the Malian manufacturing industry is reflected both in terms of the number of jobs (about 6,000 employed in 1984) and in the number of enterprises (about 50, including industrial bakeries). State and mixed companies form the majority in most of the sub-branches, except in the case of fish, cereal products and preserving.

The difficult situation facing a number of the industries in Mali (in particular those in the State sector) highlights the following constraints linked with the organizational system implemented since independence:

Price fixing

Prices of the so-called strategic products are fixed by the State. These react tardily to increases in production costs. The latter are very high due to the cost of energy and the lack of technical skills. Thus many companies are obliged to sell at a loss, without compensation or subsidies. This leads to a descending spiral, the most typical of this being that concerned with groundnuts, the margin being too low. The plants now only operate at around 20 per cent of their capacity, and consequently find themselves with higher production costs.

Marketing

Very frequently the State enterprises (in particular the food and related industries producing general consumer goods) do not carry out regular market

studies and do not try to adapt their products to consumers' needs. Products which are imported legally or fraudulently come into severe competition with domestic products, both in terms of price and also of quality; Mali traders can obtain more comfortable sales margins on imported products than on the local products.

Supplies and maintenance

On several occasions the difficulties have been pointed out in regard to supplies of raw materials, linked with the policy of prices to the producers or to the communications infrastructures which do not make it possible to ensure satisfactory delivery of the products. Another crucial problem for the enterprises is that of acquiring spares - industrial equipment is all imported, and the range is very wide. The diversity and heterogeneity of the plant equipment is linked with the history of the projects and the aid which allowed them to be realized.

Enterprise and administration

The absence of autonomous management in State enterprises and the intervention of the State in the management of public enterprises occurs frequently. Co-ordination between the departments concerned in industrial development is sometimes inadequate.

All these constraints limit the expansion of the industrial sector and explain the stagnation of its contribution to the formation of GDP, despite important potentials in respect of natural and human resources.

2.3 Exports and imports of manufactures

The value of total imports is considerably higher than that of total exports. In 1983 the value of exports totalled \$167 million against \$241 million worth of total imports. It resulted in a trade deficit of \$74 million which partly reflects Mali's heavy dependence on a wide range of imports and partly the drought-induced sluggish performance of agricultural exports. Both export composition and geographical distribution of exports are concentrated. France is the leading supplier and the second largest buyer of

products from Mali. Senegal and the Côte d'Ivoire are major suppliers of food products. Other countries in Western Europe maintain preferential trading links with Mali.

The share of manufactured exports in total exports was around 5.4 per cent in 1982. Cotton is easily distinguishable both from the standpoint of its absolute value and relative importance. Table 6 shows that cotton and cotton products constituted over 44 per cent of total exports in 1983. While the exports of cotton and cotton products represent a success story, exports of groundnut products have been deteriorating sharply in recent years. Cotton products are sold in the form of fibre, cottonseed and fabric. Sales of oil cake are somewhat limited by the domestic use of this product to improve cattle feed on fattening terms where forage crops are inadequate. Although cotton products remain the major export item, exports of secondary stage of cotton products tend to be far less significant. In 1982 cotton fabrics and cottonseed cakes accounted for 2.9 per cent of Mali's total exports.

Imports of machines and vehicles represented about a third of the total value of imports in 1982. A substantial increase in the imports of food products from CFA Fr. 20.3 billion in 1982 to CFA Fr. 31.9 billion in 1983 reflects the difficulties on the food front.

Table 6 suggests that the falling oil prices would be a blessing for Mali which spent CFA Fr. 22.8 billion in 1982 and CFA Fr. 25.5 billion in 1983 on the imports of petroleum products. There has been a sharp increase in the imports of chemical and pharmaceutical products. Rising imports of costly construction materials makes it necessary to evaluate the feasibility of taking new initiatives toward starting local cement works, which would probably enable Mali to save hard currencies.

**Table 6. Trade statistics related to selected exports
and imports, 1978-83**

(CFA Fr. billion)

	1978	1979	1980	1981	1982	1983
TOTAL EXPORTS	25.2	31.4	43.3	41.9	47.9	63.6
Cotton and products	12.6	17.0	21.8	17.1	18.6	28.0
Groundnut products	3.0	1.8	1.0	2.5	0.9	0.7
Hides and skins	0.2	0.2	0.3	0.5	0.6	0.5
TOTAL IMPORTS	64.3	76.5	93.1	104.8	109.2	131.2
Machines and vehicles	18.5	27.5	27.8	29.0	31.1	...
Food products	11.8	10.2	16.6	22.9	20.3	31.9
Petroleum products	9.9	11.8	17.5	19.9	22.8	25.5
Construction materials	7.6	9.2	8.8	8.3	10.0	...
Chemical and pharmaceutical products	6.0	8.9	11.0	10.8	10.0	...

Sources: IMF, International Financial Statistics, 1985, p. 433; Central Bank of Mali.

2.4 Ownership and investment pattern

The distribution of industrial enterprises shows the pivotal role played by the State and the close control exerted by the State over the industrialization process. In 1982 there were 17 State enterprises operating in agricultural and food industries. Although the private enterprises within the field of manufacturing activity outnumbered the State and mixed enterprises, privately owned enterprises are principally involved in small-scale operations. Thus 60 per cent of the total enterprises run by the private sector does not necessarily imply a significant role assigned to the private sector.

Table 7 shows that the State had the monopoly in the production of building materials, glass, minerals and non-ferrous metals in 1982. The private sector operated all 5 chemical and paracheical industries. The mixed sector had 6 out of 12 enterprises in textiles and clothing.

Within the definition of the objectives of the 1981-85 Five-Year Plan the emphasis is placed on associating the private sector with industrial development - "private initiative will be sustained and encouraged, in particular in the form of small- and medium-sized enterprises which will benefit from favourable fiscal, customs and banking measures."^{1/} Within the framework of a strategy for employment the multiplication of these small and medium enterprises forms an imperative for development in Mali. The absence of private entrepreneurs at the beginning of industrialization is a characteristic which is not specific to Mali. However, the dynamics of the artisan and the pre-industrial sectors has favoured the emergence, during the last decade, of a group of creators of small industrial enterprises, more or less numerous in the different branches. The greater part of the production of the chemical industry is now in the hands of a private group. This group was, at the start, a small enterprise which subsequently became larger and more diversified. It is in the metal engineering branch that one finds most small enterprises (assembly, repair, production of consumer durables, etc.): small and medium enterprises, created after 1970.

The present investment code was promulgated by Decree 76-31/CMLN of 30 March 1976.^{2/} It makes provision for the granting of three distinct regimes: Regimes A and B may be granted to so-called "priority" enterprises, whereas regime C is intended for small- and medium-sized enterprises ("PME"). Article 4 of the code defines the concept of a "priority enterprise" and Article 6 specifies that these enterprises must achieve a value added level of 40 per cent or higher.

1/ Five-Year Plan for Economic and Social Development, 1981-1985.

2/ A new investment code is in preparation. For details of 1976 investment code, see Appendix B.

Table 7. State, mixed and private enterprises by branch of manufacturing, 1982

	<u>State sector</u>		<u>Mixed sector</u>		<u>Private sector</u>		<u>Total</u>	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
<u>Manufacturing industries</u>								
Agricultural and food industries	17	32	4	8	32	60	53	45
Building materials and glass	2	100	-	-	-	-	2	2
Engineering and electrical industries	3	15	2	10	15	75	20	18
Chemical and paracheical industries	-	-	-	-	5	100	5	4
Textiles & clothing	2	17	6	50	4	33	12	11
Timber, paper and miscellaneous industries	2	15	-	-	11	85	13	11
<u>Extractive industries and energy</u>								
Minerals and non-ferrous metals	2	100	-	-	-	-	2	2
Electricity and others	7	78	1	11	1	11	9	7
T O T A L	35	30	13	11	68	59	116	100

Source: Industrial Census, 1982-83.

An analysis of the projects approved by the National Directorate for Industries over the period 1980-84^{1/} (see Table 8) shows the underlying trend in the pattern of investment. The food and agriculture industries account for 55 per cent of the projects, in particular the creation of industrial bakeries, refrigerated stores and plants for the production of

Table 8. Investment pattern in manufacturing, 1980-84

Industrial activity	Approvals	
	Number	Per cent of total
Food and agro-food industries	76	55
- of which:		
. Baking-cakemaking	46	(33.6)
. Food-grade ice and refrigerated depots	11	(8.0)
. Food-grade ice and carbonated beverages	3	(2.2)
. Drinks	4	(3.9)
. Other food products	12	(8.8)
Leather	1	0.7
Textiles, clothing, cleaning	4	2.9
Chemicals, paracheicals, soap-making	20	14.5
Building materials, timber, furniture	6	4.3
Engineering workshops, metalworking, garages, electrical	7	5.1
Paper, school articles, printing	6	4.3
Tourism and leisure activities	8	5.8
Others (principally services)	6	4.4
Sub-total	134	
Activities not identified	3	
T O T A L	137	100

Source: National Directorate for Industries, Survey of the Industrial Potential of Mali, December 1984; CDI Brussels.

