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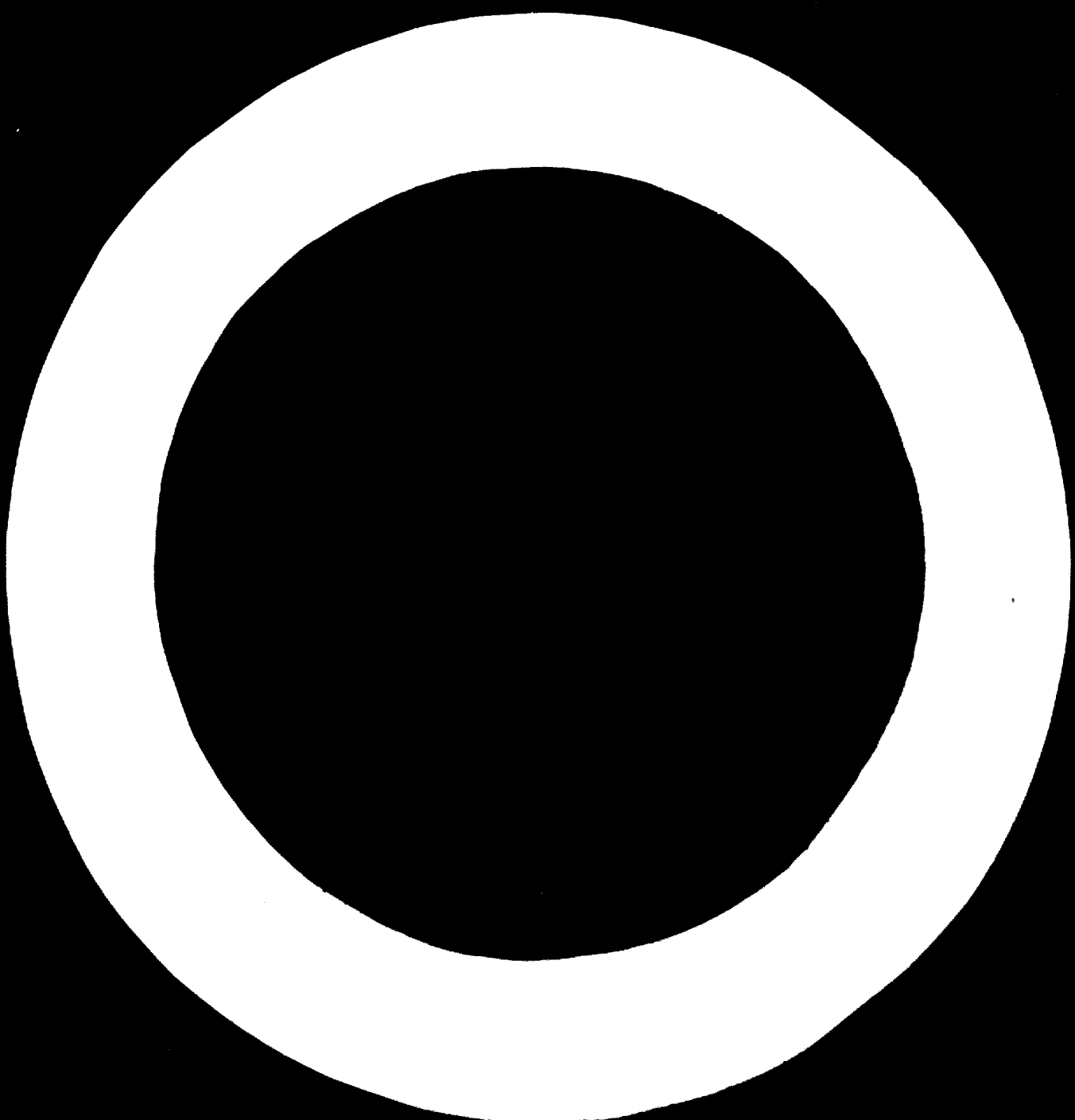
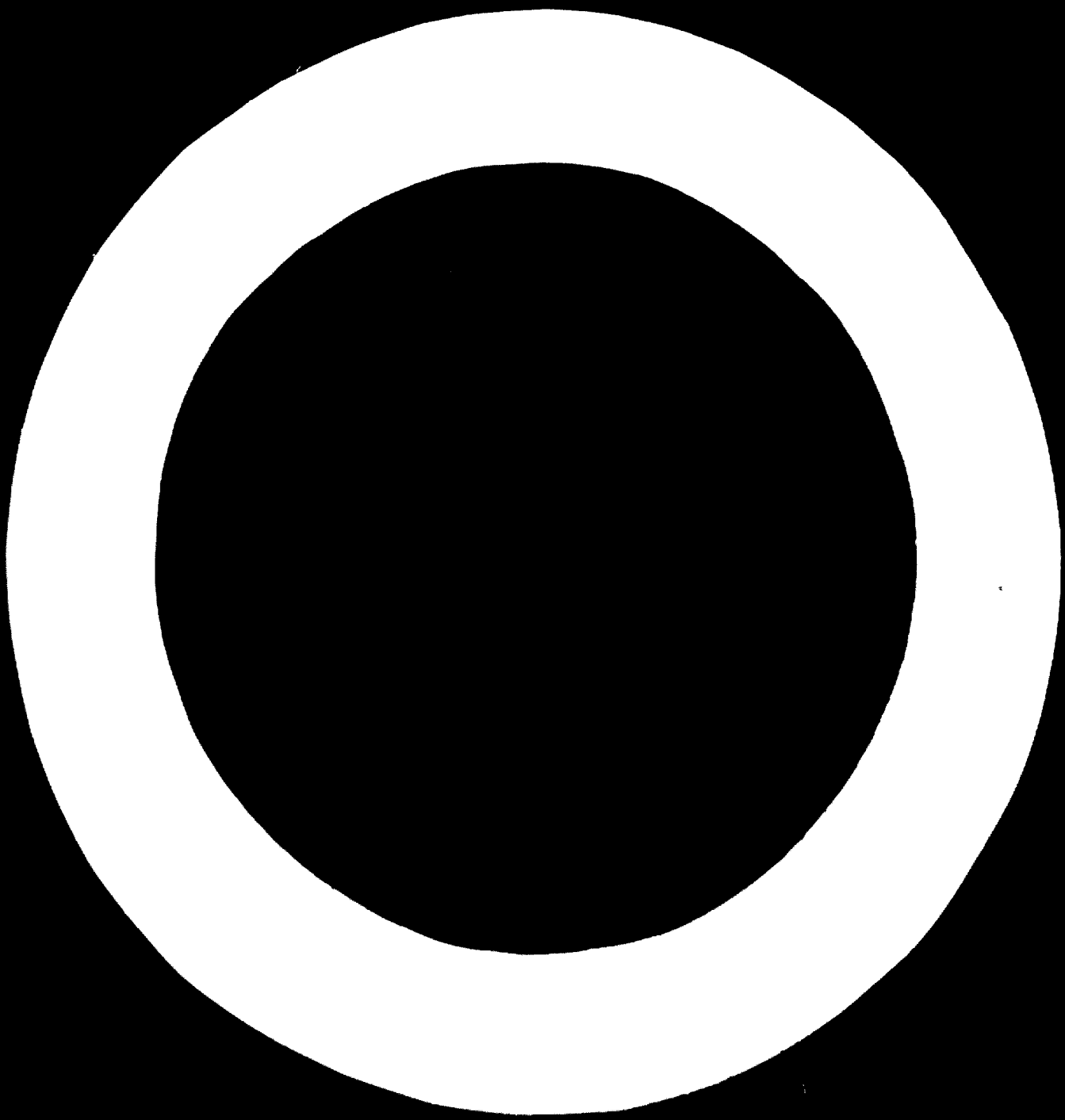


PART TWO

Country Reports



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1. INDUSTRIAL DEVELOPMENT IN CAMEROON

Presented by the Government of Cameroon

CONTENTS

I. Historical review

Industrialization is a relatively long-standing process in Cameroon, taking into account all the sectors, including forestry production and mining. Forestry enterprises have been established in Cameroon since 1919, in fact, in addition to earlier enterprises that are no longer in existence. In the sector of manufacturing industries proper, the first large-scale establishments were the BASTOS Company, manufacturing cigarettes, which was set up in 1946, and, notably, the ENELCAM Company, which was set up in 1948 to produce electric power. From then onwards, various industries began to make their appearance; in the sphere of medium-scale industry, for example, the manufacture of bicycles was begun in 1949, as was the manufacture of furniture and metal goods; and in 1954 the ALUCAM aluminium plant was set up at Edéa. This factory, which is currently the largest plant in the country, has an output exceeding 53,000 tons of aluminium ingots. Since the advent of independence and the political stabilization of the country, progress has been shown in all branches of activities in the sector of manufacturing industries.

II. Current importance of manufacturing in the national economy

A. Over-all distribution of production

The *production intérieure brute*[1] at market prices is equal to the value added (total consumption minus intermediate consumption) by the enterprises in the various sectors. It does not include services supplied by the Government (Fr CFA 10,900 million) and wages paid to domestic servants (Fr CFA 2,000 million).

The *production intérieure brute* of Cameroon was estimated at Fr CFA 110,200 million in 1962/1963, as against Fr CFA 86,500 million (corrected figure) in 1959. It has made significant progress at the same rate as the gross domestic product, i.e., approximately Fr CFA 7,100 million per annum, on the average.

The marketed portion of the *production intérieure brute* in 1959 can be estimated at Fr CFA 57,000 million, i.e., 66 per cent of the total. In 1962/1963, the corresponding figures were Fr CFA 77,800 million, i.e., 70.6 per cent of the total.

This increase indicates the development of the modern economy at the expense of the subsistence economy. It is an encouraging sign of the country's advance along the road of economic progress.

B. Production and value added by major sectors

The share of each major sector in gross domestic product is as shown in table 1.

[1] Literally, "gross domestic production".

Table 1. Cameroon: share of major sectors in gross domestic product
(Millions of francs CFA)

	1959		1962/1963		Difference in amount	Index (1959 = 100)
	Amount	Percentage	Amount	Percentage		
Primary sector	45.8	47.7	49.8	40.4	4.0	108.7
Secondary sector	9.3	9.7	14.5	11.8	5.2	155.9
Tertiary sector	31.4	32.7	45.9	37.3	14.5	146.2
Production intérieure brute	86.5	90.1	110.2	89.5	23.7	127.4
Government employees	8.7	9.0	10.9	8.9	2.2	125.3
Wage-earners in private households	0.9	0.9	2	1.6	1.1	222.2
Gross domestic product	96.1	100.0	123.1	100.0	27.0	128.1

It will be noted that:

(*a*) The share of the primary sector in gross domestic product fell sharply from 47.7 per cent to 40.4 per cent (it should be remembered that in 1961 this share was 60 per cent);

(*b*) The secondary sector made notable progress. Its share in gross domestic product rose from 9.7 to 11.8 per cent. In comparison with 1959, its index stood at 155.9, i.e., an average annual growth rate of almost 14 per cent;

(*c*) The tertiary sector likewise developed rapidly, thus expressing the development of the market economy. Its share in the gross domestic product rose from 32.7 per cent to 37.3 per cent, and its average annual growth rate was 11.7 per cent;

(*d*) The share of the services rendered by the Government advanced somewhat less rapidly than the gross domestic product, contrary to what had been noted during the previous decade.

As is shown in table 2, construction output is estimated at Fr CFA 8,800 million and value added at Fr CFA 4,500 million for 1962/1963, as against Fr CFA 3,500 million value added in 1959. The relative share of this branch of industry in the *production intérieure brute* showed a slight increase, i.e., from 4 to 4.1 per cent

Two indexes are of particular significance with regard to the increase of activity in the construction field. The first is that of imports of cement and reinforcements, which rose from 59,800 tons and 850 tons, respectively, in 1959 to 75,400 tons and 4,500 tons in 1962/1963.

The second is that of building-permits. In Douala and Yaoundé (the only two towns for which statistics are

Table 2. Cameroon: distribution of production and value added, by sector of activity, 1962/1963
(Thousand million francs CFA)

	1962/1963		Value added 1962/1963		Value added 1959		Index (1959 = 100)
	Output	Intermediate consumption	Amount	Percentage	Amount	Percentage	
I. Primary sector							
Agriculture	47.6	2.6	45.0	40.8	41.8	48.3	107.7
Forests	5.7	0.9	4.8	4.4	4.0	4.6	120.0
TOTAL I	53.3	3.5	49.8	45.2	45.8	52.9	108.7
II. Secondary sector							
Construction	8.8	4.3	4.5	4.1	3.5	4.0	128.6
Power	1.4	0.4	1.0	0.9	0.85	1.0	117.6
Food-manufacturing industries	9.3	7.4	1.9	1.7	0.95	1.2	200.0
Other industries	20.1	13.0	7.1	6.4	4.0	4.6	177.5
TOTAL II	39.6	25.1	14.5	13.1	9.3	10.8	155.9
III. Tertiary sector							
Transport	9.7	3.8	5.9	5.4	2.6	3.0	226.9
Commerce	41.1	7.2	33.9	30.8	25.8	29.8	131.4
Other services	8.3	2.2	6.1	5.5	3.0	3.5	203.3
TOTAL III	59.1	13.2	45.9	41.7	31.4	36.3	146.2
GRAND TOTAL	152	41.8	110.2	100.0	86.5	100.0	127.4

published), building-permits were granted for 32,000 square metres in 1959 (of which 30,400 square metres were for housing). The increase from one year to another exceeded 55 per cent; it was particularly marked in Yaoundé, where it rose from 13,400 square metres to 28,600 square metres.

1. Power

The power output of Cameroon rose from Fr CFA 1,200 million to Fr CFA 1,400 million, and the value added, from Fr CFA 850 million to Fr CFA 1,000 million.

The production of electricity rose from 826 million kWh to 1,100 million kWh, and the production of water, from 6.7 million to 9.4 million cubic metres.

2. Food-manufacturing industries

This branch of industry has expanded greatly. The value of production almost doubled during the period under consideration (from Fr CFA 4,900 million to Fr CFA 9,300 million), and the value added reached Fr CFA 1,900 million in 1962/1963 (1.7 per cent of the *production intérieure brute*). The average annual rate of growth in the branch was of the order of 20 per cent.

Table 3 shows the progress in major food products.

Table 3. Cameroon: increase in output of major food products, 1959-1962/1963

	1959	*1962/1963*
Palm-oil (tons)	4,000	8,000
Palm-kernel oil (tons)	1,700	3,000
Cotton-seed oil	650	1,700
Beverages (millions of hectolitres)	190	318
Cocoa butter in bulk (tons)	5,450	4,142
Oilcake	4,000	6,400

3. Other industries

The output of other industries and handicrafts was estimated at Fr CFA 20,100 million, as against Fr CFA 10,800 million in 1959, the value added rising from Fr CFA 4,000 million to Fr CFA 7,100 million, and from 4.6 per cent to 6.4 per cent of the gross domestic product.

This result was obtained through an increase in the output of long-standing enterprises and from the diversification of industry. In 1962, the number of sizable manufacturing enterprises (taxed on actual profits) was 158, and the number of cottage industries in the same sector was approximately 1,400.

Table 4 shows the development of the chief activities in this group, by quantity and value, wherever possible.

Table 4. Cameroon: development of various manufacturing activities

(*Value in millions of francs CFA*)

	1959		*1962/1963*	
	Quantity	*Value*	*Quantity*	*Value*
Aluminium (tons)	42,300	2,900	55,000	3,500
Cotton fibre (tons)	7,800	500	15,000	1,660
Latex (tons)	3,900	325	4,250	400
Oxy-acetylene (cubic metres)	146,000	25	145,000	120
Sawnwood (cubic metres)	81,000	810	44,000	900
Wood manufactures		860		900
Garments		1,300		1,900
Soap and chemical products		280		500
Bicycle assembly		200		220
Hides and plastics		225		750

III. Current structure of manufacturing industry

A. Cottage industries

It should be noted that cottage industries are currently little developed in Cameroon because of the credit difficulties of craftsmen wishing to provide themselves with modern equipment. In fact, there are a large number of wood craftsmen and mechanics undertaking small repairs. There is also a difference between crafts carried on in the urban and the rural sectors.

Since surveys are difficult in this branch of the traditional economy, no numerical data can be supplied.

B. Relative importance of private and public enterprises

Most industrial enterprises are private undertakings in which foreign capital has a majority holding.

Cameroon has, however, adopted a policy of systematic participation in large-scale enterprises (a textile factory, a cement works and a sugar-refinery). Although these are only minority holdings, they enable government officials to attend the meetings of the boards of directors and to keep track of the activities of the enterprises more easily.

Provision has also been made for the subsequent cession of part of the capital subscribed by the State to private shareholders who are Cameroonian nationals as soon as it becomes possible to utilize local savings.

C. Geographical location of main manufacturing enterprises

Almost all industrial enterprises are located at Douala. However, the aluminium plant (ALUCAM) and the factories manufacturing aluminium products (Alubassa, Socatral) are located at Edéa, close to the hydroelectric power-station. The cigarette factory and a cocoa-butter plant are located at Yaoundé. In northern Cameroon, there is a spinning-mill at Garoua and an oil mill at Kaélé, combined with cotton-seed hulling, and a food-canning plant is now being set up at Maroua.

D. Methods of industrial financing

Conventional methods are employed. As most finance is of foreign origin, each enterprise seeks initial loans when it is set up and makes provision for a working-capital fund. On the basis of a financing programme founded on long-term loans from various sources, the enterprise is able to begin operations. In addition, local banks and, in particular, the Banque Camerounaise de développement, grant loans to enterprises. With regard to capital participation, the recently established So-

ciété nationale d'investissement will be able to subscribe part of the capital of large enterprises on behalf of the State and likewise to grant them loans.

E. Trends in the supply of industrial machinery and equipment

At the current time, all industrial equipment—machinery, in particular—is imported. A few firms, such as the Forges tropicales or the Société de fibres et de mécanique, are able to manufacture some simple parts.

F. Structure of foreign trade

1. The balance of trade

According to Customs statistics, the balance has developed as shown in table 5.