^{1/} Projects approved in 1983 and 1984 are presented in Appendix C.

food-grade ice (41.6 per cent of all the approved projects). Second position is held by paracheicals and soap-making with 15 per cent of the approved projects. Half the approvals in this sector concern soap-making factories. The dominant activity of the smaller enterprises is concerned with the valorization and processing of agricultural products, a large proportion of which are imported.

2.5 Size and geographical distribution

In terms of number of employees COMATEX, a State textile enterprise engaged in weaving and hosiery activities, is the largest industrial enterprise employing 2,650 persons in 1982. In the textile industry two other enterprises, ITEMA and SONASAC, employed 650 and 300 persons respectively in 1982. Other industrial units in textiles employed less than 100 persons. In the food and related industries the State enterprise SEPOH ranks as the largest enterprise. Other industrial units are relatively smaller in size, with size of labour force ranging from 360 to 30 persons. On an average mechanical, electrical and engineering industries employed 100 persons each in 1982.

The difficulties which confront these smaller enterprises are linked both with the economic environment (difficulties which affect the whole of Mali's industry) and also with the specific character of small private enterprises:

The financing of a small or medium enterprise is difficult; individual saving is not easily directed towards industrial investment and the banks need to develop specific financing mechanisms for such enterprises (at the present time this is done by the Mali Development Bank). It should be noted that bilateral aid is becoming increasingly interested in small and medium enterprises: for example the Federal Republic of Germany has supported the creation of a number of small enterprises in the metal engineering branch.

The managerial training of the smaller entrepreneurs is often inadequate, as is also their knowledge of markets and outlets and

of production techniques. All the capital equipment goods have to be imported, which necessitates a knowledge of suppliers abroad and which multiplies the difficulties when installing and operating workshops, particularly in terms of maintenance and repair.

Assistance from the public authorities in the creation of small- and medium-enterprises does exist (for example the Centre for Studies and Industrial Promotion, CEPI) but this is still limited: support could be given by an acceleration and simplification of administrative procedures, but also by assistance in the preparation and execution of projects (feasibility studies, documentation, economic forecasting, etc.).

The multiplication of small- and medium-sized enterprises, linked with the larger industrial units, is presented as an indispensable stage in the creation of an industrial fabric. However, if they are to develop under the best conditions, such private enterprises always establish themselves at Bamako. If this concentration is to be limited some encouragement from the public authorities is essential (establishing industrial zones outside the capital, tax encouragements, etc.).

A survey carried out in 1978 by the Centre for Industrial Promotion and Studies (Centre d'Etudes et de Promotion Industrielle, CEPI) listed more than 80,000 artisans in Mali. In a country where 80 per cent of the population is in rural areas some 64 per cent of the active population employed at artisan level live and work in a rural environment as compared with 36 per cent in the towns. Artisan work thus constitutes an appreciable activity and a source of extra-agricultural revenue. It is an activity with a high female participation rate: amongst the artisans listed there were 56 per cent men and 44 per cent women; women artisans are more numerous in the rural areas than in the towns. According to ILO estimates there were 95,900 artisans in Mali in 1983 (including apprentices).

**Table 9. Active population employed at artisan level
by sex and by area, 1976**

	Number	Per cent of total	Per cent of men	Per cent of women
Rural	51,549	64	45	55
Urban	28,929	36	63	37
Total artisans in Mali	80,478	100	50	44

Source: Ministry of Planning, Results of 1976 Census.

The productive non-structured artisan sector is defined by the ILO on the basis of the following criteria:

- restricted scale of operation,
- use of local resources in labour-intensive techniques,
- family ownership of the enterprises,
- skills acquired outside the official training system,
- markets falling outside legislation, and open to competition.

Artisans are often intermediate consumers of industrial products. However the equipment of artisans is often rudimentary, and the modern sector does not produce capital equipment goods: this offers, through the equipping of artisans, an activity with large possibilities for a dynamic interaction between industry and the artisan sector, with important positive effects on each sector. The degree of dependence of artisans on imports varies according to the type of activity.

The output produced by artisans (classified as part of the secondary sector) would account for 3.3 per cent of the GDP. The exporting capability of the sector is fairly small (0.4 per cent of the production). The activities located in the rural areas are essentially based on the utilization of local raw materials (weaving, pottery, processing of agricultural products). The "modern" artisans offering production and services are essentially located in the towns (plumbers, painters, cycle repairers, etc.).

This informal sector in the towns employs about 30,000 persons, including apprentices, about half of these being in Bamako and the remainder in the other local capitals outside Bamako.

In these towns outside Bamako 87 per cent of the artisans are employed in production activities and 13 per cent in service activities. About three-quarters of the artisans are employed in spinning, weaving and clothing manufacture, followed by basket makers, carpenters, blacksmiths and shoemakers. "The artisans are often young men under 40 years of age, having learned their trade in the family circle, and with only half of them having been to school."^{1/}

In Bamako the artisans occupied in production are more numerous than those providing services (75 per cent, against 25 per cent). Goods and services are provided in parallel with the modern sector (car mechanics, motorcycles, etc.). Artisan activities of the "traditional" type are of far less importance than in the rural environment.

The relationships between industry and artisans in the production sector vary greatly with the category of activity concerned: weavers come into competition with the factories producing fabrics, whilst glassblowers and potters come into competition with the units producing enamelled household articles. Artisans experience serious problems when industry produces popular products, such as footwear, at low prices, but in other cases artisans are competitive (low prices because of the absence of social charges, low tax levels, etc.).

Most of the industrial establishments are concentrated in and around Bamako, the capital, and account for 63 per cent of all enterprises, whilst 28 per cent of establishments are located in the neighbouring regions of Sikasso and Ségou.

Nearness to the financial and administrative institutions is even more vital when means of communication are limited. But the largest obstacle still remains the lack of physical infrastructures: water, electricity and roads.

^{1/} Seminar on industrial planning and strategy. ILO paper on "Appui du secteur non structuré au Mali". December 1984, p. 25.

Table 10. Informal manufacturing activities by urban and rural artisans, 1983

Informal activity	Per cent of urban artisans	Per cent of rural artisans
Textile workers	37	63
Tailors, dressmakers, seamstresses, carpet-weavers and similar	80	20
Leather-workers and shoemakers	26	74
Carpenters and cabinet makers	85	15
Metal-workers and machinists	22	78
Plumbers, welders, sheetmetal workers, boilermakers, structural steelworkers	90	10
Glassblowers, potters and similar	15	85
Production workers (basket-makers, ropemakers, musical instruments, etc.)	9	91
Masons, carpenters and other building workers	78	22

Source: ILO, L'artisanet urban au Mali - choin des produits et politiques visant à la promotion du secteur non structuré urban au Mali, 1983.

A comparison of the location of enterprises according to their legal status is revealing. Table 11 shows that nearly 80 per cent of the private establishments are in the Bamako region, as compared with only 35 per cent of the public enterprises. This illustrates the wish of the Malian Government to limit the polarization around Bamako, despite the very considerable constraints imposed by locating enterprises in regions far from the capital. It should, however, be noted that practically all the establishments are found in the regional capitals.

The geographical distribution of enterprises according to branch^{1/} shows that it is the agricultural and food industries (in any case the most

^{1/} Appendix Tables A-3, A-4 and A-5 present enterprise-wise information on geographical distribution.

Table 11. Location of enterprises in the six administrative regions, according to their legal status, 1983

Administrative region (and principal towns)	Total		State sector		Mixed sector		Private sector	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
BAKAO Bamako, Koulikoro, Dioula, Fana	73	63	12	35	7	54	54	79.5
KAYES Kayes, Kita	6	5.2	3	8	1	8	2	2.9
SIKASSO Sikasso, Bougouni	12	10.2	5	14	3	23	4	5.9
SEGOU Ségou, Koutiala, San, Tombouctou, Nioro, Markala	18	15.6	10	29	2	15	6	8.8
NOPTI Nopti	6	5	4	11	-	-	2	2.9
GAO Gao, Bourem	1	1	1	3	-	-	-	-
T O T A L	116	100	35	100	13	100	68	100

Source: Industrial Census, 1982-1983.

numerous) which are most widely distributed: Bamako has 26, whereas the remaining 29 are unequally distributed among Ségou, Sikasso, Mopti and Kayes. The engineering, electrical, chemical, timber, paper and glass industries are almost exclusively concentrated in Bamako (36, out of a total of 37 - see Table 12). Of the 11 textiles and clothing industries, 6 are located in Bamako.

Table 12. Distribution of manufacturing enterprises by branch and by administrative region, 1983

Administrative region	Agricultural and food industries		Building materials		Engineering & electrical		Chemical industries		Textiles and clothing		Timber, paper and glass	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Bamako	26	48.9	1	50	19	95	5	100	6	50.2	13	100
Kayes	3	5.8	1	50	-	-	-	-	1	8.3	-	-
Sikasso	5	9.3	-	-	1	5	-	-	2	16.3	-	-
Ségou	13	24.5	-	-	-	-	-	-	3	24.3	-	-
Mopti	6	11.5	-	-	-	-	-	-	-	-	-	-
Gao	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	53	100	2	100	20	100	5	100	12	100	13	100

Source: Industrial Census, 1982-1983.