Table 5. Cameroon: exports and imports, 1959-1962/1963
(Value in thousand million CFA francs)

	1959		1960		1961		1962		1962/1963	
	Thousands of tons	Value	Thousands of tons	Value	Thousands of tons	Value	Thousands of tons	Value	Thousands of tons	Value
Exports	407.7	26.8	383.4	23.9	432.1	24.2	439	25.5	478.2	25.5
Imports	429.3	20.2	404.6	20.8	488.7	23.7	487	25.1	508	1.6
Balance		+6.6		+3.1		+0.5		+0.4		+27.1

These figures differ somewhat from those shown in the balance-of-payments table drawn up by the Central Bank, but these differences do not in any way affect the direction of the trends observed. They should be corrected, in any case, in order to take into account unofficial imports and exports. An estimate of these imports and exports has, however, been attempted only for the year 1959.

2. Significant trends in foreign trade

Apart from the progressive reduction in the balance surplus, detailed studies of foreign trade have brought to light three significant trends which are indicative of the growth and diversification of the economy of Cameroon: (*a*) the increase in the over-all volume of exports; (*b*) the diversification of exports; and (*c*) improvements in the structure of imports.

(a) *The increase in exports*

Exports made a distinct recovery in 1961. In 1960 they had fallen to a lower level than in 1958 and 1959 (383,000 tons, in comparison with 395,000 and 408,000 tons, respectively). This was caused, in particular, by a very sharp drop in tonnages of bananas, Arabica coffee and ground-nuts.

The volume of exports in 1961 increased by 13 per cent and amounted to 432,000 tons. The increase included almost all commodities except palm kernels.

Unfortunately, the benefit of this increase in volume was almost completely absorbed by the drop in world prices of tropical products, since the increase in value was only 1 per cent.

If the same comparison is made by budgetary years, a temporary drop in the volume of exports is seen for 1961/1962, i.e., 400,000 tons as compared with 432,000 tons in 1960/1961, and in their value, Fr CFA 23,500 million as against Fr CFA 24,300 million in 1960/-1961.

In 1962/1963, however, there was a vigorous recovery, exports being 478,207 tons by volume and Fr CFA, 27,177 million by value, i.e., an increase of 20 per cent in tonnage and of 15 per cent in value, compared with 1961/1962.

The quantities of agricultural products exported are all increasing except for cocoa, ground-nuts and palm kernels. Furthermore, the slight levelling-off of prices for cocoa and Arabica coffee has been largely compensated for by the spectacular gains in the prices of Robusta coffee (Fr CFA 132 as against Fr CFA 98 per kilogramme, f.o.b.).

(b) *The diversification of exports*

The diversification of exports is an even greater sign of a healthy economy than is the increase in exports.

Whereas, for many years, cocoa and coffee alone accounted for half of exports by value, they currently represent only 43 per cent. Cotton and timber are becoming increasingly important. In 1962/1963 they accounted for 7.3 per cent and 5.2 per cent of the value of exports, respectively.

Exports of industrial products are also increasing rapidly. In 1962/1963, they amounted to Fr CFA 8,291 million, i.e., 31 per cent of exports by value, as against 28 per cent during the previous financial year and 20 per cent in 1960. Aluminium and by-products of cocoa constitute the main industrial exports, but sawnwood, oilcake, oils, beer, cigarettes and miscellaneous manufactured goods are also increasing.

In 1962/1963 the value of exports of the major industrial products reached the index of 130.6, by comparison with 1960, whereas the index for the major agricultural products stood at 104.9.

(c) *Improvements in the structure of imports*

In 1958 and 1959, imports were of the order of 430,000 tons, rising to 441,000 tons in 1960/1961, 506,000 tons in 1961/1962 and 508,000 tons in 1962/-1963. From 1958 to 1960 there was a distinct trend towards an increase in imports of consumer goods and towards a decrease in imports of raw materials and capital goods.

This trend has been reversed since 1961. Raw materials and capital goods, which represented 36.9 per cent of total imports in 1960, amounted to 42 per cent in 1961/1962 and 42.4 per cent in 1962/1963.

Imports of cement, 46,000 tons in 1960, now exceed 75,000 tons. From the first half of 1962 to the first half of 1963, imports increased by 60 per cent for iron and steel, 25 per cent for lime and cement, and 16 per cent for machinery and mechanical appliances.

In 1962/1963, imports of consumer goods fell not only in relative, but also in absolute, value: i.e., 87,500 tons for food, beverages and tobacco, as against 99,700 tons in 1961/1962; and 24,870 tons for consumer goods, as against 27,440 tons (see table 6). This is a favourable trend when there is corresponding substitution of local products for imported products (vegetables, eggs, beer); it is less favourable in so far as it indicates the inadequacy of the consumers' purchasing power linked with a fall in the prices of export commodities or with excessive indebtedness.

Table 6. Cameroon: trends in imports, by end-use groups

Imports by end-use groups	*1960*			*1962/1963*		
	Tons	*Value (millions of francs CFA)*	*Percentage*	*Tons*	*Value (millions of francs CFA)*	*Percentage*
Food, beverages, tobacco	82,294	4,040	20.0	87,503	4,296	17.0
Fuel, lubricants	111,634	1,375	6.1	132,393	1,464	5.7
Crude products	1,851	197	0.9	2,220	332	1.3
Semi-finished products	177,309	3,995	20.0	224,261	5,298	20.6
Capital goods	10,491	3,537	16.0	16,191	5,247	20.5
Consumer goods	20,986	7,705	37.0	24,870	8,900	34.9
TOTAL	404,565	20,849	100	508,038	25,539	100

The evolution of foreign trade by volume thus shows a certain number of favourable factors, indicating economic recovery, the development of investments and the diversification of production.

3. TERMS OF TRADE

The situation appears less favourable if trends in value are taken into consideration, because the terms of trade have continued to deteriorate during the last few years. Taking 1957 as the base, the average prices of exports stood at the index 103 in 1962, after reaching a maximum of 128 in 1959, while import prices rose to 118.

In spite of the net increase in the volume of exports, the balance-of-trade surplus has gradually decreased since 1959. The good results of the 1962/1963 season, in conjunction with the rise in some prices, brought about a temporary recovery: the surplus for 1962/1963 was Fr CFA 1,630 million.

Nevertheless, the considerable capital-equipment programme, which has to be maintained and increased during the coming years, will inevitably bring a large deficit in the balance of trade if there is not a rapid improvement in the trend of the terms of trade.

Table 7. Cameroon: value of exports of principal industrial products, 1960-1962/1963

(Millions of francs CFA)

Principal industrial products	*1960*		*1962/1963*		*Index (1960 = 100)*
	Tons[a]	*Value*	*Tons*	*Value*	
Principal industrial products		5,812		7,582	130.5
Cocoa by-products	4,650	864	9,733	1,273	147.3

Table 7. Cameroon: value of exports of principal industrial products, 1960-1962/1963 (*continued*)

(Millions of francs CFA)

Principal industrial products	*1960*		*1962/1963*		*Index (1960 = 100)*
	Tons[a]	*Value*	*Tons*	*Value*	
Palm-kernel oil	472	37	780	44	118.9
Beer	406	17	1,888	111	652.9
Cigarettes	11	12	33	48	400.0
Ready-made clothing	7	22	28	43	195.4
Foot-wear	88	8	35	18	225.0
Sawnwood	24,111	402	27,860	538	133.8
Aluminium	42,070	4,402	52,290	5,472	124.3
Aluminium products	812	35	43	19	54.2
Bicycles	1,722				

[a] With the exception of bicycles, which are in units.

G. Production of electric power

Electric power is derived mainly from the hydro-electric station at Edéa, which has a capacity of 189,500 kva and supplies the ALUCAM factory as well as the towns of Edéa and Douala.

There are also a number of secondary diesel-power stations with an installed capacity of 20,000 kva.

Industries located at Douala are served by the sea route. A road and rail route links the port of Douala with Edéa and Yaoundé. Industries located in northern Cameroon are served by the River Benue route to Garoua and thence by road.

IV. Industrial programmes and major projects

An economic and social development plan was drawn up for the 1960-1965 period as part of the programme for doubling personal incomes within twenty years, i.e., by 1980.

The new five-year plan is being drawn up and will not be ready before 1966. As an indication of the programme, however, the major projects currently being carried out (including private investments) are discussed below.

A. Food-manufacturing industries

The main investments in this sector since 1961 have been carried out by existing enterprises which were expanding their activities: the Brasserie du Cameroun;

the Société industrielle des cacaos; the Société Bastos (cigarettes); the Boulangeries industrielles, UCCAO and ODUCAF (hulling and packaging of coffee); etc.

Moreover, some major projects are nearing completion:

(*a*) A factory manufacturing chocolate and sugar confectionery is being set up by the Société Camerounaise d'alimentation et de diététique, which plans an annual production of 1,500 tons of chocolate and 500 tons of confectionery (investment planned: Fr CFA 150 million);

(*b*) A flour-mill and biscuit factory with a capacity of 30,000 tons of flour, work on which was begun in 1963 (investment planned: Fr CFA 1,000 million);

(*c*) A sugar-mill and refinery with a minimum capacity of 10,000 tons is being set up by SOSUCAM (investment planned: Fr CFA 1,800 million);

(*d*) A factory to produce spaghetti and macaroni is being established by the Société Milliat Frères with a production target of 1,000 tons in 1965 (investment planned: Fr CFA 65 million);

(*e*) A meat-packing plant is being opened at Maroua by the Société Rediefsen.

B. Textile and leather industries

A number of major investments have been made in the textile industry during the period under consideration. The Compagnie française pour le développement des fibres textiles (CFDT) has built a fifth cotton-ginning mill at Maroua with a capacity of 12,000 tons of cotton seed. The BATA Company opened a shoe factory (plastic, leather and rubber foot-wear) in 1963, and the production target for 1964 was reported to be 2.2 million pairs of shoes. Several enterprises manufacturing ready-made garments have developed their equipment.

Among the projects contemplated, the following may be mentioned:

(*a*) A spinning and weaving mill at Garoua, with a production target of 850 tons of cloth per annum in the first phase;[2]

(*b*) A factory for bleaching, printing and dyeing cloth at Douala, with a capacity of 7 million metres per annum;[2]

(*c*) A factory manufacturing knitted goods, with a production target approaching 1 million garments from the second year onwards (investment planned: Fr CFA 60 million);

(*d*) A factory manufacturing blankets, with a final capacity of 2,000 tons (investment planned: Fr CFA 164 million);

(*e*) A factory making leather foot-wear, bags and suitcases.

C. Timber and building materials industries

In this sector, existing sawmills and joiners' workshops have continued their investments since 1960, in particular, the Société forestière et industrielle de la Doumé.

Furthermore, a number of new projects have received the approval of the Commission des investissements or else are being implemented:

(*a*) The Société d'exploitations forestières et industrielles (SEFIC) is going to modernize its equipment and set up new installations (sawmills and a workshop for prefabricated houses). A total of 50,000 cubic metres of logs per annum will be used industrially (investment planned: Fr CFA 247 million);

(*b*) The Société forestière et industrielle de l'Azobe (SFIA) is planning to reopen yards which had been closed down in the Kribi area by opening up roads and establishing two sawmills (investment planned: Fr CFA 164 million);

(*c*) The Société grumes et placages du Cameroun is to set up a sawmill and a factory to manufacture agglomerates, flooring and plywood (investment planned: Fr CFA 220 million);

(*d*) The Groupement d'imprégnateurs camerounais (GIC) is going to open a plant for impregnation of wood, with a capacity of approximately 150,000 railway sleepers per annum (estimated investment: Fr CFA 50 million);

(*e*) SOPACAM intends to set up a factory for the manufacture of mosaic flooring (estimated investment: Fr CFA 90 million);

(*f*) The Société d'études de la cimenterie du Nord-Cameroun (CIMENCAM) is working on the completion of the project for the construction of the northern Cameroon cement-works, with a capacity of 30,000 tons (investment planned: Fr CFA 800 million);

(*g*) The Société camerounaise de béton manufacturé is planning an output of 23,000 tons in 1965 for the plant manufacturing pipes, walls etc., which it intends to build (investment planned: Fr CFA 143 million);

(*h*) The Société ICAB aims to build a factory for the manufacture of granite and terrazzo paving-stones (investment planned: Fr CFA 30 million).

D. Chemical industries

This sector is also in process of development. During the period under consideration the PLASTICAM Company opened a factory making polyethylene sheathing, which produced 228 tons in 1962. The company proposes to diversify its production of plastic goods.

Investments have also been made in the following branches of manufacture: soap; agricultural and household chemicals; and perfume.

Several of the projects planned or under construction are listed below:

(*a*) The Union allumettière équatoriale (UAE) has undertaken to build a factory for the manufacture of matches, which will have a capacity of 10,000-12,000 cases of 7,200 boxes each (minimum investment planned: Fr CFA 200 million);

(*b*) A paint factory is currently being built by SEO (investment planned: Fr CFA 25 million);

(*c*) Also planned are undertakings for the packaging of pharmaceutical products, the manufacture of plastic goods, the enamelling of household ware etc.;

(*d*) Finally, the establishment of a cellulose industry is being studied, and it should be possible to begin preliminary tests in 1965.

[2] The investments planned for these two factories would amount to approximately Fr CFA 1,500 million.

E. Metallurgical and engineering industries

The ALUCAM Company is continuing its development by ploughing back its profits. Furthermore, Socatral, which produces corrugated-aluminium sheet (2,900 tons in 1963), began production during the period.

The Maison du cycle has expanded its workshops and plans to increase its output to 18,000 bicycles and to begin manufacturing mopeds (6,000 in 1965) and trailers.

Two important projects have also been approved by the Commission des investissements:

(*a*) The creation of a plant to manufacture agricultural implements, with a capacity of 700 tons, by the Société des forges tropicales (investment planned: Fr CFA 150 million).

(*b*) The establishment of a Land Rover assembly plant is contemplated, with a capacity of 400 vehicles per annum.

V. Industrial policies

The general policy on industrial development will be outlined in the next five-year plan. It is difficult to anticipate it.

It is only possible to stress that the State grants privileges to those enterprises which are recognized as being the most valuable for economic and social development, on the basis of various criteria, including:

(*a*) The size of the investment;

(*b*) The type of activities and, in particular, their importance for the development and economic use of agricultural output;

(*c*) The size of the labour force;

(*d*) The possibilities of improving occupational training;

(*e*) The importance for area development and the possible integration of other activities;

(*f*) The contribution, based on certain profitability, to the development of the rate of growth of the gross domestic product.

A number of measures have been taken to promote investments:

(*a*) The mobilization of savings. A national issue of development bonds has been launched, intended for banking or commercial enterprises and transactions. Part of the money subscribed has already been paid to the Société nationale d'investissement, which will use it to take shares in and to grant loans to industrial enterprises;

(*b*) Taxation applicable to industrial investments is reduced and includes a series of benefits laid down in the Investment Code. According to the particular schedule, these comprise exemption from import duties and taxes on equipment, material and tools necessary for development and production, exemption from taxes on business profits and exemption from business licence fees and land taxes and possible tax stabilization for a period not exceeding 25 years.

(*c*) In the financial sphere, the free transfer of funds is guaranteed, enabling enterprises to repatriate their profits, with the exception of sums subscribed for development bonds;

(*d*) In the foreign-trade sector, there is virtually no quantitative restriction upon imports except in the case of redundancy (e.g., rice). A revision of the customs and fiscal tariff is, however, planned in implementation of the treaty setting up a Central African Customs and Economic Union, and it is expected that imports competing with national industrial products will be subject to higher taxation. This new tariff will be completed in December 1965;

(*e*) Foreign currency is allocated under the import programme;

(*f*) Private foreign capital may be invested freely, as the right of establishment is recognized for activities in the industrial sector;

(*g*) Regulations concerning industrial enterprises include social legislation (the labour code), the application by the Department of Mines of laws on dangerous or unhealthy establishments and fiscal control.

The construction of industrial enterprises is subject to a zoning system, which was established as part of the town-planning programme, and building-permits are required.

VI. Institutional framework

A. Allocation of governmental responsibility for industrial development

There is no ministry responsible for industry in Cameroon. Under a recent reform, there was established a Ministry of Economic Affairs and Planning, which comprises all offices of economic affairs and planning under the authority of a Minister and an Assistant Minister.

Decree No. 65/DF/247 lays down the powers of Ministers concerned with problems of an economic and financial nature and with planning.

The organization of the planning departments particularly responsible for the promotion of development and with keeping investment problems under review is defined in an earlier text, which is to be revised shortly, i.e., Decree No. 62/DF/196 of 9 June 1962.

B. Industrial development agencies

In Cameroon, these comprise public financing agencies, such as the Société nationale d'investissement and the Banque camerounaise de développement, and bodies representing trade groups (chambers of commerce and agriculture).

There are also bodies representing employers' associations, e.g., GICAM, as well as a number of

bodies without permanent representation, but with correspondents.

C. Development banks

There are two public bodies in Cameroon engaged in industrial development. They are the Banque camerounaise de développement and the Société nationale d'investissement.

The purpose of the Banque camerounaise de développement is to grant loans of various types: (*a*) short-term loans for consumers and housing improvements; (*b*) medium-term loans for minor development projects, e.g., the purchase of equipment or vehicles, housing, cottage industries etc.; and (*c*) long-term loans for industrial enterprises, residential construction projects and the improvement of agriculture.

The main purpose of the Société nationale d'investissement is to participate in activities concerning economic development and, chiefly, industrial enterprises. It also grants long-term and medium-term loans to enterprises in which it holds shares, in cases where the Banque camerounaise de développement is not able to make these loans.

D. Research institutes and consulting facilities

In Cameroon, the research institutes are mainly those concerned with agricultural research, for example, the Institut des fruits et agrumes tropicaux and the Institut de recherches sur les huiles de palmes et oléagineux (IRHO). Their role is to study industrial outlets for agricultural commodities.

With regard to consulting facilities, there are no permanent bodies in Cameroon, with the exception of a few firms of consultant engineers.

E. The training of skilled labour

There are several institutions in Cameroon which are engaged in training personnel, in particular, the state or private technical colleges at Douala and Yaoundé, and the technical secondary school to be opened shortly at Bafoussam.

Vocational training centres also exist, such as the centre for accelerated vocational training at Douala, which comes under the Ministry of Labour and trains about fifty students annually, and the Jean-Baptiste de la Salle training centre, which is of similar size. The instruction given at the vocational training centres is related primarily to the construction industries, welding, carpentry and the engineering industries.

The technical colleges provide a more theoretical and general training of personnel intended for the various branches of industry, including radio and the electrical industry. The training is supposed to be supplemented by practical courses.

There is as yet no institution undertaking complete training for engineers.

F. Patents and standardization

The Office africain et malgache de la propriété industrielle (OAMPI), which is part of the Organisation commune africaine et malgache (OCAM), has its headquarters at Yaoundé, the capital of Cameroon. The role of this body is to register and protect the patents, designs, trademarks and models belonging to nationals of the OCAM countries.

It should be pointed out that OAMPI is a member of the International Union for the Protection of Industrial Property and as such applies international regulations.

G. Industrial federations and co-operatives

There are no industrial co-operatives in Cameroon, except in the field of cottage industries.

There is a union of manufacturers, called Syndustricam, but the chief function of this body is to protect the interests of the industrialists. It is, nevertheless, able to co-ordinate their policy to a certain extent.

In addition, the Chamber of Commerce has a specialized section open to the manufacturers in which they are expected to undertake joint legal or economic studies. This organization is functioning effectively and doing valuable work.

VII. External assistance

The technical assistance received by Cameroon derives from a certain number of multilateral agreements: with the United Nations for technical assistance (the assignment of experts and a cultural mission); and with the European Economic Community (EEC) under the Implementing Convention, for the assignment of experts and the allocation of fellowships for study and further training.

A number of bilateral agreements for technical co-operation have been concluded with various countries, among the most important of which are China (Taiwan), the Federal Republic of Germany, France and the United States of America.

A detailed outline of this technical assistance is provided in the annex to this report.

VIII. Miscellaneous topics

A. Prospects for accelerating the industrial development of Cameroon

Since the establishment of political stability, the industrial development of Cameroon has entered a progressive phase.

In view of the group of new projects described above, some of which are already at an advanced stage, it can be assumed that the importance of the secondary sector will grow rapidly.

Certain data are of significance in this respect.

1. Wages

In 1959, the share of wages distributed in the secondary sector represented 20 per cent of the over-all total

(Fr CFA 4,700 million out of Fr CFA 23,100 million); in 1963, the rate rose to 27.7 per cent (Fr CFA 8,300 million out of Fr CFA 30,100 million). Wages in the secondary sector thus showed an annual increase of 15 per cent between 1959 and 1963.

2. Value added

In 1959, the value added in the secondary sector amounted to Fr CFA 9,300 million out of a total of Fr CFA 86,500 million, i.e., 10.8 per cent. In 1963, it was Fr CFA 14,500 million out of a total of Fr CFA 110,200 million, i.e., 13.2 per cent. The annual rate of increase of value added in the secondary sector was thus 12 per cent in current francs.

3. Foreign trade

In 1959, exports of locally manufactured industrial products represented 21 per cent of total exports (Fr CFA 5,700 million out of Fr CFA 26,800 million). For the 1963/1964 budgetary year, these exports amounted to 23 per cent of the total (Fr CFA 7,200 million out of Fr CFA 30,900 million). The annual rate of increase for exports of industrial products was thus 6 per cent between 1959 and 1964, in current francs.

These different factors permit a favourable forecast to be made of the industrial growth of Cameroon; a distinct improvement in the rates quoted may even be hoped for, taking into account the scale of the projects currently in hand.

ANNEX

External assistance in development of Cameroon

I. French aid

Because of its traditional ties with Cameroon, France was the first country to contribute aid on a large scale for the development of the country. The characteristics of this aid are its breadth of scope, its long duration and its diversity. From the end of the Second World War until 30 June 1965, France may be estimated to have given more than Fr CFA 80,000 million in aid to Cameroon.

A. Fonds d'investissement pour le développement économique et social [a]

The programmes of the Fonds d'investissement pour le développement économique (FIDES) were the first manifestation of this aid. The political reasons that led to the drawing-up of these programmes are well known and will not be discussed in this note.

The programmes date from 1946 and derive from the act of 30 April 1946 known as the "Loi des programmes d'investissements pour le développement économique et social". Cameroon has benefited from two programmes for a total amount of Fr CFA 36,118,414,892 from 1947 to 1960, allocated as shown in table 8.

[a] Economic and Social Investment Development Fund.

Table 8. Recapitulatory statement, by type of operation carried out under FIDES, local section of Cameroon, 1946/1947-1959/1960

(CFA francs)

	First plan 1946–1955	*Second plan 1953–1960*	*Total*
General expenses	195,204,245	75,906,000	271,110,245
Production	1,930,750	7,003,828,630	8,934,578,630
Infra-structure	14,374,500,000	7,374,500,000	21,759,419,242
Social equipment and facilities	1,762,400,000	3,388,906,775	5,151,306,775
Total	18,262,854,245	17,853,560,647	36,118,414,892

Sources: Documents of the Ministry of Co-operation.

B. Fonds d'aide et de coopération

The Fonds d'aide et de coopération (FAC) took the place of FIDES in 1960. It is estimated that Fr CFA 9,866,423,900 of aid had been granted as subsidies under this programme by 30 June 1965. For the allocation of this assistance, see table 9.

Table 9. Aid granted to Cameroon by Fonds d'aide et de coopération

Type of operation	*Amount*	*Comment*
General studies	2,136,314,467	
Production	2,159,401,000	
Infra-structure	3,314,600,000	
Social equipment and facilities	2,256,108,433	Including Fr CFA 229 million subsidizing private projects
Total	9,866,423,900	

Source: Signed agreements held by the Ministry of Economic Affairs and Planning.

This table thus shows that FAC participates in a number of operations affecting the economic life of the country as a whole.

Expenditure is distributed in a relatively well-balanced fashion.

The danger is that, as these annual grants come from the budget of the French State, they naturally follow the general economic and financial trends in France. There is thus an element of uncertainty in FAC grants, which fall within the general context of the French policy of aid to developing countries.

In the criteria adopted for the selection of projects, account is taken of the particular value of each project as regards its economic, social and financial consequences.

C. Caisse centrale de coopération économique

Caisse centrale de coopération économique (CCCE) is a loan agency, which by 31 December 1964 had granted Cameroon

Fr CFA 32,272,540,172 of aid in the form of advances and participation—to the State, local communities, public companies and government bodies.

It has been impossible to determine the amount of this aid over the last five years, as the accounting documents are held at the head office in Paris.

It should, however, be pointed out that loans granted by CCCE may be combined with FAC subsidies, loans from national and international credit agencies etc. This aid is therefore relatively flexible and is granted on normal banking conditions.

D. Budgetary subsidies

From 1957, Cameroon received budgetary subsidies, which came to an end during the 1964-1965 financial year. The attached table shows the development of this aid:

(*Millions of CFA francs*)

Cameroon financial year								
1957	1958	1959	1960	1961	1961	1962	1962	1963	1963	1964	1964	1965
2,050	130	1,549	2,415	2,335	1,100	1,000	50

Source: French Ministry of Co-operation.

E. Other expenditures in Cameroon by the Ministry of Co-operation

Other expenditures in Cameroon by the Ministry of Co-operation include subsidies to research institutes, scholarships and technical assistance. Subsidies for research institutes are given in table 10.

Table 10. Subsidies granted to research institutes by Ministry of Co-operation
(*Francs CFA*)

	1960	1961	1962	1963	1964	Total
ORSTOM	21,038,000	23,100,000	...	63,500,000	70,000,000	177,638,000
IRTHO	3,755,000	3,445,000	...	3,917,500	4,605,000	15,722,500
IRCT	2,588,500	2,639,250	...	3,805,900	5,250,000	14,283,650
IFAC	9,826,500	9,301,250	...	10,376,500	10,800,000	40,604,250
IRAT					18,500,000	18,500,000
IFCC					45,000,000	45,000,000
CTFT					8,500,000	8,500,000
IEMVTW					12,800,000	12,800,000
Total	37,208,000	38,485,500	...	81,899,900	175,855,000	333,448,400

Source: French Ministry of Co-operation.

With regard to students and scholarship holders, FAC scholarships amounting to the following annual totals have been given: 1961/1962, Fr CFA 70 million; 1962/1963, Fr CFA 138 million; 1963/1964, Fr CFA 194 million; 1964/1965, Fr CFA 182 million. The total value of the scholarships given during the period is Fr CFA 580 million.

Over the period 1960-1965, French contributions to technical assistance have amounted to Fr CFA 8,425 million, distributed as follows: 1960, Fr CFA 1,500 million; 1961, Fr CFA 1,300 million; 1962, Fr CFA 1,150 million; 1963, Fr CFA 1,350 million; 1964, Fr CFA 1,525 million; 1965, Fr CFA 1,600 million. A breakdown of these contributions by sector for the period 1960-1964 is given in table 11.

Table 11. French contributions to Cameroon for technical assistance, by sector, 1960-1964
(*Millions of francs CFA*)

	1960	1961	1962	1963	1964
Production technique	220	202	151	88	90
Infra-structure technique	134	125	104	104	128
Health	350	188	167	184	214
Education	341	524	572	764	909
Total	1,500	1,300	1,150	1,525	1,600

F. Price support

Cameroon has been advanced money from the Fonds de soutien de textiles. This fund, which is administered by CCCE, has advanced money to the following institutions:

(*a*) Caisse de stabilisation du coton du Cameroun has received advances as follows: 1958, Fr CFA 40 million; 1962, Fr CFA 10 million; and 1963, Fr CFA 60 million. Subsidies for 1957-1959 amount to Fr CFA 50 million;

(*b*) Compagnie française pour le développement des fibres textiles (CFDT) received subsidies from the Fund in 1959 (Fr CFA 165 million) and 1960 (Fr CFA 73 million).

It has, unfortunately, been impossible to make a breakdown of the share allocated to Cameroon.

In this study, moreover, no account has been taken of either civil expenditure for development under the French budget or military expenditure. The same is true of expenditure under other French Ministries.

In conclusion, French development aid is still of great importance for the development of Cameroon. For the last five years, the forms of aid discussed above might be classified as follows:

Source of aid	*Amount of aid (francs CFA)*
Fonds d'aide et de coopération	9,866,450,000
Technical assistance	8,425,000,000
Caisse centrale de coopération économique	1,561,419,523
	19,852,869,523

If budgetary aid, estimated at Fr CFA 7,850 million, is added to this amount, French aid has greatly exceeded Fr CFA 28,000 million over the last five years.

This recapitulation prompts one to make the following comments: the amount intended for technical assistance almost equals FAC aid and the budgetary subsidies. CCCE is still the financial agency that contributes to the financing of development in Cameroon.

II. Aid from the European Development Fund

It may seem paradoxical to classify assistance from the European Development Fund (EDF) with bilateral aid. The main reason for doing this is because of the effect it has upon French aid.

In fact, the evolution of certain forms of French aid is linked with the application of the Common Market clauses regarding

the Associated Countries of Africa and Madagascar (FAC subsidies, price support, etc.).

By 30 June 1965, EDF aid to Cameroon amounted to a total of Fr CFA 14,121,971,000, distributed as shown in table 12.

Table 12. Total aid to Cameroon from European Development Fund, as of 30 June 1965

(Francs CFA)

Type of operation	*Amount*
Road infra-structure	7,372,985,000
Health infra-structure	2,121,095,000
Building of schools	2,151,000,000
Water-supply	765,271,000
Production	1,272,620,000
Miscellaneous	439,000,000
TOTAL	14,121,971,000

SOURCE: Financing agreements held by the Ministry of Economic Affairs and Planning.

The total sum actually paid by 31 December 1964 was Fr CFA 3,497,830,056.

A. FORMS OF AID

Before the signing of the Yaoundé Convention, Common Market aid to the Associated Countries was paid principally in the form of subsidies intended to finance economic and social projects.

Within this framework, Cameroon received an amount of Fr CFA 12,186,871,000, the broad allocation of which was shown above. This is now known as the "Old Fund".

The Convention of Yaoundé introduced what is called "Refundable aid and non-refundable aid". Non-refundable aid is allocated by the European Development Fund. Refundable aid is granted by the European Investment Bank (EIB)

1. *Non-refundable aid*

Aid for production and diversification is called non-refundable aid. Such aid is intended to promote the marketing of some tropical commodities at competitive prices, by encouraging the rationalization of cultivation and marketing methods and by helping the producers to make the necessary adjustments.

Advances to help to mitigate the consequences of temporary fluctuations in world prices may be granted to countries requesting them.

Under the heading of "Aid for production and diversification", Cameroon should receive a grant of approximately Fr CFA 3,871 million, distributed over five years, of which Fr CFA 1,935 million is intended for production and Fr CFA 1,936 million for diversification.

(a) *Aid for production*

This aid is concerned primarily with three products — cotton, ground-nuts and coffee — and is subdivided into two parts: (*a*) price support: Fr CFA 420 million; and (*b*) structural improvements: Fr CFA 1,515 million.

As mentioned above, the aid is to be distributed over a period of five years. The price support involved concerns ground-nuts and will be divided into the following instalments:

Instalment	*Amount (millions of francs CFA)*
1	114.5
2	110.5
3	81.0
4	50.0
5	34.0
TOTAL	420.0

Aid for structural improvements involving three products — cotton, ground-nuts and coffee — will also be made available in five instalments (see table 13).

Table 13. Aid to Cameroon for structural improvements: cotton, ground-nuts and coffee

(Millions of francs CFA)

Instalment	*Cotton*	*Ground-nuts*	*Coffee*	*Total*
1	100.0	91.6	330.0	521.6
2	93.0	4.6	208.5	306.1
3	82.2	30.0	172.5	285.3
4	69.8	40.6	115.5	225.9
5	65.0	32.6	78.5	176.1
TOTAL	410.0	200.0	905.0	1,515.0

Total aid for production is given in table 14.

Table 14. Aid for price support and structural improvements

(Millions of francs CFA)

Instalment	*Cotton*	*Ground-nuts*	*Coffee*	*Total*
1	100.0	236.1	330.0	666.1
2	93.0	115.1	208.5	416.6
3	82.2	111.6	172.5	366.3
4	69.8	90.6	115.3	275.9
5	65.0	66.6	78.5	210.1
TOTAL	410.0	620.0	905.0	1,935.0

A financial agreement has already been signed regarding the first instalment of aid for production, Fr CFA 665.1 million, and it is being put into effect.

(b) *Aid for diversification*

This type of financing of projects may take the form of subsidies or loans granted by the European Investment Bank with interest bonuses, or else may be a combination of these methods.

These arrangements mainly include programmes for plantation of palm trees, bananas and agricultural diversification.

The dossiers are currently being studied.

(c) *Loans from the European Investment Bank*

EIB finances projects that have been proposed by the States and have received their approval, as far as the enterprises are concerned, in accordance with the conditions, terms and procedures laid down by its regulations and taking into account the credit standing of the States concerned.

However, the Government is studying the possibility of presenting certain projects to the bank for financing. As the grants allocated to the Associated States are so low, the loans made to each State will perforce be limited.

The rate of interest is that applied by the Bank at the time of the loan.

(d) *Advances to the stabilization funds*

The stabilization funds may receive advances intended to enable them to cope with the drop in world prices of tropical commodities.

The conditions are studied for each particular case.

III. Other bilateral aid

A. UNITED STATES OF AMERICA

The contribution of the United States of America has represented an important share in the development of Cameroon for the last five years. It was estimated that over Fr CFA 5,000 million had been granted by 30 June 1965, allocated

broadly as follows: (*a*) subsidies, Fr CFA 2,000 million; and (*b*) loans, Fr CFA 3,000 million.

The subsidies have been chiefly intended for the financing of the local costs of some infra-structure projects (Fr CFA 755 million) and for social projects. Special aid for the rehabilitation of the formerly disturbed areas must also be added to this amount (Fr CFA 460 million).

The loans have been granted primarily for infra-structure, including Fr CFA 2,254 million for the Trans-Cameroonian Railway; and the financing for the Kumba-Mamfé road has already been approved in principle (Fr CFA 800 million).

It should be noted that almost all aid from the United States America, with the exception of that canalized under the heading of "Public Law 480", the so-called "food surplus act", and the Peace Corps, is granted through the Agency for International Development (AID) and the Export-Import Bank.

The aid from the Export-Import Bank is granted mainly in connexion with private enterprises in the United States of America, and its objective is the commercial expansion of those interests.

In conclusion, it may be noted that of the Fr CFA 5,000 million in aid from the United States of America, more than four-fifths have been allocated to road infra-structure.

Aid intended for social projects or directly productive projects constitutes an infinitesimal share.

B. Federal Republic of Germany

Aid from the Federal Republic of Germany is an important contribution although it has only recently become operative in Cameroon. Unfortunately, unlike the financial aid amounting to Fr CFA 2,120 million, technical aid has not been estimated, although it is on a substantial scale.

Financial aid from the Government of the Federal Republic of Germany is granted through the Kreditanstalt für Wiederaufbau, which is a development credit bank, and technical assistance is canalized through the Federal Republic's Ministry of Foreign Affairs. A number of projects have been negotiated on this basis.

C. Miscellaneous aid

Miscellaneous bilateral aid is estimated at over Fr CFA 3,000 million, of which approximately Fr CFA 2,000 million has been offered by the Government of the Union of Soviet Socialist Republics.

It is extremely difficult to estimate technical assistance in the form of the assignment of experts, allocation of scholarships to Cameroonian nationals and the supply of various equipment.

IV. Multilateral aid

Multilateral aid is canalized through the international organizations. Within this framework, mention could be made of the financial aid granted by the international financial agencies — the United Nations Special Fund and the International Bank for Reconstruction and Development (IBRD), and the technical assistance allocated by the departments of the United Nations or by its specialized agencies.