3. PLANS, POLICIES, INSTITUTIONS AND RESOURCES FOR INDUSTRIAL DEVELOPMENT

3.1 Plans and policies

The Malian industrial sector was at its embryonic stage of development when the country attained independence in 1960. The Five-Year Plan, 1961-65 provided clear indicators of Mali's desire to create conditions for rapid industrialization. It spelled out the determinant role of the State and the public sector in its orientation towards a planned socialist economy. The policy of industrial promotion aimed at encouraging industries for processing the local resources of cotton and groundnuts. Industries for replacing imports of mass consumer goods, such as household articles, fabrics, matches, etc., were also encouraged. Thus, the Five-Year Plan emphasized the importance given to industrialization as a means of valorizing local raw materials both to satisfy domestic consumption and to increase exports. The following priorities were set out:

- to develop agricultural and animal production within a socialist framework to achieve self-sufficiency in food production and to increase exports in pursuit of reducing the external trade deficit;
- to establish bases for a diversified planned economy by the valorization of principal industrial crops; and
- to make such investments in infrastructure (transport, health, education and administration) which will permit a new advance in production during subsequent Plans.

Despite serious financial difficulties and management problems it was during 1961-68 that most of the State and mixed industrial enterprises were created.

The change of Government which took place at the end of 1967 was the origin of the so-called "Re-establishment Plan" for 1969-72. The para-public sector was reorganized so as to make the enterprises more operational, and the

private sector was encouraged: this liberalization of economic activities was effected by means of an investment code. National or foreign private investors benefited from more flexible conditions for establishing or developing enterprises. The secondary sector (apart from Building and Public Works) achieved the best results with 12.4 per cent of the capital investments being devoted to this sector. The emphasis was placed on:

- industrial projects for the valorization of raw materials;
- agro- and related industries;
- projects for the replacement of imports.

Between 1969 and 1972 the value of industrial production increased by 45.7 per cent (in current Malian francs). The advance of the secondary sector stemmed mainly from the food and textiles industries, which were themselves closely linked with the development of industrial crops (particularly cotton).

The Five-Year Plan for 1974-78 was being drawn up at the time of the droughts. The whole of this period was marked by the steady degradation of the State sector, the direct consequence of this being the under-utilization of the productive apparatus and the fall in productivity. This was due to:

- the aging of the productive apparatus;
- the failure to control increasing manpower levels;
- the increase in indebtedness and claims, resulting in financial crisis in a context of falling turnovers.

The State sector was subject to a Three-Year Re-establishment Programme (1980-1982):

- opening up six companies to private capital;
- rebalancing the financial structures and improving management so as to achieve improved turnovers; and
- improving the economic environment (prices, protecting local productions, correct supply provisions, etc.).

The Five-Year Plan for 1981-85 aimed at greater association of the private sector with industrial development largely through support for small- and medium-sized enterprises. In the case of the overall strategies and objectives of the Plan it was necessary to emphasize the importance given to

the integrated development of the industrial base. "The major originality of the 1981-1985 Plan will be to advance development by way of decentralised actions for local development. These actions will be termed self-centred, since their design and their execution will depend on the basic collectivities. They will be termed local since they will be exercised principally at village or group of villages level, to the benefit of their own specific situations."^{1/}

In the case of industrial policy, as it is described in the Plan, this shows some change. The Plan makes reference^{2/} to the implementation of a system integrated with the national economy which should be as independent as possible of the international economic situation to achieve the following principles:

- satisfying the essential needs of the population;
- supplying "inputs" to the various branches of the economy;
- improving external trading;
- promoting artisan-level work;
- generating employment; and
- complying with community policies.

The private sector was recognized as having an important place in this: "the association of the private sector will be supported and encouraged, in particular in the form of small and medium-sized enterprises.... This sector should contribute in a substantial manner to the promotion of jobs in production and to promoting vocational training."^{3/}

A national seminar on industrial planning and strategy was held at Bamako from 18.2.1985 to 7.5.1985.^{4/} Principal subjects discussed were: the strategy for industrial development, the policies accompanying industrial development and the process of industrial planning.

^{1/} Five-Year Plan for Economic and Social Development - 1981-85, Chapter III, p. 21.

^{2/} Ibid, p. 165.

^{3/} Ibid, p. 19.

^{4/} See the document "Synthèse des Travaux", April 1985. National Directorate for Industries. UNDP-UNIDO Project. DP/MLI/82-014. DNT assistance.

The main conclusions and recommendations of this seminar were along the following main lines:

- i) the long-term objectives:
 - active contribution to food self-sufficiency and the control of water supplies;
 - valorization of agricultural, forestry and pastoral resources;
 - creation of jobs; and
 - spatial redeployment of industry.
- ii) in the case of employment special attention was directed towards:
 - the development of labour-intensive technologies; and
 - support for the development of small industries and artisan-level production.
- iii) in the field of technology priority is given to simple equipment goods and repair and maintenance workshops.
- iv) in the case of the institutional aspects and the industrial environment the seminar recommended:
 - decentralized planning;
 - the mobilization of internal saving; and
 - the improvement of the environment of the enterprise, in particular the private enterprise.

3.2 Institutions

There are essentially two authorities promoting industrial development: the Sub-Commission for Industry and Artisan Activities (Sous-Commission de l'Artisanat et de l'Industrie) which is responsible to the National Commission for the Secondary Sector; and the National Directorate for Industries (DNI).

The DNI performs the following broad tasks:

- to participate in the definition and application of industrial policy;
- to carry out general and specific studies on industrial planning;
- to evaluate feasibility studies to be presented to the Minister to obtain approval;
- to collaborate with national and international institutions in the field of industrial development;
- to collect information of an industrial character, and to initiate follow-up projects.

The functions of the DNI are thus extremely wide.

The Centre for Industrial Promotion and Studies (CEPI) is a public body placed under the authority of the Minister of State responsible for Industrial Development and Tourism. The function of the CEPI, as defined at the time of creation of the Centre in 1976, covers various fields designed to facilitate the promotion of industry in general and small- and medium-sized enterprises in particular. The Centre carries out sectoral studies and feasibility studies, and gives information, aid and advice to promoters when realizing their projects, and also helps in locating and obtaining financing and approvals. The CEPI studies 15 to 20 projects every year.

The Institute of Productivity and Forecast Management (IPGP - Institut de Productivité et de Gestion Prévisionnelle) is a public body, created in 1970 and placed under the authority of the Minister for State responsible for State Enterprises. Its main functions in respect of the initial and further training of personnel of State enterprises.

The National Development Studies Company (SNED - Société Nationale d'Etudes de Développement) is a public body, placed under the authority of the Minister for Planning. It carries out studies concerning industrial planning (general studies, sectoral studies, etc.).

The Mali External Trading Centre (CMCE - Centre Malien de Commerce Extérieur) is exclusively concerned with export matters. Since very few products from the industrial sector are exported this Centre could play a crucial role in the field of industrial export promotion in the future.

In addition to these State bodies there are also organizations in the private sector such as the Mali Employers' Federation, two small consulting companies and the Chamber of Trade and Industry which has an industrial promotion department for advising entrepreneurs and a centre for vocational training.

The creation of the National Council for Scientific and Technical Research (CNRST) dates from 30 January 1967. Research and adaptation work on energy, agricultural machinery, the storage of products, water, building materials, etc., is carried out by various rural development bodies, specialized institutes such as the Sahel Institute, Non-Governmental

Organizations and by private bodies.^{1/} This multiplicity of public, para-public and private structures leads to some fragmentation of research and endangers general co-ordination.

In regard to research linked with industrial issues the following should be cited:

The Agricultural Machinery Division (DMA - Division de Machinisme Agricole), created in 1968 within the Directorate for Rural Engineering, with the aim of promoting research and adaptation work on agricultural equipment. Its major orientations in regard to a policy for agricultural mechanization are defined for it by a National Consultative Committee for Agricultural Machinery, which meets every other year. The DMA builds, tests and improves a number of prototypes, the manufacture of which is then entrusted to the Public Enterprise for the Production of Agricultural Machines (SNECMA). The DMA also tests imported equipment.

3.3 Resources for industrial development

Human resources

At the current rate of population growth (2.7 per cent) Mali's population will increase from around 7.7 million in 1984 to around 9 million in 1990. The urban population represented only 19 per cent of the total population in 1982, but given the rate of increase of the urban population (around 5 per cent) it may account for 25 per cent to 30 per cent by the year 2000. Malians under 40 years of age account for 80 per cent of the population.

About 5,000 young holders of degrees enter into the labour market every year, about 350 to 400 of them having received specialized education abroad. The number of high level managers trained annually is about 1,000 to 1,300, and they can normally only find employment in the civil service, where needs

^{1/} Appendix D provides the list of institutions carrying out research activities for various ministries.

are now increasingly limited. In the case of middle management (about 1,500 graduates annually) and skilled workers (about 2,000 annually) they now experience great difficulty in finding a job: on the one hand the economy is experiencing difficulties and on the other the number of civil servants is expanding at a much reduced rate (3 per cent per year, or about 1,500 posts at all levels in 1985).

In Mali industrial employment in the modern sector accounts for only about 1 per cent of the active population (about 20,000 jobs). By contrast the artisan sector accounts for some 100,000 jobs of which 75 per cent are in the artisan production sector. Faced with the increase in the active population (2.5 per cent to 3 per cent annually, or 90,000 to 100,000 persons) it will be difficult for the modern sector to create the necessary jobs. This situation poses an even greater challenge in regard to the choice of technologies and forms of production.

Despite the large number of research centres which undertake research in a wide range of fields there is still no real technological policy in Mali. "In none of the Major Plans or Programmes which Mali has had since it achieved National Independence on 22 September 1960 has Science or Technology, as such, been the subject of explicit planning"^{1/}. "What is involved is not an absence or a gross insufficiency of intervention but, on the contrary, it is a multitude of non-coordinated actions and projects which has to be taken into account. One of the essential problems is that of the circulation of information."^{2/}

Recommendations were made at the conclusion of the National Workshop on Technology - Employment - Development in the fields of technological planning and strategy, research and development, the dissemination of technological information, training and production-marketing. Specific recommendations

^{1/} Communication from the National Directorate for Planning to the Atelier National Technologie-Emploi-Developpement - Bamako, 31 October to 7 November 1984.

^{2/} Communication from the National Directorate for Industries to the above-cited Workshop.

relating to each working commission were also drawn up for the "agriculture, stock raising, fishing and forests", "industry-artisan sector", "water-energy", "building and transport" and "family technology and health" commissions.

In order to ensure the maintenance and repair of small agricultural equipment the Malian Company for the Development of Textile Fibres, *Compagnie Malienne pour le Développement des Textiles (CMDT)*, has been involved since 1970 with the training of blacksmiths. This vocational training is combined with the provision of new equipment of greater technical complexity. Among blacksmiths one finds, as with other artisans, an entire range of workshops from the "traditional" rural workshop to an urban workshop more akin to a small industrial unit. The upgrading of such workshops to small-scale industries represents a significant industrial potential.

In 1982 around 122 apprentices were trained by 83 master-blacksmiths. In this way a total of 256 blacksmiths have been trained by the CMDT, including 64 now in oxy-acetylene welding whilst 54 have their own electrical welding units with heavy-duty electrical generators. A survey carried out in 1984 showed that the annual turnover of a blacksmith in the CMDT zone rose to 1.1m CFA^{1/} Fr., giving a monthly turnover of CFA Fr. 91,000. The principal activity of the blacksmiths is the production of agricultural equipment and spares.

Since that time other rural development operations have launched "blacksmith" actions. To the technical problems encountered must be added a major "exogenous" difficulty arising from the fall and fluctuations in the incomes of peasants, who are the principal customers of the blacksmiths.

The artisan sector plays an important socio-economic role in terms of both employment and incomes and also "by its relationships with the industrial sector and the commercial sector. Any recession in artisan activities results in a recession at industrial and commercial level".^{2/} The reinforcement of

1/ Ministry of Agriculture: *Artisans ruraux en zone CMDT. Seminar on industrial planning and strategy, Bamako, 1985.*

2/ Woillet, J.C. Éléments pour une politique de l'artisanat, ILO, 1983.

the links between industry and the artisan sector would appear to be necessary for the development of these two sectors which, while sometimes in competition, are often complementary.

Agricultural resources

a) Cereals and industrial crops

Cereal production is far from being able to cover the country's needs. Millet, maize, sorghum and rice are rainy-season crops, and dependent upon rainfall levels. Given the climatic hazards it may be stated that, taken over a long period, the productions of millet, sorghum and maize are rarely lower than 750,000 tonnes but rarely higher than 1 million tonnes, that of paddy rice is rarely below 150,000t but rarely above 250,000t (see Table 13). However in addition to the recurrent unfavourable climatic conditions, the economic environment, in particular price structures (with very low prices to the producer) and the marketing networks have held back the production of crops.

Industrial crops are represented by sugar cane, cotton, groundnuts, tobacco and tea. It may be stated that, taking the considerable fall in the production of groundnuts, cotton has become the principal cash crop which is exported.

Considerable efforts have been made to develop the growing of fruits and vegetables, particularly in the proximity of the larger towns: citrus fruit, green beans, peppers and mangoes. Fruits and vegetables are beginning to be exported.

b) Stock raising

This constitutes one of the principal sectors of the Malian economy. Exploitation of the herds of animals, mainly cattle, sheep and goats (slaughtering and export on the hoof), contributes 25 per cent of the GDP. However the droughts have had a catastrophic effect on the total number of animals.

c) Fishing

The number of persons engaged in the catching and marketing of fish is estimated as about 200,000. Some 70 per cent of the catches are dried and smoked at artisan level, and a part (10 per cent) is exported. Mali could derive considerable income from fishing. Since it possesses a developed river network.

d) Forest resources

Natural forest vegetation encompasses around 17.4 million hectares, 14 per cent of Mali's area, of which 12.9 million stands as natural forest, and 4.5 million as human-created forests (bush fallows - 2.5 million, forest parks - 2 million). There are some 5,000 hectares of dense tree plantations. According to official statistics the forestry subsector accounts for 2 per cent of GDP. The main forestry resources are used for fuelwood and charcoal, 4.3 million cm in 1983, while 290,000 cm was used for industrial roundwood and only 6,000 cm for sawnwood and panels.

Table 13. Agricultural, fishery and forestry production, 1961-1984 (selected years)

Description	Unit	1961	1965	1970	1975	1982	1983	1984
PRODUCTION								
Agricultural production ('000 MT)								
Total cereals		1,106	997	991	1,307	983	880	832
Root crops		87	70	79	84	127	134	121
Total pulses		26	29	33	33	51	55	45
Oil crops		58	75	81	96	64	62	75
Total meat		73	92	113	103	125	120	118
Milk total		116	149	167	128	202	199	189
Livestock (number) ('000)								
Cattle		3,513	4,640	5,310	3,886	6,663	6,500	6,000
Sheep		4,006	4,900	5,750	5,000	6,400	6,300	6,300
Goats		4,188	5,262	5,500	5,000	6,037	6,000	6,000
Pigs		9	25	32	25	45	47	50
Fishery production ('000 MT)								
Freshwater & diadrom		80	90	90	100	54	33	...
Forestry production								
Fuelwood & charcoal	('000 CM)	2,020	2,200	3,026	3,417	4,176	4,293	...
Industrial roundwood	('000 CM)	178	200	220	239	281	290	...
Sawnwood & panels	('000 CM)	9	10	8	5	6	6	...
Paper	('000 MT)							
MAJOR COMMODITIES								
(AG + FI + FO production)								
Freshwater diadrom	('000 MT)	80	90	90	100	54	33	...
Cattle meat	('000 MT)	40	53	67	54	100	93	83
Millet	('000 MT)	828	720	715	925	695	638	580
Sheep meat	('000 MT)	13	16	21	18	26	25	25
Vegetables	('000 MT)	91	92	97	93	210	220	210
Goat meat	('000 MT)	13	16	17	14	25	24	24
Cotton lint	('000 MT)	4	11	18	23	38	44	50
Game meat	('000 MT)	8	10	14	17	18	17	17
Rice, paddy	('000 MT)	185	162	169	259	145	122	125
Chicken meat		8	10	12	11	13	13	14

Source: FAO, Country Tables, Basic Data on the Agricultural Sector, 1985, p. 202.

e) Mineral resources

Although geological findings have revealed a large number of mineral resources in the sub-soils of Mali only the following resources are exploited:

- salt (3,000t, produced at artisan level);
- phosphates (1,500t in 1979) - a project exists for extension of this;
and
- gold (400 to 1,000 kg).

The products being prospected at the present time are iron, manganese, bauxite, uranium, oil and diamonds. The 1981-1985 Plan reported iron resources of 1 billion tonnes, bauxite reserves of 800 million tons and manganese of 3.5 billion tons.

f) Energy resources

Hydro-electric power

The Niger and Senegal rivers together with their tributaries, offer considerable hydro-electric potentialities.^{1/} The power stations so far installed are those at Sotuba (power installed 5.2 MW) and at Sélingué (inaugurated in 1981: power installed 44 MW). The Sélingué power station is only being operated at 55 per cent of its capacity. Work has been going on at the Manantali barrage since 1982: this barrage is of interest to both Mali and Senegal.^{2/} The hydro-electric scheme provides 90 per cent of all production of electricity in Mali.

Thermal power stations

These have been established in the principal urban centres: there are nine of them, and their total production in 1982 was about 11 GWh.

1/ 5,000 GWh.

2/ A current study involves a power plant to be installed with a capacity of 200 MW.

Fuelwood

The principal form of fuelwood use is for heating. The consumption is estimated at 450 kg per inhabitant.

Other renewable sources of energy refer principally to solar power.

g) Financial resources

Domestic resources

These include domestic savings, State revenues and company profits intended for re-investment. Gross domestic saving represented 14 per cent of GDP in 1960 but only 4 per cent in 1982, with the following intermediate figures: 11.6 per cent in 1969, 18.2 per cent in 1974 (a year of great drought) and 7.7 per cent in 1976. Domestic saving is thus limited, and may even have been negative in some years, particularly because of weak performance of the public enterprises.