A. Financial aid

Cameroon has recently begun to seek aid from IBRD. On 30 June 1965, studies financed by IBRD, with the participation of Cameroon, were proceeding on two projects: one for the revival of cocoa production; another for the Ngaoundere-Garoua road. The amount involved is Fr CFA 651,584,000.

With regard to the United Nations Special Fund, since 1962, the Government of Cameroon has received financial aid exceeding Fr CFA 112 million for the payment of salaries to teachers and the training of Cameroonian nationals for the Ecole Normale Supérieure.

Financial approval has been given for other projects concerning several African States and amounting to more than Fr CFA 170 million.

B. United Nations technical assistance

Cameroon benefits from the United Nations ordinary and expanded programmes of technical assistance, as well as from the ordinary programmes of the specialized agencies — the Food and Agriculture Organization of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the World Health Organization (WHO).

This aid is furnished in the form of the assignment of experts and the provision of scholarships and supplies of various types of material and equipment.

Technical assistance from the United Nations alone can be estimated at more than Fr CFA 715 million for the past five years.

To sum up, the amount of multilateral aid in the development of Cameroon is still very insignificant. This state of affairs may be explained by the political reasons that predominated prior to independence. In fact, the colonial power practised a restrictive policy with regard to international financing. Furthermore, the geographical situation of the agencies distributing this aid and linguistic difficulties constituted definite barriers to aid.

In this sphere, prospects appear relatively favourable, in particular with respect to IBRD.

A breakdown of foreign aid to Cameroon over the last five years is given below:

Source of aid	*Amount (millions of francs CFA)*
France	19,855
European Development Fund	14,122
United States of America, Agency for International Development	5,000
Federal Republic of Germany	2,120[a]
Miscellaneous aid	3,000[b]

[a] Excluding technical assistance.
[b] Projects selected for aid from the Union of Soviet Socialist Republics are currently being negotiated.

DO 2268

2. INDUSTRIAL DEVELOPMENT IN ETHIOPIA

Presented by the Government of Ethiopia

CONTENTS

I. Historical background of manufacturing in Ethiopia

Before the Second World War, there was little manufacturing activity in Ethiopia. Most of the peoples' needs were met by local arts and crafts. Indeed, for centuries Ethiopian artisans have provided the nation with a wide range of simple handicrafts, including agricultural implements, household utensils, cotton cloths, spears, knives and a host of other articles which otherwise would have been bought abroad. It seems probable that there were no more than 2,500 factory workers before the Second World War.

After the war, industrial planning was again resumed with active support of the Government.

In 1949, it was estimated that there were about 10,000 factory workers, chiefly in Addis Ababa and Dire Dawa, where two of the largest plants were located. At that time, the largest single industrial establishment in Ethiopia was the cotton spinning and weaving mill operated by the Cotton Company of Ethiopia at Dire Dawa, which had almost 1,100 workers. Production capacity averaged 7,500 packages of yarn (quantity in kg not indicated) and 240,000 yards of grey sheeting per month. Another important factory was operated in Addis Ababa for the production of bags from *musa ensete* fibre. Capacity was about 30,000 bags per month, and, in addition, rope was produced. About 200 workers were employed. The Cement Mill at Dire Dawa was capable of producing 2,000 tons of high-quality cement per month and, at full operation, employed about 500 people.

The flour-milling industry was, at the time, one of the most advanced in Ethiopia, and capacity was estimated at approximately 5,000 tons per month. It was estimated that the industry, as a whole, employed about 1,000 workers.

Other important industries before 1950 included tanneries and shoe factories (about 1,500 workers), an edible-oil mill and soap factories (about 500 workers), and wood works.

II. Development of manufacturing since 1950

Since 1950, the development of the economy and, in particular, that of manufacturing industry has proceeded rapidly. The Government adopted planning officially in 1957, and since then, a First Five-Year Plan has been completed and the Second Five-Year Plan is in its fourth year of implementation.

The basic targets of the First Five-Year Plan were as follows:

(*a*) The development of infra-structure as a prerequisite for accelerated economic growth;

(*b*) The spread of education and the training of the technical personnel needed for implementing the plan;

(*c*) Accelerated development of agriculture, which accounts for almost 90 per cent of total employment, in order to produce the raw materials on which industry would be based and to increase export earnings;

(*d*) Accelerated industrialization, particularly the processing of locally available raw materials;

(*e*) Gearing economic policy towards the mobilization of the country's resources for economic development.

To achieve these goals, a total investment of 673.6 million Ethiopian dollars ($E), equivalent to $269,440,000, was allocated to be spent over the five years. By the end of 1961, however, total investment reached $E 839.8 million, or $US 335,840,000, out of which about $E 160 million was invested in mining, power and manufacturing industry, as may be seen from table 1.

Table 1. Ethiopia: investment during First Five-Year Plan, 1957-1962

(*Millions of Ethiopian dollars*)

Sector	*Planned*	*Fulfilled*	*Index of fulfilment*
Agriculture and forestry	92.1	109.9	120
Mining, power and manufacturing	138.0	159.8	116
Transport and communication	240.0	287.3	120
Social service	57.0	39.0	68
Housing	122.5	206.8	169
Others	24.0	36.8	153
TOTAL	673.6	839.6	124

As a result of this intensified investment activity, the manufacturing sector made considerable progress. New industries were erected, and the established ones were modernized and expanded. The net effect of the intensified investment in the field of manufacturing industry was that the share of the manufacturing sector in the gross domestic product made gains. Thus, while at the beginning of the First Five-Year Plan, the value of manufacturing in the gross domestic product was $E 24.7 million, at the end of the First Five-Year Plan this value increased to $E 34.9 million (see table 2). Over the last three years, the gross value of manufacturing sector in the gross domestic product has almost doubled.

Table 2. Ethiopia: gross domestic product, selected years

(*Millions of Ethiopian dollars*)

Sector	*1957*	*1962*	*1964*
Agriculture	1,328.0	1,453.6	1,556.2
Forestry	18.3	23.3	26.1
Fishing and hunting	1.1	1.8	2.1
Mining	1.0	1.4	5.1
Power	4.4	7.5	12.8
Manufacturing	24.7	34.9	71.9
Handicrafts and cottage industries	60.9	77.0	86.3
Building and construction	24.2	44.5	59.5
Transport and communication	69.7	109.3	132.7
Trade and commerce	110.3	136.1	156.2
Catering and tourism	20.8	25.0	29.6
Others	128.0	216.0	261.4
GROSS DOMESTIC PRODUCT	1,802.3	2,130.4	2,399.9

This rapid growth of the manufacturing sector is in accordance with the targets of the Second Five-Year Plan, which assumes industrialization to be the main avenue to the economic and social development of the country.

The main emphasis laid on industrial development has resulted in great expansion of the manufacturing industry. The following table shows the progress made in manufacturing industry from 1962 to 1964.

Table 3. Increase of manufacturing industry in Ethiopia, 1962-1964

	1962	*1963*	*1964*
Gross value of industrial production (thousands of Ethiopian dollars)	116,350	148,805	176,500
Exports of industrial products (thousands of Ethiopian dollars)	10,200	15,830	18,800
Investment in manufacturing industry (thousands of Ethiopian dollars)	25,560	31,965	49,000
Employment in manufacturing industry (number of employees)	27,000	31,500	36,800

During the period 1962-1964, the value of industrial production increased by 52 per cent. This growth of production can be considered fairly rapid. The growth of industrial production during 1962-1964 was due to an additional investment of $E 81 million. Investment in 1964 was 92 per cent larger than that of 1962.

The main favourable factor for the development of manufacturing industry was the availability of raw materials, especially in the food, beverage, tobacco manufacturing, leather, shoe, building and non-metallic industries. The limitation of the market and the difficulty of transportation were the main causes for the insufficient utilization of the available raw materials.

Nevertheless, as is shown in table 4, some branches of manufacturing industry have shown spectacular development. The textile and food industries have continued to grow at a high rate. The development of the canned- and frozen-meat industries has been notable, especially in the last few years, and has enabled the country to increase its exports to international markets. The structure of industrial production in Ethiopia is shown below in table 5.

Table 4. Ethiopia: gross value of production, 1949-1957

(*Thousands of Ethiopian dollars*)

Branch of industry	*1957*	*1961*	*1962*	*1963*	*1964*
Food	33,300	41,900	45,300	53,050	59,900
Beverages	7,900	9,400	9,800	12,950	23,000
Tobacco manufacturing	4,000	4,100	4,500	4,650	4,135
Textiles	24,800	33,900	39,000	55,000	63,000
Leather and shoes	3,100	4,100	4,500	4,880	6,000
Timber	3,000	1,300	2,900	3,250	3,600
Building and non-metallic products	—	1,500	5,500	5,325	5,200
Printing and publishing	—	1,200	1,400	2,450	3,500
Chemicals	—	900	950	3,050	3,100
Steel, other metals and electrical products	1,900	5,300	—	1,650	2,180
TOTAL	82,600	108,000	116,350	148,805	176,500

Table 5. Structure of industrial production in Ethiopia

(*Percentage*)

Branch of industry	*1962*	*1963*	*1964*[a]
Food	38.9	35.6	34.0
Beverages	8.4	8.7	13.0
Tobacco manufacturing	3.9	3.1	2.3
Textiles	33.5	37.0	35.7
Leather and shoes	3.9	3.3	3.4
Timber	2.5	2.2	2.0
Building and non-metallic products	4.2	3.6	3.0
Printing and publishing	1.2	1.7	2.0
Chemicals	0.8	2.0	1.8
Steel, other metals and electrical products	—	1.1	1.2
Others	2.2	1.7	1.6
TOTAL	100.0	100.0	100.0

[a] Estimated.

The outputs of some important products in various branches of manufacturing industry during the period 1957-1964 are given in table 6.

Table 6. Ethiopia: outputs of some important industrial products, 1957-1964

Product	1957	1962	1963	1964[a]
Meat, frozen (tons)	683	5,500	5,000	5,500
Meat, canned (tons)	1,290	1,000	3,000	1,500
Sugar (tons)	16,181	38,000	39,682	68,002
Salt (tons)	132,292	138,000	195,805	187,434
Edible oil (tons)	4,350	4,800	5,150	5,500
Flour (tons)	23,000	24,000	26,500	31,000
Beer (hectolitres)	41,780	67,000	87,770	116,500
Wine (hectolitres)	12,900	18,600	22,500	26,000
Cotton fabrics (thousands of square metres)	5,000	21,500	34,500	44,000
Gunny bags (thousands of of pieces)	700	2,800	4,100	4,600
Leather shoes (pairs)	203,000	248,000	390,000	420,000
Matches (thousands of pieces)	11,800	16,000	18,000	25,000
Cement (tons)	26,860	29,000	40,000	40,000
Bricks (thousands of pieces)	5,670	8,000	11,500	15,000
Glass bottles (thousands of pieces)	3,800	7,500	11,600	11,134
Round iron bars (tons)	—	—	2,747	4,500

[a] Estimated.

Table 7. Ethiopia: employment in manufacturing industry, 1957-1964

Branch of industry	Number of persons employed			
	1957	1962	1963	1964
Food	1,500	10,200	11,070	12,557
Beverages	960	1,350	1,565	2,580
Tobacco manufacturing	410	450	460	443
Textiles	4,770	10,100	12,175	13,800
Leather and shoes	940	960	1,000	1,200
Timber	1,800	1,450	1,540	1,720
Building and non-metallic products	720	1,290	1,280	1,290
Printing and publishing	320	400	550	800
Others	2,280	1,400	1,860	2,420
TOTAL	18,700	27,600	31,500	36,800

With the growth of industrial development and the quickening pace of the rate of investment in the manufacturing sector, productivity has shown some relative improvements. The gross value of industrial production *per capita* employed in manufacturing industry as a whole for 1962, 1963 and 1964 were $E 4,230; $E 4,730 and $E 4,790, respectively.

In line with the growth of industry, employment in the manufacturing sector has also increased. Employment in manufacturing industry reached 36,800 in 1964, or 5,300 more than that of 1963. The trend of employment from 1957 to 1964 in manufacturing industry, as a whole and in the different industrial branches, is shown in table 7.

Beverages, printing and publishing, and the leather and shoe industries showed relatively rapid increases of employment. The erection of new factories and the extension of existing ones contributed to the increase of employment in the above-mentioned branches.

Relevant data regarding the structure of employment are not available. It may be of some interest, however, to show the number of foreigners working in some manufacturing industries. According to the data obtained from ninety industrial enterprises in 1964, 618 foreigners were employed in these enterprises.

On the whole, it can be said that the two dominant branches of industry, in terms of value of production and employment, are the textile and food industries. In the textile sector, public investment constitutes a considerable portion, but the food industry sector is predominantly made up of relatively small and medium-sized private investments. Furthermore, the production and distribution of electricity, as well as the cement industries, are mainly publicly controlled. The beverage industries are generally private, except in some cases where semi-public institutions own large plants.

It is difficult to ascertain the relative share of investment in large-scale and small-scale industries, but, generally, small-scale and medium-sized industrial enterprises predominate in the manufacturing sector.

While in the small-scale and, to some extent the medium-scale industries, foreign ownership predominates in certain activities, public investment has ensured the dominance of local control.

Most of the manufacturing enterprises in Ethiopia are situated in a limited number of localities. The majority of the industries are to be found in two centres, namely, Addis Ababa and Asmara. The others are distributed in Dire Dawa, Jimma, Bahar Dar, Mekele, Assab and Massawa.

III. Transportation and power

The successful establishment and operation of manufacturing enterprises requires an adequate development of transportation network and power supply. In respect of both of these, the Government has made considerable investment and is continuing to invest heavily.

The Imperial Highway Authority has completed its first and second highway programmes and is currently engaged in the construction of new roads and improvement of existing ones under the third highway development programme.

The development of ports, airports and railways is also proceeding at a satisfactory pace.

The availability of power for industrial progress is well recognized, and, as a result, the production and distribution of electricity has been one of the major tasks of the public sector.

In 1963 and 1964, the production of electric energy increased at a satisfactory rate. The background work and preparations for the construction of new projects are already completed. Electric-power production in 1964 showed an increase of 15 per cent over the 1963 figure and 37 per cent over the 1962 figure (see table 8). The limiting factor for the greater production of electric energy is the size of the market. With the increase of demand for electric power, production is anticipated to increase considerably.

Table 8. Ethiopia: production of electric energy, 1962-1964

(Millions of kilowatt hours)

Producers	1962	1963	1964
Ethiopian Electric Light and Power Authority	95.0	117.0	146.0
Società Elettrica dell' Africa Orientale	30.0	35.5	39.5
Industrial firms	20.0	21.0	23.0
TOTAL	145.0	173.5	198.5

The growth in the production of electric power is due to the expansion of small thermo-electric plants and the construction of few hydroelectric plants.

Some of the activities undertaken in 1964 to increase the generation of electric power are mentioned below.

A. Power-plants completed

The Tis-Abbai hydroelectric plant was completed, and two generators are now in operation.

The Bellesa thermo-electric plant was completed, and a 5,000-kW generator was put into regular operation.

The Ghion (Woliso) hydroelectric plant was put into operation with a 192-kW generator.

At Debre Berhan, a thermo-electric plant has been erected, and a diesel generator of 300-kW power has been installed. A second generator has also been ordered.

B. Electric power-plants under construction or in preparation

The Awash II hydroelectric plant is under construction and is expected to be completed by 1966. The preparatory work for the Awash III hydroelectric plant has already begun.

Two generators, each of 400-kW power, have been ordered for the enlargement of the Shashamane thermo-electric plant.

Preparations have already been made for the extension of the Assab thermo-electric plant, and two diesel-powered generators have already been ordered.

Preparations have already been made for the installation of a new diesel-powered generator of 500 kW in Yirgalem.

At Debre Markos, construction for the establishment of a hydroelectric plant has been completed, and a 230-kW generator is being installed.

All the necessary preparations for the extension of the existing Hagere-Hiwot thermo-electric plant have been completed, and a 300-kW generator has been ordered.

Preparations have been completed for the erection of a hydroelectric plant in Dembidollo, and construction will soon begin. The establishment of one hydroelectric plant in Dilla is being elaborated, and two generators, 400 kW and 300 kW, have already been purchased.

A diesel-powered generator (300 kW) has been ordered for the Makele thermo-electric plant.

In order to enlarge the existing thermo-electric plant in Lekemti, a diesel-powered generator (500-kW) has already been ordered.

Steps have been taken and are being taken to increase the supply of electric energy by establishing new plants, enlarging the high-tension electric lines and constructing new transmission networks and substations.

Electricity is the only available energy at the current time, but explorations for crude oil and coal are being carried on. The commencement of production of the Assab Refinery will make the utilization of petroleum by-products possible.

IV. Industrial programmes and major projects for further development of manufacturing industries

The programme of economic development of the country, in particular, the industrial programme, envisages the establishment of numerous enterprises in various fields of activity. Some of the most important are discussed below.

A. Food and beverages

There are abundant raw materials for industries which are based on agricultural products. Not all the raw materials are utilized, and many are exported without being processed. The potential of the country for agricultural and livestock production is immense. The food and beverage industries—for example, meat, fish, edible oil, canned fruit and vegetables, and coffee—need further investments and development. The following projects are intended to be undertaken.

The establishment of slaughter-houses with ranches located in the cattle-raising areas is being considered. The Ethiopian Government plans to establish such slaughter-houses with the co-operation of foreign private investors, which would ensure partial investments, technical "know-how" for the erection of the plants and the sale of the meat products in foreign markets. The establishment of six slaughter-houses with the total annual capacity of over 600,000 head of cattle is anticipated in the near future.

Two edible-oil plants are expected to be established in order to process the locally produced oil-seeds, e.g., linseeds, neug and others. The production of margarine is also planned. Edible oil, margarine and other fats could be sold in the domestic market. Possibilities of production for exportation are not excluded.

The establishment of fish-processing plants in Assab and Massawa, and on the inland lakes is foreseen. It would be possible to process large quantities of fish from the Red Sea and from some of the large inland lakes. Fish products could possibly be exported. The domestic market for fish products could be enlarged by educating the Ethiopian public with regard to the nutritive value of fish products and the necessity of including them in their diet. By tradition, Ethiopians generally do not care for fish.