External financing and aid

External financing in the 1981-1985 Five-Year Plan represented 85 per cent of all financing needs as follows:

Public financing:	94.7 per cent	Total 100 per cent
Private financing:	5.3 per cent	
Bilateral financing:	53.8 per cent	Total 100 per cent
Multilateral financing:	46.2 per cent	
Subsidies:	66 per cent	Total 100 per cent
Loans:	34 per cent	

The banking system consists of five financial establishments: The Banque Centrale du Mali, which became the Banque Centrale de l'Ouest Africain since the entry of Mali into the Union Monétaire de l'Ouest Africain in June 1984, the Banque de Développement du Mali (BDM), the Banque Malienne de Crédits et de Dépôts (BCMD), the Banque Internationale pour l'Afrique Occidentale (BIAO) and the Banque Nationale pour le Développement Agricole (BNDA). In practice only the BDM finances public and private industrial projects.

The financing of investments is effected essentially on external credits, as may be seen from the following table:

Table 14. Contribution of external financing to the various development plans, 1961-1985 (selected years)

(as percentage)

	Proposed per cent	Realized per cent
1961-66 Plan	83.3	74.1
1970-71 Plan	83.4	78
1974-78 Plan	89.7	91
1981-85 Plan ^{a/}	85	...

Source: Various plan documents.

^{a/} The total sum of the industrial investments for which provision is made in the 1981-1985 Five-Year Plan is CFA Fr. 50 billion.

Concerning the financing of projects from private promoters^{1/} the BDM has only very slender foreign funds which are difficult to mobilize. As a result the BDM managed, from 1975 to 1985, six lines of credit from West Germany (DM 12m), from the International Development Assistance (IDA) (US\$ 2,765,000) and from the FED (180,000 ECU). The financial conditions are as follows:

- personnel support : 10 per cent to 20 per cent of the total investment cost
- rate of interest : 9 per cent to 12 per cent
- duration : 18 months to 15 years
- deferred payment : maximum of 3 years.

These lines of credit have made it possible to finance 36 projects, a considerable proportion of which seems to have experienced financial and technical difficulties.

^{1/} A sum of CFA Fr. 6 billion was estimated in the 1981-1985 Plan for financing small and medium industries.

4. MANUFACTURING PROSPECTS AND ROLE OF TECHNICAL CO-OPERATION

4.1 Manufacturing prospects

The prospects for industry in Mali are considerable. Natural resources (agriculture, energy) and human resources are available. Financial resources, however, are lacking. Domestic savings are mainly invested in speculative activities. International resources are inadequate. The Five-Year Plan under preparation (1987-1991) is tailored to achieve food self-sufficiency and to avert desertification. Industry should be able to contribute to these two main objectives. The work at present being carried out on the preparation of the Plan shows that there are possibilities for the development of the industrial and artisan sectors.

Good rains during 1985/86 season have favourably changed the downward trend in manufacturing activities and Mali is emerging from the worst drought in recent history. Unfavourable national and international environment - adverse climate factors, a rise in the value of the dollar and interest rates, and the rising cost of energy - which culminated in a series of difficulties in the early 1980s were reversed in early 1986. Mali's manufacturing sector could thus seize the opportunities stemming from favourable national and international economic conditions.

The resurgence of economic activity takes place at a time when the country is passing through a series of reforms and liberalization of the domestic market. The Government has demonstrated its desire for an overall in-depth reform of State-operated companies. The thrust of structural adjustment in Mali has been towards a greater role for prices, markets and the private sector in promoting development.

It has been contended that the manufacturing sector's rate of labour absorption fell behind the growth rate of the urban population. In the context of poverty alleviation and of employment creation, the manufacturing sector would need to play a significant role in creating linkages with the informal manufacturing activities and services. Mali has relatively a large informal sector which could be an important breeding ground for small industry development. The crucial contribution of the small manufacturing sector to

employment could be enhanced through more extensive linkages with various informal activities, particularly through increasing demand for artisan services.

A realistic approach towards developing the manufacturing sector in Mali could be firstly in terms of integrating agro-industrial development, and secondly in terms of rural development where industry and the artisan sector could interact in a complementary manner. This could lead to a strategy of rural development which would integrate the problems of jobs and incomes (in particular the maintenance of the value added in agricultural operations) and the development of diversified economic activities. This should allow the rural sector to enhance the domestic basis for industrial growth and development. Great efforts are needed in assisting enterprises in the choice of products, technology, market research, maintenance of industrial workshops and in seeking sound financial support.

4.2 Role of technical cooperation

Bilateral aid represented 56.3 per cent of total aid during 1981-84, of which aid from France accounted for 40 per cent in 1981 and 44 per cent in 1984. The net multilateral aid was around \$341.7 million during 1981-84, indicating an average of \$85.4 million a year. External financial support for industrial development in Mali has been a marginal aspect of bilateral and multilateral aid activities. However, most bilateral and multilateral donors have programmes of technical assistance to industrial development.

Technical co-operation projects presently under implementation by UNIDO as at end of April 1986 amount to some \$3.1 million. During 1985 UNIDO spent \$767,277 on various technical co-operation projects in Mali. The projects cover operations arising from industrial planning, industrial promotion and studies on specific projects. Technical assistance provided by UNIDO is mostly in the form of assistance to leading organizations involved in industrial development and to industrial enterprises.

Within the framework of a programme financed by Swiss technical cooperation the International Labour Organization, in collaboration with the respective Governments, carried out a research programme from 1977 to 1980 on the acquisition of skills and of employment in the urban informal sector of the French-speaking countries of Africa. A specific programme was initiated

in Mali from 1982 onwards, particularly concerned with carpentry, building and structural metalwork in Bamako.

Mali collaborates with its neighbouring countries through a few sub-regional institutions. Economic Community of West African States (ECOWAS) consists of 16 West African countries. It initiates integrated programmes for industrial promotion at the sub-regional level. Other sub-regional organizations, such as Organization for the Development of the Senegal River (OMVS) and Organization for the Integrated Development of the Liptako-Gourma Region, also attempt to play an important role in the field of sub-regional cooperation.

France, Canada and Federal Republic of Germany have attempted to develop programmes of industrial cooperation in Mali. One may, for example, cite the recent agreement between the Mali Chamber of Trade and Industry and the Cologne Chamber of Commerce (FRG). There are several parts to this agreement: technical assistance in the service of industrial promotion, technical assistance to a centre for further vocational training and technical aid for artisans.

The implementation of industrial cooperation with enterprises in the industrialized countries is made difficult by the limited size of the projects (5 to 15 employees, investments of CFA Fr. 50m to CFA Fr. 100m), by the still too recent experience of the Malian partners and also by the sluggish industrial environment in the country.

In recent years Mali has introduced a number of policy reforms, with the emphasis on reform of the State sector. The current wave of restructuring seems to provide greater scope for international cooperation in industrial development.

APPENDIX A

Statistical Tables

Table A-1. Composition of manufacturing value added (at 1980 prices), 1975-1982
(Percentages)

Description (ISIC)	1975	1976	1977	1978	1979	1980	1981	1982
TOTAL MANUFACTURING(300)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food products(311)	13.4	13.8	17.5	14.8	14.9	13.6	13.0	16.4
Beverages(313)	5.3	5.2	4.7	4.5	4.4	4.3	3.1	6.0
Tobacco(314)	2.7	2.9	3.3	4.1	4.8	5.2	8.3	...
Textiles(321)	61.5a/	64.1a/	60.4a/	63.0a/	63.0a/	56.6a/	56.5a/	64.3a/
Wearing apparel,except footwear(322)	...	...	...	...	...	...	...	...
Leather products(323)	0.7b/	0.7b/	0.8b/	0.8b/	0.8b/	0.8b/	0.9b/	...
Footwear,except rubber or plastic(324)	...	...	...	...	...	...	...	...
Wood products,except furniture(331)	0.2c/	0.3c/	0.3c/	0.3c/	0.3c/	0.3c/	0.3c/	0.5c/
Furniture,except metal(332)	...	...	...	...	...	...	...	...
Paper and products(341)	0.5d/	0.5d/	0.5d/	0.6d/	0.5d/	0.6d/	0.6d/	...
Printing and publishing(342)	...	...	...	...	...	...	...	...
Industrial chemicals(351)	3.0e/	1.5e/	1.3e/	1.8e/	1.4e/	1.4e/	1.7e/	2.2e/
Other chemicals(352)	...	...	...	...	...	...	...	...
Petroleum refineries(353)	...	...	...	...	...	...	...	...
Misc. petroleum and coal products(354)	...	...	...	...	...	...	...	...
Rubber products(355)	...	...	...	...	...	...	...	...
Plastic products(356)	...	...	...	...	...	...	...	...
Pottery, china, earthenware(361)	1.5f/	1.4f/	1.0f/	1.2f/	1.0f/	1.3f/	1.8f/	...
Glass and products(362)	...	...	...	...	...	...	...	...
Other non-metallic mineral prod.(369)	4.2	3.7	2.4	2.7	2.4	3.1	4.7	4.2
Iron and steel(371)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	...
Non-ferrous metals(372)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	...
Fabricated metal products(381)	...	...	...	...	...	4.1	...	...
Machinery,except electrical(382)	...	...	...	...	...	0.5	...	...
Machinery electric(383)	...	...	...	...	...	0.7	...	...
Transport equipment(384)	7.0	5.9	7.7	6.2	6.5	7.5	9.1	6.4
Professional & scientific equipm.(385)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	...
Other manufactured products(390)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	...
TOTAL MANUFACTURING IN THOUSANDS US \$	169655	178209	206930	198460	200072	173800	146259	125430

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

Note: TOTAL MANUFACTURING is the sum of the available components and does not necessarily correspond to ISIC 300 total.

Footnotes: a/ 3210 includes 3220.
b/ 3230 includes 3240.
c/ 3310 includes 3320.
d/ 3410 includes 3420.
e/ 3510 includes 3520 3530 3540 3550 3560.
f/ 3610 includes 3620.

Table A-2. Number of enterprises and employment structure in manufacturing, 1969-1981 (selected years)

Manufacturing subsector (ISIC)	1969		1973		1977		1981	
	Enter- prises	Employ- ees	Enter- prises	Employ- ees	Enter- prises	Employ- ees	Enter- prises	Employ- ees
Agricultural and food industries (311,313,314)	15	811	28	1,676	35	3,104	51	3,823
Textiles and leather industries (321 to 324)	7	1,073	12	5,413	14	5,763	16	6,643
Wood products (331,332)	2	...	2	291	2	270	2	273
Paper and printing (341,342)	3	16	6	79	7	113	8	192
Chemicals (351 to 356)	1	176	4	435	6	444	7	567
Non-metallic minerals, building materials (361,362,369)	1	145	3	517	3	539	3	633
Iron & steel, metallurgy (371,3720)	...	...	...	...	...	...	...	...
Mechanical and electrical & transport industries (381 to 385)	8	245	11	655	15	1,114	19	1,304
TOTAL	37	2,466	66	9,066	82	11,347	106	13,435

Source: UNIDO, Mali in Figures.

Table A-3. Food and related industries, 1982

Activities	Enterprises and legal status	Date of creation and location	Employees (approx.)	Observations
<u>Oil products</u>				
Groundnut oil and cake, soap, cottonseed oil	SUPOM State	1964 Koulikoro	800	Created with aid from West Germany, doubled in size in 1973
Groundnut oil mill	SUPAMA mixed	1975 Kita	360	51 per cent of capital held by a WC group: production halted in 1982-83
Cottonseed oil	MUICOMA mixed	1981 Koutiala	190	20 per cent of capital CVDI (France)
Karite butter	SIKA private	1983 Bamako	110	Belgian, German, SFI shareholdings
<u>Stock raising products</u>				
4 Abattoirs, 1 shut down (Gao)	Bamako Abattoirs SONWA State	1965 Bamako	135	FED; modernization with the EEC
Dairy products	ULB State	1970 Bamako	80	Multilateral aid
<u>Tobacco</u>				
Cigarettes, matches	SONATAM State	1966 Bamako	200	Aid from China
<u>Fruits and vegetables</u>				
Preserves, fruit juices	SOCAM mixed	1978 Baguinéda	40	Aid from CCCE (France); moved to the mixed sector in 1978 from a State company created by the Bulgarians and the Yugoslavs
<u>Beverages</u>				
Carbonated beverages	SONALIBO private LIDO) private AZAR)	1963 Bamako 1957 Bamako 1968 Bamako	90 92	French group Sogépal
<u>Preserving</u>				
	Grande Confiserie du Mali private	1950 Bamako	110	Achcar Group (private Malian company, cf flour mills)
<u>Cereal products</u>				
Flour mill	Grande Moulins du Mali private	1982 Koulikoro	90	) Achcar Group (private
Biscuits, pasta	SOMABIPAL private	1970 Bamako	30	) Malian company)
Industrial bakeries	30 private			
<u>SUGAR refineries</u>				
Cane sugar	Office du Niger State	1965 1976	Dougabougou Sembala	Created by the Chinese
<u>Rice mills</u>				
	Office du Niger State	8 mills		
<u>Tea</u>				
	Office du Niger State	1973	Ferako	Created by the Chinese

Source: Table drawn up from ITOM, Ediafric, WTM, Bamako Chamber of Trade, sectoral study of Mali industry, November 1982.

Table A-4. Textiles, clothing and leather industries, 1982

Activities	Enterprises & Legal status	Date of creation & location	Employees	Observations
Weaving, hosiery	CONATEX State	1968 Ségou	2,650	Chinese aid
Spinning, weaving bleaching	ITEMA mixed	1969 Bamako	650	Agache Willot (France)
Jute bags	SOMASAC mixed	1971 San	300	Private, Mali
Tanning and footwear production	TAMALI State TAPROMA mixed	1970 Bamako 1977 Kayes	70 56	Chinese aid Private, Mali

Source: Table drawn up from ITOM, Ediafric, MTM, Bamako Chamber of Trade, Sectoral study of Mali industry, November 1982.

Table A-5. Mechanical and electrical engineering industries, 1982

Activities	Enterprises and Legal status	Date of creation and location	Employees	Observations
Agricultural equipment, ploughs, seeders	SNECMA mixed	1974 Bamako	150	French shareholding
Boilermaking, steelwork	ACH State	1961 Koulikoro	100	
Maintenance of admin- istration transport	BETRAM mixed	1978 Bamako	80	French shareholding
Radio receivers	SOCORAM mixed	1965 Bamako		French shareholding
Repair and maintenance of vehicles, spares	ENAMA mixed	1979 Sikasso		Programme for hand-pumps
Cycles and motorcycles (assembly)	INACY private	1969 Bamako	120	100 per cent OPTORG-CFAO
Articles for cycles	SONAFAM private	1965 Bamako	80	
Boilermaking	METAL SOUDAN private	1957 Bamako	150	
Metalwork semi-trailers	12 private enterprises (small- and medium-sized, between 10 and 30 employees) created between 1970 and 1983 in Bamako. Activity is directed towards consumer goods (batteries, beds, enamelled articles). About half were established with bilateral aid (in particular from Federal Republic of Germany) or multilateral aid (UNDP).			

Source: Table drawn up from ITOM, Ediafric, MTM, Bamako Chamber of Trade, Sectoral study of Mali industry, November 1982.

Table A-6. Miscellaneous industries, principal enterprises, 1982

Activities	Enterprises and Legal status		Date of creation and location		Employees	Observations
Cement production	SOCIMA	State	1969	Diamou	400	SOCIMA also operate a brickworks at Bamako
Tiles & ceramics	UCEMA	State	1974	Bamako	160	Aid from North Korea
Plastic footwear	SIP	private	1982	Bamako	150	
Bottles, pipes, bags, rope	Sada Diallo	private	1973	Bamako	150	Wide diversification
Furniture, doors, windows, timber	ENAB	State	1970	Bamako	120	
Corrugated cardboard	SOMAPEC	private	1974	Bamako		Aid from West Germany
Exercise book production	LMP	State	1977	Bamako	70	

Source: Table drawn up from ITOM, Ediafric, MTM, Bamako Chamber of Trade, Sectoral study of Mali industry, November 1982.

Table A-7. Bilateral and multilateral aid to Mali, 1981-84
(\$ million)

	<u>Total amount allotted</u>					<u>Total net transfers</u>				
	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1981-84</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1981-84</u>
<u>Bilateral</u>	<u>149.0</u>	<u>96.5</u>	<u>96.6</u>	<u>223.1</u>	<u>565.2</u>	<u>141.6</u>	<u>104.7</u>	<u>96.7</u>	<u>216.7</u>	<u>559.7</u>
Of which										
France	65.7	28.4	27.9	129.9	251.9	57.6	34.9	26.9	127.1	246.5
F.R. Germany	36.1	28.9	17.1	19.3	101.4	33.6	30.9	14.5	16.8	95.8
USA	18.0	13.0	15.0	25.0	71.0	18.0	13.0	15.0	25.0	71.0
Netherlands	6.4	3.6	8.0	15.6	33.6	6.4	3.6	8.4	15.6	34.0
Canada	11.2	9.4	7.6	7.0	35.2	11.2	9.4	7.6	7.0	35.2
Japan	5.1	4.7	8.6	1.5	19.9	5.1	4.7	8.6	1.5	19.9
Switzerland	3.8	6.4	7.3	6.3	23.8	6.5	6.0	7.2	8.0	27.7
<u>OPEC bilateral</u>	<u>7.8</u>	<u>40.1</u>	<u>33.7</u>	<u>11.0</u>	<u>92.6</u>	<u>7.2</u>	<u>39.9</u>	<u>37.1</u>	<u>9.4</u>	<u>93.6</u>
<u>Multilateral</u>	<u>90.5</u>	<u>75.6</u>	<u>88.0</u>	<u>89.4</u>	<u>343.5</u>	<u>88.4</u>	<u>75.8</u>	<u>86.8</u>	<u>90.7</u>	<u>341.7</u>
Of which										
EEC	25.2	18.8	10.9	29.6	84.5	25.2	18.8	10.9	29.4	84.3
IDA	19.2	14.3	19.0	21.3	73.8	19.0	14.0	18.5	20.6	72.1
ABD	6.2	9.3	13.5	3.3	32.3	5.9	9.2	13.4	3.2	31.7
UNDP	8.6	11.0	11.4	11.0	42.0	8.6	11.0	11.4	11.0	42.0
PAM	12.6	6.4	13.2	17.0	49.2	12.6	6.4	13.2	17.0	49.2
OPEC	12.9	12.1	15.8	1.9	42.7	10.8	11.2	14.2	4.3	40.5
<u>TOTAL</u>	<u>247.3</u>	<u>212.1</u>	<u>218.4</u>	<u>323.5</u>	<u>1,001.3</u>	<u>237.2</u>	<u>220.3</u>	<u>220.6</u>	<u>316.8</u>	<u>994.9</u>
Of which										
EEC	135.3	81.7	68.5	209.3	494.8	125.3	90.3	68.7	201.0	485.3

Source: Bulletin de l'Afrique, No. 1308 du March 6, 1986.