The industrial programme foresees the establishment of three milk-processing plants with large capacities. The greater proportion of the dairy products is

expected to be sold in the domestic market, while a smaller proportion is expected to be exported.

There are possibilities for the production of canned fruits and vegetables in Ethiopia. However, the canned fruits and vegetables must be marketed in foreign countries because the local demand for such products is not large. At this juncture, it is worth while to note that consumption of canned fruits and vegetables in Ethiopia is gradually increasing and will, in the future, support plants of significant capacities.

The growth of production of cereals (wheat, barley, sorghum, maize and teff), and the inadequacy of the milling capacity of the country necessitate the erection of larger, modern flour-mills, macaroni factories and bakeries.

The production of sugar (over 60,000 tons in 1964) showed a tremendous rate of growth. The increasing internal consumption, the possibility of exporting sugar to neighbouring countries and the low production costs justify the establishment of cane-sugar factories.

The availability of sugar should create possibilities for the establishment of chocolate and biscuit factories. Molasses could also be utilized for the production of alcohol and yeast.

The consumption of beer is increasing at a rapid rate. The availability of the raw materials and the rapid growth of consumption in the country create favourable conditions for the establishment of breweries.

The programme also anticipates the erection of a powdered-coffee plant.

The availability of raw materials and the growth of towns and industrial centres necessitate the establishment of food and beverage industries in the country.

B. Textiles

The textile industry has developed rapidly during the last ten years, and the industry is currently in a position to cover the basic clothing needs of the population.

The production of cotton fabrics increased from 21.5 million square metres in 1962 to about 44.0 million square metres in 1964. In 1962, the production of gunny bags was 2.8 million pieces, while in 1964 it reached 4.6 million pieces. It is anticipated that in 1967 the production of cotton fabrics will be 74.0 million square metres, while the production of gunny bags will be 6.0 million pieces. It appears that the current trend of growth of consumption will require far greater production than is anticipated.

It is necessary for Ethiopia to increase the assortment of textile goods produced in the country. Textile goods which are not currently produced or which are produced in small quantities must be stimulated. This would greatly diminish the large volume of imports of textile goods. In 1962, the value of imports of all kinds of textile goods amounted to $E45.5 million.

Because of favourable conditions, further investments are expected in the production of cotton yarns, quality cotton and woollen clothes, cotton and woollen knitwear, rayon, stockings and other textile goods.

The establishment of another umbrella factory and of more than one carpet factory seems to be economically feasible. The industrial programme foresees the establishment of carpet factories, lace-work factories and fibre plants using flax. Such industries do not currently exist. The availability of raw materials and the existence of demand make the establishment of gunny bag factories highly desirable.

C. Leather and shoes

Many foot-wear industries are planned, but only the canvas and rubber shoe factory, with an annual capacity of 1.5 million pairs, was completed in 1965.

The leather and shoe industry is expected to develop at a more rapid rate. The main raw material is available. Ethiopia exports large quantities of hides and skins.

The erection of new slaughter-houses has greatly increased the availability of properly treated hides and skins. The supply is therefore adequate to support several leather factories with a total capacity of 7,500 tons and shoe industries with a total capacity of 5 million pairs per annum.

Domestic consumption of leather and shoes is growing rapidly. The leather and shoe industry must, however, be oriented towards exportation.

D. Timber

The timber industry in Ethiopia is of recent development. At the current time, this industry mainly consists of sawmills and one plywood factory.

The most important factors for the development of wood industry are: (*a*) the availability of raw materials (sawlogs); and (*b*) the size of the market.

The main centres of consumption in Ethiopia are far from the ports. It is very costly to transport wood products from the ports to the centres of consumption. Because of this situation, the production and marketing of wood products in Ethiopia are characterized by: (*a*) a lack of competition from foreign countries in the centres of consumption of sawnwood; and (*b*) higher prices for low-quality sawnwood.

There are thirty-one sawmills, excluding Eritrea, which are situated around Addis Ababa and within 350 km of Addis Ababa. The annual output is estimated at about 40,000 to 60,000 cubic metres.

The main species of timber are:

(a) *Coniferous:* tedh (East African pencil cedar, *Juniperus procora*); Zigba (East African yellow wood, *Podocarpas gracilor*);

(b) *Non-coniferous:* kararo (*peuteria Ferruginea*), wanza (*Cordia Abyssinica*), amalacca (*Celtis Kraassiana*), sombo (*Ekbergia reupelliana*), brown olive (*Olea chrysophylla*), kosso (*Hagenia Abyssinica*), tukur inchet (red stinkwood, *pygeum Africanum*) and many others.

In addition to the above-mentioned sawmills, there is a plywood factory in Addis Ababa with an annual output ranging from 1,500 to 3,000 cubic metres of plywood. A veneer mill with a capacity of 3,000 cubic metres of peeled veneers per annum is being constructed in Jimma. A hardboard industry is also under construction.

In Ethiopia, there are some furniture industries with a large variety of production, but small carpenter shops predominate.

At the current time, there are no pulp and paper industries, but one pulp and paper factory, with a

capacity of about 7,100 tons per annum, is being constructed.

The future development of the timber industry depends upon many factors, including the *per capita* national income and the fiscal policy of the Government. The Government could encourage the exportation of wood products by means of tax deductions and thus stimulate the timber industry in the country. If the timber industry in Ethiopia is not encouraged to enter foreign markets, its development will depend only upon the growth of the national income. If this is the case, its growth will tend to be slow.

E. Building materials and non-metallic products

In some localities, there are building booms. It would be necessary to establish new industries to produce building materials and non-metallic products—and to expand existing ones also—in order to meet the demands of the construction industry.

Cement is the basic and most important construction material. Production of cement currently amounts to 180,000 tons. This more than covers the country's current requirements, and the possibilities of exportation to neighbouring countries merit consideration.

An asbestos cement plant is also under construction and is expected to substitute domestic products for imports of roofing materials. The establishment of five brick plants, with a total capacity of about 20 million pieces, and three new lime factories, with a capacity of 5,000 tons of hydrated lime per annum, is expected.

There are large reserves of good-quality clays in Ethiopia. The existing productive capacity of the ceramics industry will be expanded so as to meet domestic demand.

The establishment of a refractory-material plant to cover the needs of domestic metallurgy is being considered. The erection of an electro-insulator factory has been planned in order to create conditions for the rapid electrification of the country and to reduce the imports of such materials.

The availability of raw materials and the expansion of the market favour the establishment of building materials industries.

F. Chemicals

In spite of its rapid growth in the course of the last few years, the chemical industry is not yet sufficiently developed.

The high level of imports of chemical products and the existence of basic raw materials in Ethiopia call for an intensive development of the chemical industry.

The existence of large quantities of wood justifies the production of pulp for the new paper and viscose factories of larger capacities. The erection of a caustic soda factory and a carbon bisulphide factory, together with the production of sulphuric acid, has been planned to meet the needs of these factories. Their products will also meet the needs of other chemical plants.

One of the largest chemical projects is the oil refinery which is now under construction. It will begin production in 1966 and will refine 500,000 tons of crude oil annually. Its capacity may later be doubled, especially if crude oil is domestically produced. After the erection of the refinery, there may be possibilities for developing a petrochemical industry.

The existence of a sufficient supply of domestic raw materials justifies the establishment of additional soap factories. The 1962 import of soaps, detergents etc., accounted for some $E4.0 million.

The availability of domestic raw materials derived from certain types of trees, coupled with the increased needs of the leather industry, is a basis for constructing two large tanning factories, while deposits of quartz and sandstone are the basis for the expansion of the glass industry. In addition to enlarging the existing glass factory, the building of a larger factory to manufacture glass sheets is being planned.

The increasing demand for pharmaceutical products, perfumery, cosmetics and dentifrices—the total import value of which amounted in 1962 to $E7.0 million—demonstrates the need to produce them domestically.

Among the other new projects to be established within this branch of industry are a fertilizer plant, a polyvinyl chloride plant, a paint factory, a plastic products factory and a tire plant.

G. Steel, other metals and electrical products

The sector comprising steel, metals and electrical products has yet to develop sufficiently. At the current time, there are about nine small steel and metal industries.

The Ethiopian Iron and Steel Company produces round iron bars for reinforced concrete, nails and steel structures. It utilizes local scrap-iron.

The setting up of steel industries is part of the industrial programme for the realization of machine-building industries. Consequently, an increase of $E10.6 million in the gross product is foreseen for 1967. Planned investments for the period 1963-1967 are $E57.5 million.

Owing to the need for developing the steel, metal and electrical products industry for economic development, the erection of a large number of projects is foreseen.

When the domestic supply of iron-ore is secured, it will be possible to build a steel plant of an estimated capacity of 80,000 tons. On the basis of this production and that of the completed ironworks at Akaki, it will be possible to begin more intensive and extensive construction of a metal and electrical products industry to satisfy the country's basic needs.

It has been planned to erect an agricultural-machine and tool factory, a metal-processing plant, a metal-construction plant and a household appliance plant.

Production of tractors will begin with the erection of a tractor assembly plant during the initial phase, and ship repair and reconstruction will be begun with the building of ship-repairing workshops. Similarly, the erection of a motor-car assembly is foreseen.

The demand for domestic utensils and similar goods are met by a number of existing aluminium and plastic-ware industries.

In the sector of electrical products, factories for motor-car batteries, electrical installations and electric bulbs are expected to be established.

H. Printing and publishing

The expansion of the existing plants to meet the domestic needs in printing and publishing industry is envisaged.

I. Small-scale industries

Apart from the need to erect some large-scale projects which would serve as foundations for the country's industrialization, there also exists a favourable condition for establishing small-scale industries in almost all branches of manufacturing.

The erection of milk-processing plants, alcohol-extraction plants and factories for the preservation of fruits and vegetables is feasible. Favourable conditions exist for constructing small-scale plants for freezing, drying and processing of vegetables, which grow in Ethiopia throughout the entire year and which are of excellent quality.

The processing of the by-products of various groups of food industry favours the development of small-scale plants for such products as blood, meat and bone-meals, which happen to be very suitable components of compound animal-feeds.

Favourable conditions also exist for organizing the processing of qualitative stone, timber, pottery, various kinds of knitted wear (plaiting), basket-making etc., in small plants, using available raw materials.

In some of the above-mentioned fields, private investment has already made considerable progress, and no need is felt for the public sector to make major efforts. Therefore, it is expected that the initiative in many of the small-scale processing industries would come from the private sector.

V. Industrial policies

The industrial policy of the country centres mainly around the creation of processing industries based on the abundant local raw materials, the establishment of industries with growth potential and the erection of export-oriented industries or industries which meet local demand.

The Investment Corporation's main task is to undertake new enterprises through equity participation or underwriting, and by advancing loans to new and existing enterprises. But it is also expected to canalize domestic savings to industrial development. The Technical Agency is envisaged to give support to private enterprise through feasibility studies on a free or a small-fee basis.

The fiscal policies that the Government pursues in respect to its industrialization policy are outlined mainly in the Investment Law, the Income-Tax Law and the Customs Tariffs.

The Investment Law covers many topics and its contents are summarized below.

A. Income-tax relief

Newly established enterprises with an investment of not less than $E200,000 are exempted from the payment of income-tax for a period of five years, beginning from the date of commencement of operations.

An enterprise, whether existing or newly established, with an investment of not less than $E400,000 for extension or expansion is exempted from the payment of income-tax for a period of three years, provided that the new extension is operated as a separate technical unit with a separate account.

B. Import duty relief

Agricultural and industrial machines, implements, appliances or parts thereof which are imported for exclusive use in agricultural and industrial enterprises are exempted from the payment of import duties, transaction taxes, municipal taxes and other taxes and duties levied on imports, provided, however, that similar goods are not being produced in Ethiopia.

Structural and other building materials which are imported for direct and exclusive use in constructions destined to house industrial enterprises could be exempted from the payment of import duties and all other taxes upon the recommendation of the Investment Committee. Exemption is only applied to goods which are not being produced within Ethiopia.

C. Export duty relief

Manufactured finished goods destined for exportation may be exempted from export duties and transaction taxes on exports for a reasonable period of time if such exemption is found necessary to ensure the competitive position of these goods on the export markets.

D. Remittance of foreign exchange

The National Bank of Ethiopia shall make available the foreign exchange necessary for:

(*a*) The remittance of profits of foreign investors to their countries of origin;

(*b*) The repatriation of the net proceeds of a foreign investor upon partial or total sale or liquidation of his investment;

(*c*) The payment of interest and the repayment of foreign loans by enterprises in accordance with the provisions of the Investment Decree, provided, however, that such loans are approved beforehand by the Minister of Finance or by an authority designated by him;

(*d*) The remittance of savings of foreign personnel, employed in enterprises, to their countries of origin, subject to the provisions of the Decree and in accordance with the regulations of foreign exchange;

(*e*) The purchase of replacement and spare parts, and other materials and goods required in connexion with operations.

E. Acquisition of immovables

Foreign investors in Ethiopia shall be allowed to acquire land for the purpose of establishing industrial enterprises.

There are two special laws which provide facilities to investors:

(*a*) No tax is levied or collected with respect to lubricants, furnace oil and diesel oil which are to be used for power-generating stationary engines.

(*b*) Salt destined for exportation and for industrial purposes is exempted from the payment of salt-tax.

F. Dividends

Under the Income-Tax Law, dividends are not taxable.

The above-mentioned laws and regulations apply to both domestic and foreign enterprises and, as such, no discrimination exists against foreign capital.

There are few laws regulating industrial enterprises. Industrial enterprises must have an industrial license, and they must be registered in the Commercial Register. Furthermore, they must comply with tax, health and labour regulations issued from time to time.

G. Protection

Protection is granted to industrial enterprises upon satisfaction that such protection is justifiable.

VI. Institutional framework

The Ethiopian Government enforces its economic-policy measures through different Ministries. The Ministry of Commerce and Industry is responsible for policy measures relating to the development of manufacturing industry and handicrafts.

According to the existing laws, the Ministry of Commerce and Industry has the power to supervise industries. It has the power to initiate laws regarding industry, to make regulations in accordance with the law, to encourage industry, to organize exhibitions showing development in industry and trade and to take all other steps necessary to promote industry and handicrafts. It has also the power to make proposals for the control of prices.

The Ministry is also responsible for the issuance of licenses to new industrial enterprises, for preparing proposals in matters concerning the protection of domestic industry and for initiating new industrial enterprises.

The Ministry is also responsible for standardization, quality control and issuance of patents, as well as general advice to industry.

An autonomous technical agency was established in July 1963, with the main aim of undertaking economic and technical feasibility studies relating to the establishment of economic and social development projects and state industrial enterprises envisaged in the development plans.

Furthermore, the agency is responsible for the preparation of necessary designs, for tenders and construction, for the preparation and negotiation of contracts, for the supervision of constructions and for recommending management personnel in new public enterprises.

The Technical Agency maintains close contact with the Ministry most directly concerned with any given project.

The Ethiopian Light and Power Authority was created by an Imperial Charter, and all its capital belongs to the Ethiopian Government.

The Planning Office is a governmental agency directly subordinated to the Prime Minister. Its main duties and functions are to act as a secretariat to the Planning Board, the main tasks of which are the preparation of plans and following up their implementation.

The Investment Corporation (earlier the Investment Bank of Ethiopia) is authorized to be the properietor of shares belonging to the State, to be the provider of private foreign and domestic capital for industrial investments and to be the participator in enterprises in which the State intends to be included.

The Development Bank of Ethiopia was established for the purpose of giving credit facilities to farmers and industrialists, and thus encouraging development activities in the country. This Bank is the only bank of major significance which provides medium- and long-term credit facilities to the private sector of the economy. The Bank gives five- to ten-year loans, depending upon the type of project.

The Commercial Bank of Ethiopia is the largest bank operating in the country. The Bank has branches in various important trading towns. As a general practice, the Commercial Bank gives loans for a short period of time. The Bank may sometimes lend for periods of up to five years, depending upon the purpose for which the money is to be used. Industrialists may get overdraft facilities and advances.

A. External assistance

Ethiopia receives external assistance from diverse sources through both multilateral and bilateral channels, and, as such, it is difficult to give the total amount of assistance on a comparable basis due to differences in currency and methods of compilation of aid received.

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3. INDUSTRIAL DEVELOPMENT IN KENYA

Presented by the Government of Kenya

CONTENTS

Introduction

Kenya has a total area of 225,000 square miles; of this total, 5,000 square miles are water and swamp areas. The country's eight provinces have a population of 9,352,000; the average density of population for the country as a whole is 42.5 persons per square mile.

One of the most important sectors of the economy of Kenya is based on the soil of the country. Agricultural land can be conveniently classified into four broad categories: soil of high, medium and low potential; and nomadic pastoral land. Land of high potential characteristically has either good soil conditions or more than 35 inches of rain per annum, or both. Land of medium potential receives rainfall of 25 to 35 inches per annum; land of low potential has 20 to 25 inches of rainfall per annum; and nomadic pastoral land has less than 20 inches of rainfall per annum. The agricultural economy of the country rests mainly on the 40,000 square miles of high-potential land lying in south-west and central Kenya. Some 170,000 square miles are pastoral country. In 1962, agricultural and livestock production accounted for 39 per cent of gross domestic product (including subsistence) and 89 per cent of exports (e.g., coffee, tea, sisal and pyrethrum). Furthermore, at least 1 million of the estimated 1.4 million families in Kenya derive their living solely from the land.

Tourism is second to agriculture in the economy of Kenya. The country's large national parks are major tourist attractions, providing one of the few remaining opportunities to see wild animals in their natural habitat. There is world-wide interest in the wild life of Kenya. In 1962, 68,000 documented visitors spent £77 million in East Africa, based on an average stay of sixteen days and an expenditure of £7 per day. The estimated share of Kenya in this expenditure, plus the expenditure of undocumented visitors to Kenya, put gross foreign-exchange earnings from tourism at £5.2 million in 1962. Only coffee and tea earned more foreign exchange for Kenya in that year.

Natural resources (e.g., forest reserves and mineral resources) are also an important factor in the Kenyan economy. The forest reserves satisfy a considerable amount of the country's consumption of timber. As far as mineral resources are concerned, Kenya is generally regarded as having no major deposits of such minerals as iron-ore and coal, although explorations for oil are continuing. Nevertheless, the geology of Kenya indicates that there should be economically exploitable deposits of such minerals as copper, gold, silver, lead, iron-ore, phosphates, platinum, manganese, nickel etc. In 1962, mineral production reached a value of £5 million per annum, but the potential is estimated to be far greater.

As far as the industrial sector of the economy is concerned, there has been an increasing trend towards industrialization in recent years. The largest concentration of industries is around Nairobi and Mombasa, but such places as Thika, Nakuru, Eldoret and Kisumu also play an important role. Many small- and medium-scale enterprises operate very successfully in those towns. Low wages, special rates for transport, water-supply and electricity are the favourable assets of the above-mentioned places which could help to attract new investors in the future.

After independence, Kenya began to mobilize its resources to attain a rapid rate of economic growth for the benefit of its people. The economic situation of Kenya was described in 1964 by Jomo Kenyatta, the President of Kenya:

> "Already much has been accomplished in the short space of time since independence, but a lot remains to be done if we are to achieve our declared goals. The Minister of Finance has stated that for the first time since 1952 Kenya will meet all her recurrent expenditure from her own resources. It is also good to note that our foreign exchange and balance of payments positions have shown considerable improvements since independence. There have been numerous delegations and enquiries about investment in Kenya in addition to the actual investments that have taken place. We have gone out to find new markets and new areas of technical and trade co-operation in the world".

I. Actual situation of industry in Kenya

The various sectors of the Kenyan economy have grown at different rates in the past. This fact is made abundantly clear in table 1, which shows the development of gross domestic product at factor cost for the industrial sector from 1955 to 1964.

Table 1. Kenya: gross domestic product at factor cost, industrial sector, 1955-1964 [a]

(Thousands of pounds)

Sector	*1955*	*1956*	*1957*	*1958*	*1959*	*1960*	*1961*	*1962*	*1963*	*1964*
Mining and quarrying	1,280	1,360	1,260	1,230	1,120	1,090	850	830	890	650
Manufacturing	17,440	18,180	19,800	20,520	20,230	21,620	22,730	23,040	24,830	26,670
Construction	8,040	9,340	9,630	8,380	7,940	7,860	7,800	6,760	4,890	4,280
Electricity and water	1,450	1,750	2,090	2,360	2,560	2,790	2,840	3,290	3,600	3,800
Transport and communication	15,180	15,780	18,640	17,690	19,030	20,340	21,150	22,260	24,620	25,640
Wholesale and retail trade	25,340	25,830	27,480	26,390	27,680	28,960	29,560	30,060	31,920	35,160
Banking and insurance	2,220	2,520	2,830	3,260	3,460	3,540	3,880	4,010	4,170	4,490
Services	10,090	10,730	12,110	13,110	14,580	15,500	14,140	14,210	15,410	17,560
Rents	5,260	5,800	6,650	7,510	8,050	8,700	8,140	8,430	9,360	9,550
TOTAL	86,300	91,290	100,490	100,450	104,650	110,400	111,090	112,890	119,240	127,800

[a] Recorded monetary economy.

Total gross domestic product in Kenya is estimated to have risen by 7.2 per cent, in monetary terms, in 1964, one of the highest rates of growth achieved in the last ten years. Only small changes in consumer prices were registered in the year—there was perhaps an over-all increase of 1 per cent—and the increase of 7.2 per cent in gross domestic product, in monetary terms, represented an increase in the goods and services on the domestic market of approximately 6 per cent. Thus, for the second successive year, the economy of Kenya achieved the target rate of growth set by the Government for the period of the Development Plan, 1964-1970, which is discussed in detail in a subsequent section of this report.

Considering table 1 in detail, it shows that three major sectors play an important role in the development of monetary gross domestic product. All three of them — manufacturing, transport and communication, and wholesale and retail trade — have increased in the last ten years, while the product of the small mining and quarrying sector was lower in 1964 than in any of the last ten years. This was due almost entirely to the cessation of oil prospecting.

The increase of the gross domestic product in the manufacturing sector was due to several factors. One of the main factors during the last few years was the opening of the new oil-refinery in Mombasa. The following table depicts the differing rates of progress of the various sectors of manufacturing industry.

Table 2. Kenya: quantity index of manufacturing production, 1960-1964

(1961 = 100)

Industrial group	*Base year weight*	*1960*	*1961*	*1962*	*1963*	*1964*
Food-stuffs	20.0	93	100	100	104	108
Beverages and tobacco	17.6	94	100	95	103	106
Textiles, clothing, foot-wear and leather	8.3	86	100	110	112	127
Wood, paper printing	12.6	116	100	95	106	121
Rubber and chemicals	12.1	87	100	94	86	146
Non-metallic minerals	10.7	105	100	101	102	124
Metal-working	17.6	91	100	123	125	119
Miscellaneous	1.0	102	100	105	119	157
TOTAL	100.0	96	100	103	106	120

The aggregate index for 1964 would have been 111 but for the oil-refinery, so between one-half and two-thirds of the growth in output can be attributed to the new industry. The remaining increase was chiefly the result of a higher level of activity in the cement and clothing textile industries. The most important of the manufacturing groups classified is the food-stuff industry. It showed an over-all increase, with rises in the grain-milling, bakery and fruit- and vegetable-canning industries, and slight falls in the meat, dairy and sugar industries. The beverage and tobacco industries showed a small rise, but this conceals a fairly large increase in the production of the breweries, which was partially offset by a decline in that of tobacco. The clothing industry is responding to protection given to it by higher tariffs and import licensing. The increase in the wood, paper and printing industries, which began in 1962, still continues. In 1964, the increase resulted from the rises in the furniture and fixture industry, as well as from the steady expansion of the paper and printing industry.

The increase in the rubber and chemicals group was entirely due to the oil-refinery; excluding this, the group shows some decline, the rises in wattle extract and soap being too small to reverse the fall in soda ash production. The planned capacity of the refinery was 2 million tons per annum, and the through-put in 1964 was about three-quarters of that figure. The manufacturing group called "non-metallic minerals" largely consists of the cement industry, and its 20 per cent expansion was entirely due to the large increase in cement production (up by 25 per cent). The metal-working industries declined with the establishment of competing plants in Uganda and the United Republic of Tanzania, and with less railway repair work.

Table 3 gives further evidence of increase, as can be seen from the net output of the manufacturing production in selected years, as well as from the annual rates of growth. The "share of total manufacturing output" shows the share of each manufacturing group in total manufacturing production in 1961.

Table 3. Net output and rates of change of manufacturing industries in Kenya

Industrial group	Net output (thousands of pounds)			Share of total manufacturing output (percentage)	Annual rate of growth (percentage)	
	1954	1957	1961	1961	1954-1957	1957-1961
Meat, dairy and canned products	860	820	1,510	7.7	−1.6	8.3
Other food products	1,430	1,750	2,430	12.3	7.1	7.9
Beverages and tobacco	1,900	3,550	3,490	17.6	23.2	9.0
Textiles, clothing, foot-wear and leather	830	1,080	1,640	8.3	9.2	10.4
Wood, paper and printing	2,620	2,700	2,490	12.6	1.0	−0.7
Rubber and chemicals	2,040	2,030	2,400	12.1	−0.2	2.3
Non-metallic minerals	1,160	1,540	2,110	10.7	9.8	8.9
Metals and associated industries	2,040	3,750	3,490	17.6	22.6	4.5
Miscellaneous	270	180	210	1.0	−12.6	−3.5
TOTAL	13,150	17,400	19,770	100.0	9.8	6.0

The output of the various manufacturing groups shows the different rates of increase in the production of consumer goods and investment goods in the past. The rapidly growing manufacturing industries have tended to be those producing consumer goods, whether for exportation or domestic trade.

A. Size of current manufacturing industries

The size of a developing industry is indicated by various important facts. The main characteristics are the number of establishments, number of employees, costs, gross production, value added and net output. Table 4 shows a summary of data for 1963 for the following industrial groups: mining and quarrying; building and construction; electricity; manufacturing and repairs.

Without doubt, the largest of these groups is that of manufacturing and repairs. In 775 establishments, 49,829 persons were employed in 1963, and the total gross production was £74,803,000. Within the group, for the sector producing investment goods, the largest industries, in terms of number of employees and gross production, were railway rolling-stock and metal products. Among the industries producing durable con-

Table 4. Kenya: Summary data for various industrial groups, 1963

	Number of establishments	Number of employees	Number of establishments according to number of employees			Gross production	Industrial costs	Value added	Net output	Kind of products
			5–19	19–49	Over 50	(Thousands of pounds)				
Mining and quarrying										
Crude petroleum	1	488	—	—	1	1,138	307	831	408	Investment goods
Metallic minerals	5	811	3	1	1	607	203	405	314	
Non-metallic minerals	2	13	2	—	—	1	1	—	—	
Quarry products	44	1,326	17	21	6	524	146	379	263	
TOTAL	52	2,638	22	22	8	2,270	656	1,614	985	
Building and construction										
Private	146	6,990	60	52	34	5,965	3,233	2,732	2,007	
Public	56	22,142	11	14	31	8,966	4,845	4,121	3,733	
Electrical contracting	18	528	10	6	2	570	262	308	254	
TOTAL	220	29,660	81	72	67	15,502	8,340	7,162	5,994	
Electricity, TOTAL	9	2,194	—	2	7	5,281	1,848	3,433	2,988	
Manufacturing and repairs										
Meat products	8	2,068	1	2	5	6,296	5,124	1,172	881	Non-durable consumer goods
Dairy products	16	881	4	5	7	4,872	3,784	1,124	605	
Canned fruit and vegetables	4	994	—	2	2	1,011	705	307	180	
Grain-mill products	39	1,973	26	6	7	9,114	6,857	2,257	1,926	
Bakery products	37	1,086	25	10	2	1,826	1,290	536	326	
Sugar	3	1,500	1	—	2	1,643	1,054	755	463	
Confectionery	2	87	—	1	1	165				
Miscellaneous foods	13	535	7	3	3	589	436	153	94	
Spirits	1	35	—	1	—	57	1,374	2,679	2,195	
Beer and malt	16	2,023	5	4	7	3,996				
Soft drinks	18	752	7	6	5	1,278	2,312	1,651	1,924	
Tobacco	1	702	—	—	1	2,685				
Soap	17	788	11	3	3	3,275	2,158	1,116	728	

Table 4. Kenya: Summary data for various industrial groups, 1963 (*continued*)

	Number of establishments	Number of employees	Number of establishments according to number of employees			Gross production	Industrial costs	Value added	Net output	Kind of products
			5-19	19-49	Over 50	(Thousands of pounds)				
Cordage, rope, twine	6	2,233	1	2	3	1,343	688	655	560	
Textiles	10	1,820	—	1	9	1,342	879	463	362	
Clothing	15	704	3	5	7	1,084				
Foot-wear	2	1,177	—	—	2	1,792	1,755	1,121	1,039	
Sawn timber	64	5,299	16	13	35	1,199	305	894	564	
Other wood products	7	320	4	1	2	217	123	93	75	
Furniture, fixtures	74	1,218	5	14	3	1,113	616	497	409	Durable Consumer goods
Paper and products	11	706	3	3	5	1,521	881	639	575	
Printing, publishing	73	2,977	41	20	12	4,102	1,877	2,225	1,799	
Tanning, leather goods	10	503	3	4	3	553	345	207	174	
Rubber products	10	276	6	3	1	543	355	189	143	
Basic industrial chemicals	15	1,561	4	3	8	2,445	970	1,475	1,356	
Paints	4	246	—	1	3	659	452	207	148	
Miscellaneous chemicals	20	864	15	3	2	4,191	3,006	1,185	301	
Clay, concrete products	17	533	6	7	4	301	131	170	134	
Glass and products	3	307	—	1	2	462	177	286	245	
Cement, other minerals	7	921	2	—	5	2,312	884	1,428	1,042	
Metal products	48	2,870	31	6	11	5,276	3,457	1,819	1,468	
Non-electrical machinery	35	711	20	15	—	612	288	323	266	
Electrical machinery	19	251	17	2	—	278	125	153	112	Investment goods
Shipbuilding, repair	12	2,107	4	2	6	949	286	663	621	
Railway rolling stock	1	6,392	—	—	1	2,616	1,604	1,012	997	
Motor-vehicles	17	464	7	7	3	507	294	213	170	
Motor repairs	96	1,454	70	25	1	1,790	1,188	602	491	
Miscellaneous manufacturing	24	491	20	2	2	792	478	313	214	
TOTAL	775	49,829	417	183	175	74,803	46,223	28,580	22,585	
ALL INDUSTRY — TOTAL	1,056	84,321	520	279	257	97,856	57,067	40,789	32,551	

sumer goods, the largest were printing and publishing, basic industrial chemicals, miscellaneous chemicals, sawn timber and cordage, rope and twine. The leading manufactures of other consumer goods were meat products, grain-mill products, dairy products and beer and malt. Considering the three other groups, which may be classified as manufactures of investment goods, a leading position is held by building and construction in the public sector.

Most of the manufacturing groups consist almost equally of small- and medium-scale establishments. Only grain-mill products, bakery products, printing and publishing, soap, miscellaneous chemicals, metal products and motor repairs have an overwhelming majority of small-scale enterprises with five to nineteen employees.

The relationship between industrial costs and value added gives an indication of intensity of production, while the "net output" shows the economic performance of each group.

With regard to the relationship of investment goods to consumer goods, more than half of the employed persons, about 45,000, are working in the investment goods industries, while only 12,600 persons are employed in the industries producing non-durable consumer goods. These figures give an indication of the importance of investment goods production in the industry of Kenya.

B. Market situation of industry in Kenya

One of the main factors in industrial development is the exportation of industrial products. As far as export trade is concerned, the main partners for Kenya are its two East African neighbours—Uganda and the United Republic of Tanzania. Kenyan exports to these two countries have been expanding rapidly during recent years, and in 1964 the increase was larger than ever before. Interterritorial trade plays an increasingly important part in the economies of the East African countries. For Kenya, these exports now account for almost 50 per cent of external sales, whereas five years ago, they were about 30 per cent. Interterritorial exports have doubled in the past five years and have increased by 50 per cent in the last two.

Table 5 shows the development of exports to Uganda and the United Republic of Tanzania since 1959. The items include both industrial and agricultural products.

According to table 5, in 1964 the increase in exports was particularly large because of the addition of the products of the oil-refinery at Mombasa. The total increase was £6.1 million, and of this, £2.5 million was in petroleum products. This rise was fairly evenly shared between Uganda and the United Republic of Tanzania, although exports to the latter moved up slightly less, particularly if petroleum products are excluded. Table 5 is intended to show both the changes between 1963 and 1964, and the longer term changes which have led to doubling of these exports in five years.

The greater rise in exports to Uganda is seen to be the result of a larger increase in food exports, which, in turn, can be narrowed down to a gain of £600,000 in milled-wheat flour resulting from the closure of the Jinja Mill in Uganda, owing to the rising level of Lake Victoria. As the mill has been rebuilt, these exports are falling in 1965. Apart from food exports, the change in exports will be seen to be very similar for

Table 5. Value of interterritorial exports from Kenya, 1959, 1963 and 1964

(Thousands of pounds)

Item	Exported to Uganda			Exported to United Republic of Tanzania		
	1959	1963	1964	1959	1963	1964
Food						
Meat and meat preparations	139	137	139	140	170	209
Dairy products	589	695	763	247	281	271
Cereals and cereal preparations	824	714	1,549	882	1,147	1,096
Fruit and vegetables	102	193	201	147	338	276
Coffee and tea	174	190	119	494	351	332
Other foods	219	335	477	156	353	540
TOTAL	2,047	2,264	3,248	2,066	2,640	2,724
Beverages and tobacco						
Beer	100	100	156	371	581	805
Cigarettes	751	783	802	895	1,127	823
Other	301	345	310	29	59	112
TOTAL	1,152	1,228	1,268	1,295	1,767	1,740
Basic materials and fuels						
Petroleum products	16	21	1,045	3	27	1,468
Other	149	168	181	219	222	214
TOTAL	165	189	1,226	222	249	1,682
Manufactured goods						
Chemicals and products	440	1,275	1,339	434	1,073	1,687
Bicycle tires and tubes	80	203	181	20	124	100
Paper and paperboards	203	365	447	77	338	418
Sisal bags and sacks	222	266	378	60	79	118
Other textile articles	66	276	424	78	191	250
Cement	95	149	119	682	537	764
Iron and steel	15	721	699	12	406	165
Non-ferrous metals	—	81	111	—	65	24
Metal manufactures	484	442	837	474	669	780
Clothing	216	568	868	375	830	1,134
Foot-wear	246	517	605	333	683	793
Other	338	862	797	334	648	831
TOTAL	2,405	5,716	6,805	2,879	5,643	7,064
Miscellaneous	15	28	34	50	66	88
GRAND TOTAL	5,784	9,425	12,581	6,513	10,365	13,299

both countries, with beverage and tobacco exports almost unchanged, basic materials and fuels up with the petroleum exports and manufactured goods up by 20-25 per cent. This is a very large increase, particularly as some exports were hit by the establishment of competing industries, e.g., bicycle tires and tubes, cement (in Uganda only), iron and steel plates and sheets, and so on.

The 1959 figures in table 5 show that, apart from one or two food items and petroleum products, the increases in exports to Uganda and the United Republic of Tanzania have been in manufactured goods, and, for these, over the five years, the annual rate of increase is about 20 per cent for both countries.

In table 6, an estimate has been made to break down (by percentage) the total value of manufactured goods consumed within Kenya and exported to East African countries in 1963.

The first part of table 6 shows the groups of investment industries which mainly supply their products to the Kenyan market (except metallic minerals, of which 99 per cent is exported, and quarry products, of which 10 per cent is exported).