APPENDIX B

The industrial investments code, 1976

A new investments code is in preparation which will replace the present code summarized below.

The present code was promulgated by Decree 76-31/CHLN of 30 March 1976. It makes provision for the granting of three distinct regimes: Regimes A and B may be granted to so-called "priority" enterprises, whereas regime C is intended for small- and medium-sized enterprises ("PME"). Article 4 of the code defines the concept of a "priority enterprise" and Article 6 specifies that these enterprises must achieve a value added level of 40 per cent or higher.

Decree 128/PG-RM specifies the conditions for benefitting from one of these regimes:

- Regime A : minimum investment to be made is 75 million Francs CFA;
- Regime B : minimum investment to be made is 300 million Francs CFA;
- Regime C : (PME) minimum investment to be made is 10 million Francs CFA.

The advantage of the "Regime A" or community regime

- Exoneration, for a period which may be up to three years, from import duties and taxes (with the exception of payments for services provided) on equipment, machinery, spares, tools and materials essential for the realization of the approved programme, excluding private vehicles.

- Exoneration (10 years maximum) from import duties and taxes (with the exception of payments for services provided) on:

- raw materials and products entering into the production;
- raw materials and products intended for non-reusable packs and packagings for the manufactured products.

- Exoneration (maximum of five financial years) from taxes on industrial and commercial profits and contributions for licences.

Appendix B (continued)

- Exoneration (five years) from rates on industrial premises.
- Exoneration (five years) from taxes on property in mortmain.
- Guarantee of the integral transfer up to the value of new investments and for net profits (and within reasonable limits for the salaries of expatriate personnel).

The advantages of the "Regime B" or special regime

- The advantages provided under regime A.
- Stabilization of the fiscal and customs regime during the period of the agreement.
- Guarantees in respect of bank credits.
- Where necessary guarantees concerning modes of use of water, electric and other resources necessary for the operation.

The advantage of the "Regime C" (PME)

- Exoneration from import duties and taxes on equipment for investments of up to 25 million Francs CFA.
- In addition to the advantages in the above point exoneration from taxes on industrial and commercial profits when the total sum of the investment is between CFA Fr. 25 million and CFA Fr. 75 million.

APPENDIX C

Projects approved by the National Directorate for Industries
in 1983 and 1984

Designation	Location	Forecast investment (Malian Fr. '000)	Forecast employees	Time for realization in years
<u>Projects approved in 1983</u>				
1. Industrial production of groundnut paste	Selingué	94,037	19	2
2. Bakery	Bamako	160,000	24	1
3. Bakery	Bamako	160,000	24	1
4. Printing works	Bamako	...	...	...
5. Bakery	Manantali	...	...	...
6. Feedstuffs	Zougoumé	398,000	36	2
7. Grand Hotel	Bamako	1,910,000	90	2
8. Jewellery manufacture	Bamako	21,000	8	1
9. Sound recording studio	Bamako	646,669	...	2
10. Refrigerated store	Bamako	605,093	30	2
11. Mali Concrete	Kati	2,907,333	72	3
12. Bakery	Ségou	123,823	24	2
13. Bakery	Sikasso	104,336	12	2
14. Hotel Dahan	Bamako	141,483	24	2
15. Colour photographic developing laboratory	Bamako	60,104	16	1
16. Artisan soapworks	Bamako	...	...	...
17. Precious metalworking	Bamako	70,147	14	2
18. Detergents	Bamako	616,000	35	3
19. Bamboo furniture	Bamako	20,930	15	-
20. Bakery	Mopti	159,000	21	1
21. Bakery	Bla	91,614	11	1
22. Carbonated drinks plant	Mopti	116,000	...	...

Appendix C (continued)

Designation	Location	Forecast investment (Malian Fr. '000)	Forecast employees	Time for realization in years
Projects approved in 1984				
30. Ice plant	Mopti	...	...	1
31. Bakery	Bamako	...	...	2
32. Bakery	Sévaré	54,043	21	1
33. Bakery	Kita	49,602	12	2
34. Bakery	Bamako	68,838	21	2
35. Artisan soapworks	Kouri	2,271	6	...
36. Industrial soapworks	Bamako	8,500	20	...
37. Artisan soapworks	Bamako	518	3	...
38. Artisan soapworks	Kouri	2,890	6	...
39. Artisan soapworks	Kabalabougou	1,500	4	...
40. Artisan soapworks	Bamako	9,203	25	...
41. Tannery	Bamako	...	...	...
42. Wine bottling	Bamako	...	...	...
TOTALS		3,417,746	668	

Source: Direction Nationale des Industries.

APPENDIX D

Institutes carrying out research activities in Mali

For the Ministry of State Responsible for Equipment

Centre d'Etudes et de Promotion Industrielle (CEPI)
Laboratoire de l'Energie Solaire
Société Nationale de Recherche Minière (SONAREM)
Direction Nationale de l'Hydraulique et de l'Energie
Direction Nationale de la Géologie et des Mines.

For the Ministry for Planning

Société Nationale d'Etudes pour le Développement (SNED)
Direction Nationale de la Statistique et de l'Informatique.

For the Ministry of Transport and Public Works

Centre National de Recherche et d'Expérimentation pour le Bâtiment et les Travaux Publics (CNRExBTP)
Direction Nationale de la Cartographie et de la Topographie
Direction Nationale de l'Urbanisme et de la Construction.

For the Ministry Responsible for State Enterprises and Companies

Institut de Productivité et de Gestion Prévisionnelle (IPGP)
Compagnie Malienne de Navigation
Usine Céramique du Mali.

For the Ministry Responsible for Rural Development

Institut National de Recherche Zootechnique, Forestière et Hydrobiologique (INRZFH)
Laboratoire Central Vétérinaire
Direction Nationale des Eaux et Forêts
Institut du Sahel
CIPEA - Mali (Centre International pour l'Elevage en Afrique).

For the Ministry of Agriculture

Institut d'Economie Rurale (IER)
Direction Nationale du Génie Rural
Organisation pour la Mise en Valeur du Fleuve Sénégal (OMVS).

Appendix D (continued)

For the Ministry of National Education

Institut Supérieur de Formation et de Recherche Appliqué (ISFRA)

Ecole Normale Supérieure (ENSup)

Ecole Nationale d'Ingénieurs (ENI)

Institut Polytechnique Rural (IPR)

Ecole Nationale de Médecine et de Pharmacie (ENMP)

Ecole Nationale d'Administration (ENA)

Institut Pédagogique National et de l'Enseignement Normal (IPNEN)

Direction Nationale de l'Alphabétisation Fonctionnelle et de la Linguistique Appliquée (DMAFLA)

For the Ministry of Public Health and Social Affairs

Institut National de Recherche en Santé Publique (INRSP)

Office Malien de Pharmacie (OMP)

Direction Nationale de l'Hygiène Publique et de l'Assainissement

Institut Marchoux

Institute d'Ophtalmologie Tropicale de l'Afrique.

For the Ministry for Sport, the Arts and Culture

Institut des Sciences Humaines

Centre de Documentation et de Recherche Ahmed Baba.

Source: ILO, Atelier National Technologie-Emploi-Développement, Volume 1, 1984.

APPENDIX E

The approved technical co-operation projects of UNIDO, April 1985

Backstopping Responsibility (Spec. Act. Code)	Project Number	Project Title
IO/PLAN (31.2.B)	DP/MLI/82/014*	Assistance to the National Directorate for Industries (DNI)
IO/FCTY (31.4.B)	DP/MLI/82/012*	Assistance to the Centre for Industrial Promotion and Studies (Phase II) (Continuation of DP/MLI/76/002)
IO/FEAS (31.6.A)	SA/MLI/81/002	Feasibility study on a unit for the production of solar equipment
IO/AGRO (31.7.E)	DP/MLI/81/002*	Assistance to the Société des Conserves Alimentaires du Mali (SOCAM)
IO/ENG (31.9.B)	CD/MLI/81/003*	Assistance to EMAMA project (connected with DP/MLI/82/003 and US/MLI/82/051)
IO/ENG (31.9.B)	DP/MLI/82/003*	Assistance to the Entreprise Malienne de Maintenance (EMAMA) (Phase II)
IO/ENG (31.9.B)	US/MLI/82/051*	Creation of a unit for the series production of manual hydraulic pumps of the India and Sahelia type
IO/CHEM (32.1.D)	DG/MLI/80/006	Creation of a decentralized unit for essential pharmaceutical products in the Koulikoro region (Kolokani)
IO/CHEM (32.1.D)	RP/MLI/84/001	Preliminary assistance to the National Centre for Research on Traditional Medicine in Bamako

* Large-scale project (Total allotment of US\$ 150,000 or above).

APPENDIX F

Major industrial companies, 1985

The following are some of the largest private and state-owned companies in terms of capital investment or employment.