Table 6. Kenya: value of production and breakdown by exports and domestic consumption, 1963

Industry	Total value (thousands of pounds)	Destination of exports: East Africa	Destination of exports: Other	Total exports	Domestic consumption
		(Percentage)			
Mining and quarrying					
Crude petroleum	1,138	—	—	—	100
Metallic minerals	572	—	99	99	1
Non-metallic minerals	1	—	—	—	—
Quarry products	513	—	10	10	90
TOTAL	2,224	—	28	28	72
Building and construction					
Private	5,897	—	—	—	100
Public	8,966	—	—	—	100
Electrical contracting	566	—	—	—	100
TOTAL	15,430	—	—	—	100
Electricity	2,015	—	—	—	100
Manufacturing and repairs					
Meat products	6,046	11	43	54	46
Dairy products	4,853	21	14	35	65
Canned fruit and vegetables	1,068	6	79	85	15
Grain-mill products	8,450	16	8	24	76
Bakery products	1,790	9	1	10	90
Sugar	1,638	—	—	—	100
Confectionery	110	—	—	—	100
Miscellaneous foods	598	—	—	—	—
Spirits	36	25	—	25	75
Beer and malt	3,772	15	—	15	85
Soft drinks	1,280	5	1	6	94
Tobacco	2,685	44	—	44	56
Cordage, rope and twine	1,335	36	18	54	46
Textiles	1,368	35	22	57	43
Clothing	966	35	10	45	55
Foot-wear	1,756	57	3	60	40
Sawn timber	1,181	25	25	50	50
Other wood products	210	40	10	50	50
Furniture and fixtures	1,103	20	5	25	75
Paper and products	1,513	25	3	28	72
Printing and publishing	3,562	5	2	7	92
Tanning and leather goods	531	9	47	56	44
Rubber products	500	15	—	15	85
Basic industrial chemicals	2,400	4	72	76	24
Paints	660	33	1	34	66
Soap	3,104	43	2	45	55
Miscellaneous chemicals	3,495	5	70	75	25
Clay and concrete products	307	5	—	5	95
Glass and products	520	22	16	38	62
Cement and other minerals	2,287	33	25	58	42
Metal products	5,323	34	9	43	57
Non-electrical machinery	599	5	—	5	95
Electrical machinery	266	5	—	5	95
Shipbuilding and repair	934	—	—	—	100
Railway rolling-stock	2,616	—	—	—	100
Motor vehicles	516	—	—	—	100
Motor repairs	1,209	—	—	—	100
Miscellaneous manufacturing	681	10	—	10	90
TOTAL	71,266	19	16	35	65
All industry: TOTAL	90,934	19	16	35	65

The second part of table 6 shows the manufacturing and repair groups of industries, which export an average of 19 per cent of their production to East Africa and 16 per cent to other countries. Therefore, the average export rate of Kenyan manufacturing industries is about 35 per cent of production, while consumption in the Kenyan market itself is about 65 per cent.

Some of the manufacturing industries primarily supply the local market, while others are mainly based on exports.

Eleven manufacturing groups export 50 per cent and more of their total value of products and hence p ay an important part in the international trade of Kenya. Three of these groups export 75 per cent and more of their products, namely, meat products, basic industrial chemicals and miscellaneous chemicals. Most of the investment goods, however, are produced almost entirely for the Kenyan market, for example, the machinery enterprises, shipbuilding and railway repairs, motor-vehicles and motor assembling and repairs. The food manufactures play a considerable part in exports.

II. Future development of industry in Kenya

The period of political transition in Kenya is over, and the Government, with a clear mandate from the people, has turned its attention to the development of the country. Kenya must now marshal its many resources and direct them towards the achievement of vigorous economic growth. For the Government to perform its role successfully, early decisions will be made on several economic choices. These decisions will influence substantially the rate at which the economy grows and the speed with which the welfare of its citizens is increased and their demands for a better life satisfied.

A. Estimates of increase

Estimates of increase of several factors of the economy in Kenya can be made up to 1970. By that year, Kenya is likely to have a population of 11 million people divided among approximately 1.8 million families. On the average, each family should have an annual income of nearly £200. Thus, despite an increase of 400,000 in the number of families, the income of the average family should be £30 higher in 1970 than in 1962. To provide for the additional 400,000 families and, at the same time, to raise average family income by £30, the economy must generate a total income of £364 million in 1970, an increase of £121 million or 50 per cent over the 1962 level. Approximately two-thirds of the increase will be used to support more families and one-third to raise living standards. The bulk of the increased income of £30 per family will result from growth of the monetary sector of the economy. Hence, in 1970 a larger proportion of economic activity will be canalized through markets and exchanged for money than was the case in 1962, indicating a higher degree of specialization in the economy.

Table 7 shows that the monetary gross domestic product is expected to grow at an average rate of 5.7 per cent per annum. Providing for additional families will require a rate of growth of 3.1 per cent, leaving 2.6 per cent per annum as the rate of increase in *per capita* monetary income.

Table 7. Kenya: total and *per capita* gross domestic product, 1962 and 1970

Sector	1962 – actual		1970 – estimated		Annual rate of growth, 1962-1970 (percentage)	
	Total (millions of pounds)	Per capita (pounds)	Total (millions of pounds)	Per capita (pounds)	Total	Per capita
Monetary	180.0	20.9	280.7	25.4	5.7	2.6
Subsistence	63.3	7.4	83.7	7.6	3.5	0.4
Gross domestic product	243.3	28.3	364.4	33.0	5.2	2.1

The rates of growth in table 7 have been estimated without regard to price changes, because it is difficult to eliminate price changes from past data.

By 1970, the monetary sector of the economy should comprise 77 per cent of all economic activity. Table 8 shows the estimated effects; product prices are assumed to be constant throughout the table.

Services comprise three groups: religious, medical and educational; domestic and hotel; restaurant and recreational. With the expected rapid increase in travel and tourism, the last group, as well as hotels, should grow very rapidly indeed, but the other groups, particularly domestic services, are not expected to do so well.

Agriculture will continue to be the dominant sector of the monetary economy. The rate of growth anticipated for agriculture (see table 8) is dependent upon two assumptions: (*a*) the necessary private investment will be forthcoming; and (*b*) export prices of main agricultural crops will not decline over the period up to 1970.

Value added in manufacturing should grow at a substantial rate over the period, but this rate is heavily de-

Table 8. Kenya: monetary gross domestic product, by economic sectors, 1962 and 1970

Sector	Contribution to monetary gross domestic product (millions of pounds)		Annual rate of growth, 1962-1970 (percentage)
	1962 (actual)	1970 (estimated)	
Electricity and water	2.98	5.80	8.7
Services	14.21	25.34	7.5
Bank, insurance and real estate	4.01	6.88	7.0
Forestry	0.95	1.64	7.0
Agriculture and livestock	37.79	63.95	6.8
Transport, storage and communications	22.21	37.32	6.7
Rents	8.39	13.69	6.3
Manufacturing	23.04	34.82	5.3
Construction	6.76	9.99	5.0
Fishing and hunting	0.81	1.17	4.7
Government services	28.02	39.85	4.5
Wholesale and retail trade	30.02	39.24	3.4
Mining and quarrying	0.82	1.05	3.0
Monetary gross domestic product	180.01	280.74	5.7

pendent upon the investment of private funds and the growth of interterritorial demand. The rate shown in table 8 has been adjusted to reflect reasonable assumptions in both respects.

B. Programme of industrial development

Under the policy of African socialism, the Government is fully committed to raise the standard of living of the majority of the people of Kenya. In order to do this, the Government fully realizes that it must promote a policy whereby all sectors of the economy will grow. A plan has been made, therefore, to establish new economic institutions and to modify old ones, freely choosing the model from the successful economies of the world, adapting them to suit Kenyan conditions and, in the process, developing new concepts of economic organization. The only criterion is the effectiveness of the institution in achieving greater economic welfare for all the people.

The Government has published and is implementing a six-year Development Plan in which the importance of private industry is emphasized. The plan requires a total investment by the private sector of £188 million over the period 1964-1970, and specific growth targets have been set for various industries.

Close co-operation between the Government and the private sector is a key element of the Development Plan over the next six years. Public-sector capital formation will be of the order of £20 million per annum. The balance needed to sustain an adequate rate of growth of the economy must come from the private sector. If the amount available from this source is on the order of £15 million per annum, the economy should grow at approximately 3 per cent annually, but with the population growth at that rate, this would provide little margin for raising living standards. To approach a growth rate approaching 6 per cent and a reasonable increase in *per capita* income, steps must be taken to stimulate a level of gross private investment in the region of £35 million per annum.

In addition to the need for a high level of private investment, the capital formation undertaken by both the Government and private investors must be closely co-ordinated to ensure that the capital resources shall be used most efficiently.

The Government is fully committed to industrialize as soon as possible, and in order to encourage this, it has drawn up a priority list of the industries considered most desirable.

C. Industrial priorities

In allocating industrial priorities, proposed industries are ranked according to the degree to which they satisfy the following criteria:

(*a*) Significant export- or import-substitution potential, in order to improve the foreign-exchange earning and saving capacity of Kenya through a reduction in the current adverse balance of trade;

(*b*) Contribution of the greatest possible value added within Kenya (i.e., the maximum possible processing of primary products or the earliest possible stage of manufacturing for import substitution), to ensure a substantial increase in gross domestic product;

(*c*) A high labour-capital ratio, in order to relieve the serious labour-surplus problem and to recognize the scarcity of capital in Kenya;

(*d*) Production of investment goods, in order to enable Kenya to approach self-sustaining growth;

(*e*) Contribution to the diversification of the economy, in order to reduce the risk to the economy of price fluctuations in one or two of its major exports and to broaden the base for growth.

An overriding consideration in allocating industrial priorities will, of course, be the efficiency of the proposed industry. Efficient industries will be able to compete in international markets without help from the Government, and the need for concessions and protection will, therefore, be considerably reduced. It is recognized, however, that at its current state of development, the economy of Kenya may not offer opportunities for highly efficient operations, particularly in the early stages. Industries which substantially meet the above-mentioned criteria and which show a potential for profitability at a later stage, therefore requiring only temporary protection, will be given the highest priority for protection or other support.

D. Protection for local industries

Attractive protection is available in Kenya to foreign investors wishing to establish a local industry, for example, in the forms mentioned below:

(*a*) Protection is sometimes made available to local industries through the East African Tariff Committee. Kenya, Uganda and the United Republic of Tanzania work closely to establish a common level of tariffs, but this is done sparingly and a firm has first to show that it is capable of meeting the local demand and to prove that external competition is disruptive. Suspended tariffs are also used to attract firms of international standing, as an encouragement for them to set up plants in East Africa to produce goods comparable to those which they import;

(*b*) Industrial licensing is also used to protect an industry from outside competition when it is felt that the market offered the three above-mentioned East African countries does not justify the existence of more than one firm. This is done by the East African Industrial Licensing Council, whose primary purpose is to provide for the orderly promotion and development of particular industries and to prevent the establishment of too many uneconomic units;

(*c*) Refunds of customs duty are also made available in respect of raw materials imported for a manufacturing process which is carried out in Kenya. The purpose of these refunds of duty is to encourage firms to establish manufacturing plants in Kenya and also to make them able to compete with foreign imported articles of similar make;

(*d*) Further inducement to investors is afforded through a low company tax and the provision of a generous investment allowance on the costs of new equipment and buildings;

(*e*) The Foreign Investment Protection Act of 1964 provides an additional guarantee on capital to foreign investors by stating that foreign assets cannot be confiscated, and it also makes provision for repatriation of money from Kenya, subject to very reasonable foreign-exchange regulations.

Unfortunately, Kenya, at the time of independence, found itself in a position where the economy of the country was, to a large extent, controlled by foreigners.

The Government is now fully committed to righting this imbalance in order to give African citizens their rightful place in running and owning industrial and commercial enterprises. In order to achieve this aim, the Industrial and Commercial Development Corporation (ICDC) has been set up to promote industries with African participation under the Government's small-industries programme (see table 9). Secondly, the Corporation will aid Africans in commerce through the provision of loans and advice.

Table 9. Kenya: estimated expenditure for small industry and commerce
(Pounds)

	1964/1965	1965/1966	1966/1967	1967/1968	1968/1969	1969/1970	Total
Industrial and Commercial Development Corporation							
Industrial loans	39,000	39,000	49,000	49,000	49,000	46,000	271,000
Traders' loans	25,000	25,000	25,000	40,000	40,000	40,000	195,000
Operating deficit	18,000	17,000	17,000	13,000	10,000	6,000	81,000
	82,000	81,000	91,000	102,000	99,000	92,000	547,000
Less:							
Internally generated funds	(7,000)	(14,000)	(20,000)	(28,000)	(37,000)	(45,000)	(151,000)
Loan guarantees (traders)	(25,000)	(25,000)	(25,000)	(40,000)	(40,000)	(40,000)	(195,000)
Government contribution	50,000	42,000	46,000	34,000	22,000	7,000	201,000
Nakuru Centre	25,000	25,000	25,000				75,000
People's shops (feasibility study)	1,000						1,000
TOTAL—GOVERNMENT	76,000	67,000	71,000	34,000	22,000	7,000	277,000
TOTAL—GOVERNMENT PLUS ICDC	108,000	106,000	116,000	102,000	99,000	92,000	623,000

The Corporation currently operates with a revolving loan fund of £30,000 for industrialists. It will be necessary to supplement this fund over the next six years to achieve an annual rate of lending approaching £50,000. By 1970, the capital of the ICDC should be sufficient to meet the annual loan requirement without additional capital from the Government. It is estimated that the successful implementation of the small-industry programme should, by 1970, result in the establishment of over 200 new small industrial ventures employing about 200 persons. The Corporation will have directly invested about £300,000, but matching financing should bring the total investment generated to £1 million.

The Government has also set up the Development Finance Corporation of Kenya (DFCK). The Government has a large financial interest in the Corporation, which was inaugurated in 1963 and which has continued to grow in reputation both in Kenya and abroad. The company was formed with an initial capital of £1.5 million. Most of this capital is already committed to various enterprises. DFCK considers only large loans of about £20,000 and, therefore, through it, the Government is able to participate with private capital where large investments are contemplated. The company is prepared to invest in a wide range of industries, including agriculture, manufacturing, tourism etc. Investment is possible in the form of either loans or shares.

E. Capital requirements

It is worth while at this stage to mention the capital requirements necessary for the development programme. A summary of the public-sector expenditure programmes discussed in this chapter is given in table 10. It shows that all public bodies are expected to spend £132.2 million on development over the six years, 1964-1970. Of this total, £10.9 million represents transfer payments in the form of land purchase, so that public-sector investment is expected to be £121.3 million, an average of £20.2 million per annum. By far the greatest proportion of expenditure will be on basic services, which account for 41.0 per cent of the total; in fact, electric power and rail transport together account for over one-fourth of public-sector development expenditure. The emphasis placed on agriculture is evidenced by the 32.7 per cent of expenditure devoted to agriculture, land consolidation and land settlement. Social services will receive an estimated 12.5 per cent, with well over half of this going to education.

Table 10. Kenya: expenditure by public sector, 1964/1965-1969/1970
(Thousands of pounds)

	1964/1965	1965/1966	1966/1967	1967/1968	1968/1969	1969/1970	Total
Public-sector expenditure	21,977	22,593	25,011	22,160	21,474	19,018	132,233
***Less:* transfer payments**	4,373	2,128	1,100	1,100	1,100	1,100	10,901
Public-sector investment	17,604	20,465	23,911	21,060	20,374	17,918	121,332
***Less:* public non-governmental bodies investment**	5,476	8,389	13,031	9,975	8,761	5,978	51,610
Government investment	12,128	12,076	10,880	11,085	11,613	11,940	69,722
***Less:* investment on settlement**	3,703	2,953	1,572	535	—	—	8,783
Government investment, excluding settlement	8,425	9,123	9,308	10,530	11,613	11,940	60,939
***Add:* settlement and transfer payments**	8,076	5,081	2,672	1,655	1,100	1,100	19,684
Government development expenditure	16,501	14,204	11,980	12,185	12,713	13,040	80,623

Almost 40 per cent of public-sector expenditure is in the hands of bodies which are partially or entirely independent of the Government, and this percentage is not included in the annual development estimates. Thus, government expenditure is estimated to be £80.6 million over the six years, and an estimated £69.7 million of this will be investment. In the first four years, £13.1 million will be devoted to the completion of the settlement schemes, which will be phased out over the period. To a certain extent, resources freed from settlement can be transferred to other development. In particular, major irrigation schemes already under construction may account for £3 million of development expenditure in 1969/1970 and will become the dominant type of agricultural development towards the end of the planning period. But this will not be sufficient to prevent the total government development expenditure from falling over the six-year period. However, this is due entirely to the extraordinary nature of the settlement schemes, and it is anticipated that investment on projects other than settlement will rise from £8.4 million in 1964/1965 to £11.9 million in 1969/1970. This increase of 6 per cent per annum will allow government investments to keep pace with an expanding economy. Furthermore, additional land purchase and development schemes, which are under consideration and are not included in the previous figures, may fully compensate for the projected decline in government expenditure.

F. Public and private capital formation

The capital formation needed to sustain the estimated rate of economic growth is indicated in table 11. Some of the growth indicated in table 8 can be attained by utilizing the excess capacity that currently exists in the economy, particularly in the manufacturing, construction and trade sectors. For this reason, the private-capital formation required over the period is somewhat less than would be needed if the economy were operating at full capacity.

Table 11. Kenya: gross capital formation, public and private

Sector	*Actual, 1954-1962*			*Estimated, 1964-1970*		
	Amount	*Average per annum*	*Share of total gross capital formation (percentage)*	*Amount*	*Average per annum*	*Share of total gross capital formation (percentage)*
	(*Millions of pounds*)			(*Millions of pounds*)		
Public	136	15	38	129	22	40
Private	221	25	62	188	31	60
TOTAL	357	40	100	317	53	100

By 1970, gross capital formation is expected to be £66 million, of which perhaps £20 million will be needed for replacement. Gross capital formation will amount to 23 per cent of monetary gross domestic product and 18 per cent of gross domestic product, substantially higher proportions than have prevailed in the last few years. It is, of course, on this higher rate of capital formation that the more rapid rate of economic growth largely depends.