Compagnie Malienne pour le Développement des Textiles (CMDT): BP 487, Bamako; tel. 22-24-62; telex 554; f. 1975; cap. 1,320m. FM; 60 per cent state-owned; cotton cultivation and ginning, promotion of other crops.

Compagnie Malienne des Textiles (COMATEX): BP 52, Ségou; tel. 32-03-67; telex 584; cap. 8,500m. FM; state-owned; textile complex; production of unbleached fibre and textiles.

Entreprise Malienne du Bois (EMAB): BP 151, route de Sotuba, Bamako; tel. 22-32-69; f. 1970; cap. 250m. FM; manufacture and sale of wooden articles.

Huilerie Cotonnière du Mali (HUICOMA): BP 487, Bamako; f. 1970; cap. 1,000m. FM; 80 per cent state-owned; construction and installation of plant for the treatment of cotton seeds; production and exploitation of oil-yielding seeds.

Industrie Malienne du Cycle et du Cyclomoteur (IMACY): BP 95, Bamako; tel. 22-22-41; f. 1969; cap. 80m. FM; mfrs of cycles, motorcycles and accessories.

Industrie Textile du Mali (ITEMA): BP 299, Bamako; tel. 22-29-05; telex 504; f. 1972; cap. 1,500m. francs CFA; 33 per cent state-owned; textile complex at Bamako; turnover in 1980 4,100m. FM.

Metal Soudan: BP 137, Bamako; tel. 22-53-72; f. 1956; cap. 103m. FM; mfrs of metalwork, metal joists, metal boilers and tanks, furniture car-bodies, trailers, tipping wagons; construction and public works.

Nouvelle Société d'Exploitation des Briqueteries du Mali (NOSEBRIMA): BP 18, Bamako; tel. 22-24-07; cap. 82.5m. FM; state-owned; production of brick and clay building materials.

Office Malien du Bétail et de la Viande: BP 1382, Bamako; telex 534; cap. 100m. FM; state-owned; abbatoirs at Bamasko and Gao.

Office des Produits Agricoles du Mali (OPAM): BP 132, Bamako; telex 509; f. 1968; cap. 3,000m. FM; state-owned.

Pharmacie Populaire du Mali: BP 277, Bamako; tel. 22-30-59; telex 523; f. 1960; cap. 800m. FM; state-owned; import and marketing of medicines and pharmaceutical products.

Société des Ciments du Mali (SOCIMA): BP 3, Diamou, Kayes region; tel. 3; f. 1959; cap. 4,800m. FM; state-owned; production of cement and quicklime at Diamou; marble quarry at Korofina.

Société des Conserve Alimentaires du Mali (SOCAM): BP 146, Bamako; tel. 22-32-27; f. 1978; cap. 305m. FM; 85 per cent state-owned; canning and preserving of fruit and vegetables; manufacture of tins.

Appendix F (continued)

Société d'Exploitation des Produits d'Arachides du Mali (SEPAMA): BP 1994, Bamako; tel. 22-35-23; telex 544; f. 1975; cap. 550m. francs CFA; 49 per cent state-owned; production of groundnut oil at Kita; plant closed in 1983 due to poor groundnut harvests (re-opening scheduled 1985).

Société d'Exploitation des Produits Oléagineux du Mali (SEPOM): BP 15, Koulikoro; tel. 22-20-24; telex 545; f. 1962; cap. 600m. FM; state-owned; production of groundnut oil, cottonseed oil, karité butter, beauty creams, soap and cattle cake.

Société de Gestion et d'Exploitation des Mines d'or de Kalana: BP 2, Kati; f. 1983; gold mining at Kalana.

Société Malienne de Fabrication d'Articles Métalliques (SOMAFAM): BP 82, Bamako; tel. 22-51-78; telex 519; f. 1969; cap. 50m. FM; mfrs of parts for bicycles and motorcycles and corrugated iron sheets.

Société Malienne de Piles Electriques (SOMAPIL): Zone industrielle, BP 1546, Bamako; telex 508; f. 1975; cap. 160m. FM; mfrs of batteries.

Société Malienne de Boissons Gazeuses (SOMALIBO): BP 442, Bamako; tel. 21-40; telex 571; f. 1963; cap. 16.5m. francs CFA; manufacture and sale of aerated beverages and beer.

Société Malienne d'Etudes et de Construction de Matériel Agricole (SMECMA): BP 1707, Bamako; tel. 22-40-71; f. 1974; cap. 502.8m. FM; mfrs of agricultural equipment.

Société Malienne de Sacherie (SOMASAC): BP 74, Bamako; tel. 22-49-41; telex 564; f. 1971; cap. 925m. FM; production of sacking from dah and kenaf fibre and manufacture of sacks.

Société Mamadou Sada-Diallo et frères (SOMACI): BP 1110, Bamako; tel. 22-49-32; telex 553; f. 1969; cap. 380m. FM; mfrs of vinegar, disinfectant and plastic packaging.

Société Nationale d'Entreprises et de Travaux Publics (SONETRA): BP 108, Bamako; tel. 22-56-45; f. 1961; cap. 720m. FM; state-owned; public works, construction, marble and terrazzo tiling.

Société Nationale de Recherches et d'Exploitation des Ressources Minières du Mali (SONAREM): BP 2, Kati; tel. 27-20-42; state-owned.

Société Nationale des Tabacs et Allumettes du Mali (SONATAM): BP 59, route de Sotuba, Bamako; tel. 22-49-65; telex 537; cap. 1,441m. FM; state-owned; production of cigarettes and matches.

Usine Céramique du Mali (UCEMA): BP 1099, Bamako; tel. 22-55-95; f. 1966; cap. 485m. FM; state-owned; construction materials; 208 employees.

Selected References

Afrique Industrie (periodical): No. 301, 1984; No. 299, 1984; No. 312, 1984.

Bamako Chamber of Trade, Dossier économique Mali, 1984.

Biry, Y., Environnement de l'entreprise: Politiques et mesures d'accompagnement, Séminaire sur la stratégie et la planification industrielle, Bamako, 1985, p. 25.

Bulletin de l'Afrique, No. 1308 du March 6, 1986.

CDI, Enquête sur le potentiel industriel du Mali, CDI CEE/ACP, 1984.

CEPI, L'expérience du Servulart dans le processus de développement de l'artisanat, Séminaire Artisanat: Rôle et mesures d'accompagnement, Dec. 1984.

CILSS/Club du Sahel, La démographie des pays du Sahel, 1981, p. 101.

CILSS/Club du Sahel, La stratégie alimentaire du Mali, 1982, p. 47.

DNI, Synthèse des travaux, 1985.

ECA, The ECA and the Development of Africa, 1983-2008 - Preliminary Prospective Study, 1983.

ECA, Studies on the Economic and Social Conditions in Africa, 1982/1983, E/ECA/CM/1014, 1984, p. 215.

The Economist Intelligence Unit, Quarterly Economic Review of Senegal, Mali, Mauritania, Guinea, etc., No. 2, Second quarter 1984.

EDIAFRIC, L'industrie africaine, 1982, pp. 111-135.

Fath, J., Structure de planification et de gestion, Project DP/MLI/82/014.

ILO, Atelier National Technologie, Emploi, Développement, Nov. 1984, p. 537.

ILO, Programme for Employment and Technical Skills for Africa (Pecta/Jaspa): Report on the Employment Mission to Mali, 1981, p. 157.

ILO, Support for the Non-structured Sector in Mali, 1985, p. 25.

JASWAL, Planification du Développement Industriel au Mali, 1985.

Mali Development Bank, L'expérience de la Banque de Développement du Mali dans le financement des PME, PMI, 1985, p. 17.

Marchés Tropicaux et Méditerranéens, Mali 1980 - L'économie malienne au seuil d'une nouvelle décennie, Special number, December 1979.

Ministry for Agriculture, Artisans Bureaux en Zone CMDI, 1985, p. 7.

Ministry for Planning, Le rôle des PME dans le développement économique et social du Mali, Séminaire sur les PME, 1982, p. 14.

Projet et Consult, Sectoral Study of Malian Industry, 1982.

Republic of Mali, Plan quinquennal, 1961-1965.

SCEI Agri, Structures et perspectives du marché des oléagineux au Mali, 1983.

UNCTAD, Basic Data Relating to the Least Advanced Countries, TD/B/AC 21/10, 1982, p. 67.

UNDP, The Development of Employment in Mali, Project MLI/84/D10 - 1985, p. 87.

UNICEF, The Situation of Children in the World, 1984.

UNIDO, African Industry in Figures: Burundi/Mali, UNIDO/IS 474, 1984.

UNIDO, Initial Integrated Programme for Industrial Promotion at Sub-regional Level in Africa, ID/Conf.5/CRP 1, 1984.

UNIDO, The Potential for Industrial Development Based on Natural Resources in the Least Developed Countries, Mali No. 4, UNIDO/IS 324, 1982, p. 101.

UNIDO, A Programme for the Industrial Development Decade in Africa, ID/287, 1983.

Willet, J.C., L'artisanat urbain au Mali, Project MLI/84/D10, 1985, p. 87.

Willet, J.C., Eléments pour une politique de l'artisanat, ILO, 1983.

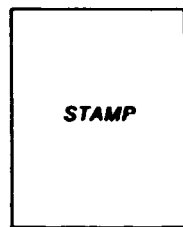
World Bank, World Development Report, 1985.

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