In table 12, public capital formation is identified by the kind of governmental authority responsible for the expenditure. Thus, transfers from the centre to other governmental units are shown as expenditures by the recipient units. It was not possible to subdivide all expenditures by the major economic activity affected, but it is clear that the three activities receiving the most funds are basic services, agriculture and social services.

Table 12. Kenya: capital formation in the public sector, 1964-1970

(*Thousands of pounds*)

	Central government and regional governments	*Local governments*	*E.A.C.S.O. trading services*	*Other statutory or semi-public bodies*	*Total*
Agriculture	11,673	—	—	4,471	16,144
Lands	150	—	—	—	150
Natural resources	1,980	3,140	—	—	5,390
Commerce and industry	—	—	—	4,846	4,846
Tourism	546	420	—	—	966
Basic services	8,521	6,000	16,510	22,200	53,231
Social services	9,090	3,460	—	3,583	16,133
Security, defence	2,770	—	—	—	2,770
Unallocable	15,740[a]	13,290[b]	—	—	29,630
TOTAL	50,470	26,580	16,510	35,100	128,660

[a] Capital element in recurrent budget, less unallocable land transfers of £600,000 included above.
[b] Estimated capital expenditure by local authorities, exact nature as yet unknown.

G. Manpower shortages

It is, of course, not to be expected that the Development Plan will work out smoothly without any problems. A crucial and possibly limiting factor to the growth of the economy is the availability of adequate numbers of highly trained and educated manpower. There is little doubt that shortages will persist throughout the planning period. To implement the plan effectively will require an increase in the planned number of secondary-school graduates and the hiring and retention of a substantial number of overseas experts. The Government is, however, sparing no efforts in encouraging secondary and higher education.

Difficulties of manpower would even be greater were it not for the various technical assistance programmes from which Kenya is benefiting. Requirements for veterinarians, geologists, engineers, teachers and doctors have been documented in the Development Plan, as have requirements for studies and surveys in various fields, such as irrigation, geology and housing. It is anticipated that many of the needs will be met by offers of technical assistance through the United Nations and by bilateral technical agreements between Kenya and some overseas countries.

H. Size of market

In the development of industries, Kenya, like other small countries, is faced with the problem of finding an adequate market for its manufactured products. The population of Kenya, at the end of 1965, is estimated to be 9.3 million and *per capita* income to be around £30. It is hoped that the East African Common Market, with a total population of 25 million, will continue to exist as an entity and that a much larger customs union area will be created to include Ethiopia, Malawi, Somalia, Zambia and other areas of the East African subregion. At the Conference on the Harmonization of Industrial Development Programmes in East Africa (Lusaka, 26 October—6 November 1965), most of the countries supported the desirability of such a union, and it is now up to the individual Governments to put those ideas into practice. Some of the industries require the markets of the whole of the subregion in order to operate economically, and it would be to the advantage of the individual territories to co-operate in the formation of such a common market.

I. Finance

Another problem which is likely to face Kenya is that of lack of funds to finance projects. A realistic assessment of the finance likely to be available to the Government for development cannot be made for a period longer than three years ahead. Table 13 sets out the amounts available and those in prospect for the period 1964-1967. Amounts "available" indicate Government revenues likely to be devoted to the development estimates and loans and grants already negotiated or promised by overseas Governments or international agencies, including settlement schemes; these total £21.5 million, half of the three-year total. Finance "in prospect" includes loans and grants which are under active discussion with various Governments and agencies; £16.8 million is involved in these discussions and, clearly, the Government's success in financing the Plan depends very much upon the outcome of such applications. The gap for which finance is not immediately in sight is £4.5 million, and it is hoped that this can be filled largely by loans or grants from Governments which have indicated an interest in the development of Kenya, but which have not been formally approached to finance the Plan. There may be some potential for additional internal sources of finance to fill the gap, but these will be severely restricted for reasons discussed below.

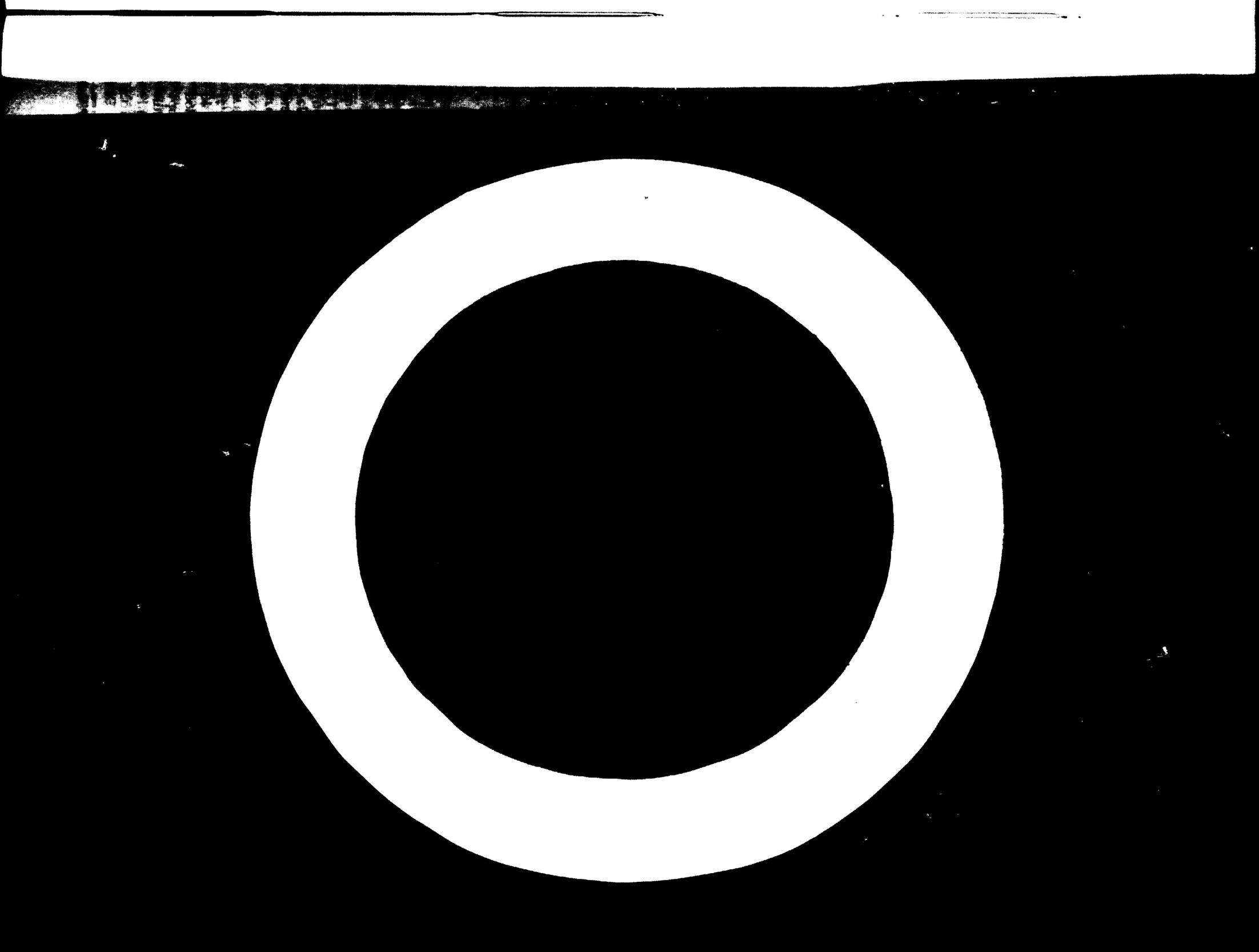
Of the £38.1 million available or in prospect for the next three years, £3.7 million, or just under 10 per cent, is expected from local sources, including taxation. This percentage is deceptively low, because the Government has recently transferred approximately £1 million per annum of recurrent services from its development estimates. Those will now be covered by governmental and regional revenues, but they would, otherwise, have increased the size of the Plan and almost doubled the proportion financed locally. Nevertheless, it would be extremely advantageous to increase substantially the proportion of development financed locally, and the Government is taking steps to achieve such an increase. By 1967/1968, it is expected that the National Provident Fund will begin to invest large amounts in government stock, and by 1969/1970, this should provide upwards of £2 million per annum for development, bringing the total of local sources to over £3 million per annum, 23 per cent of the estimated expenditure. In addition, possible new sources of taxation for development will be kept under consideration.

Table 13. Kenya: government capital sources

(Thousands of pounds)

	1964/1965	1965/1966	1966/1967	Total
Total finance required	16,501	14,204	11,980	42,685
Finance available				
Local	1,150	925	875	2,950
External:				
Settlement	6,975	3,890	1,570	12,435
Other	5,135	590	350	6,075
TOTAL	13,260	5,405	2,795	21,460
To be found	3,241	8,799	9,185	21,225
Finance in prospect				
Local	100	350	400	850
External	1,420	7,320	7,180	15,920
TOTAL	1,520	7,670	7,580	16,770
Not yet found	1,721	1,129	1,605	4,455
Finance available and in prospect				
Local	1,250	1,275	1,275	3,800
External:				
Settlement	6,975	3,890	1,570	12,435
Other	6,555	7,910	7,530	21,995
TOTAL	14,780	13,075	10,375	38,230

It is evident that for the foreseeable future the Government will be dependent upon external aid to fulfil its Development Plans. The United Kingdom of Great Britain and Northern Ireland has so far been the most generous donor of funds, but important amounts are also anticipated from the International Bank for Reconstruction and Development, and from the Governments and national agencies of other nations. Kenya follows a policy of non-alignment even in economic matters and is not committed to any one bloc of nations. The finance already in prospect from these sources allows considerable optimism that the first three years of the Plan can be completed on schedule. Such projects as major irrigation schemes, which are prominent over the latter half of the planning period, present excellent vehicles for the continued interest of overseas donors to the development of Kenya. Prospects for financing the latter half of the Plan are therefore considered promising. It may be said that Kenya has set up an ambitious plan to develop, but there is no reason why it should not be implemented, provided there is co-ordination between the private and public sectors, as well as co-operation from overseas investors and from governmental and international agencies, and, above all, dedication for hard work by the people of Kenya.



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4. INDUSTRIAL DEVELOPMENT IN THE NIGER

Presented by the Government of the Niger

CONTENTS

I. Historical review

Industrialization is a recent phenomenon in the Niger, where 92 per cent of the population is rural, being composed of approximately 2.3 million farmers and 600,000 livestock-breeders.

The first factory was a brick works built at Niamey in 1938, followed by an oil-extraction plant at Maradi in 1943 and a printing-press at Niamey in 1945.

These three factories, in addition to the thermal-power stations of the Société africaine d'électricité (SAFELEC) at Niamey, Maradi, Zinder and Agadès, were, for a long time, the only industrial activities in the Niger (with the exception of building and public works). A second oil-extraction plant was built at Matameye in 1956; and, two years later, the Compagnie française pour le développement des fibres textiles (CFDT), having developed cotton production on a sufficient scale, set up a ginning mill at Madaoua.

Several small enterprises manufacturing aerated beverages were developing at the same time. They can scarcely be qualified as industries, however, in view of their small size and limited output.

It can thus be said that, at the time independence was attained, the Niger was a rural country exporting raw materials and importing all its requirements in manufactured commodities from France or Nigeria. It was not until 1960 that a workshop manufacturing structural metal-work was established at Niamey.

An investment code was promulgated in 1961, offering different types of preferential treatment to enterprises to be established in the Niger: e.g., exemption from Customs duties, exemption from taxation on industrial and commercial profits, or reduction of indirect taxation on turnover. This code has had little effect upon industrial development, which has, however, gathered momentum in the last few years: in 1962 a second cotton-ginning mill was built, in addition to an *abattoir* with cold-storage facilities and a factory for sugar confectionery; in 1963, an enterprise manufacturing perfume and a plastics factory were set up. These were followed, in 1964, by a rice-mill, a flour-mill, a factory manufacturing aerated beverages and a tile works. The following enterprises are under construction at the current time (1965): an assembly plant for agricultural machinery and metal furniture; a brick works; an *abattoir*; a cement factory; a printing-press; and a soap factory.

II. Current importance of manufacturing in the national economy

The *production intérieure brute*[1] at factor cost amounted to 53,200 million francs CFA in 1962, broken down as follows: (*a*) traditional sector, Fr CFA 48,300 million, i.e., 90.8 per cent; and (*b*) modern sector, Fr CFA 4,900 million, i.e, 9.2 per cent.

The modern sector comprises industrial enterprises, construction, general Government, transport, etc. An analysis of employment as of 31 December 1964 provides a clear indication of its composition, in addition to more detailed information on the place of industry proper:

[1] Literally, "gross domestic production"; it is equal to gross domestic product minus salary and wage payments by the Government and payments to domestic servants.

Civil servants and wage-earners in the public sector	8,793
Wage-earners in the private sector	8,095[a]
Including:	
Construction	3,460
Industry	988

[a] Excluding servants.

The total paid in salaries and wages by the entire group of enterprises amounted to Fr CFA 1,875 million, i.e., 3 per cent of the *production intérieure brute*.

Industrial enterprises alone paid slightly more than Fr CFA 100 million in wages.

Exports of industrial products represented 4 per cent of total exports for 1962, 5 per cent in 1963 and 11 per cent in 1964.

These few over-all figures make it clear that the industrial sector proper makes only a very small contribution to the activity of the country, which will continue to remain a land of farmers and stock-breeders for a long time to come.

III. Current structure of manufacturing industry

A. The different branches of industry

In outlining the development of industrialization in the Niger in chapter I, mention was made of the factories existing in the country.

The survey of industrial and commercial establishments carried out during 1963 and the annual report of the Labour Department gave the following data for 31 December 1963:

Table 1. Distribution of employment in industry in the Niger, 1963

	Personnel employed	*Wages paid* (millions of francs CFA)	*Turnover* (millions of francs CFA)
Water and electricity	141	54.0	503.6
Food and beverage	60	9.4	114.2
Various industries	291	32.0	622.7
Mining and quarrying	231	9.5	32.0
TOTAL	723	104.9	1,272.5
Construction	3,448	580.0[a]	1,809.0
TOTAL	4,171	684.9	3,081.5

[a] Approximate.

B. Scale of industries

These industrial enterprises are, in general, on a small or medium scale, as can be seen from the table below, which classifies them according to the number of persons employed:

Number of employees	*Number of establishments according to number of employees*				
	Water and electricity	*Food*	*Miscellaneous*	*Construction*	*Total*
1–9		2	3	8	13
10–24		2	4	22	32
25–49	2	1	1		
50–249	1		2	11	14
Over 250				3	3

C. Sources of capital and personnel

Although the above-mentioned industries are private, most of them are financed partly either by foreign aid or from the national budget. Little capital from the Niger itself is invested in industry; there are, however, some Niger manufacturers who are engaged in joinery and in the production of structural metal-work. Most industries that have been recently established or are now being established owe their existence to the Banque de développement de la République du Niger (BDRN), through both the studies that the bank has carried out and the capital that it has invested. Such industrial projects include the brick works, the factory for metal furniture and agricultural machinery, the soap factory and the printing-press. The SONARA company, which is a joint public and private enterprise holding the monopoly of ground-nut exports, is building ground-nut-shelling plants, and the COPRO-NIGER company, which is also a joint public and private enterprise responsible for the marketing of local products, has built a rice-husking plant.

The level of capital participation by the Government of the Niger is 15 per cent. It may intervene directly (e.g., the financing of the cement factory of Malbaza) or as the agent of foreign assistance. The *abattoir* was built out of a gift from the Fonds d'aide et de coopération (FAC).

Lebanese sources provided the foreign capital invested in the following enterprises: a sugar confectionery factory, a plastic shoe factory and a flour-mill, while French capital is invested in an oil-extraction plant, a cotton-ginning mill, plants manufacturing tiles and aerated beverages, and a printing-press.

Table 2, which was drawn up by the Labour Department, gives the breakdown of personnel according to the type of employment and nationality, as of 31 December 1963 and 31 December 1964.

It may be seen that the situation changed very little from one year to another in the sphere of construction, whereas very marked progress was shown in industry, entirely due to a sharp increase in the number of nationals employed, which rose from 638 to 833. The proportion of Niger nationals in the supervisory and management categories rose from 0 per cent to 13 per cent and 10 per cent, respectively. These figures are still low, but they will continue to increase with the progressive allocation of the senior posts to Niger nationals.

Table 2. Breakdown of personnel in industry and construction in the Niger, by type of employment and by nationality, 31 December 1963 and 31 December 1964

	Industry						Construction					
	Nationals of the Niger		Other Africans		Other foreigners		Nationals of the Niger		Other Africans		Other foreigners	
	1963	1964	1963	1964	1963	1964	1963	1964	1963	1964	1963	1964
Unskilled workers	535	623	17	14	—	—	1,930	1,921	166	128	—	—
Semi-skilled and skilled workers	78	162	61	53	—	—	654	686	324	376	22	6
Drivers	9	17	6	8	—	—	80	73	55	47	—	—
Clerical staff	16	26	21	26	7	1	32	33	80	69	23	17
Supervisory staff	—	3	—	2	26	22	5	5	8	14	50	53
Management	—	2	—	—	10	23	1	—	—	—	38	32
TOTAL	638	833	102	103	43	46	2,702	2,718	633	634	113	108

D. Geographical locations of industry

The geographical locations of industry in the Niger are as follows:

	Industrial zone					
	Niamey-Dosso		Maradi-Tahoua		Zinder-Agadès	
	1963	1964	1963	1964	1963	1964
	(number of employees)					
Construction	2,409	2,770	103	49	936	626
Industry	249	310	260	336	274	342

The Niamey zone clearly predominates in construction. The industrial importance of the Maradi-Tahoua zone is due to the presence of the Siconiger oil-extraction plant, which employed a total of ninety persons as of 31 December 1964, and of the CFDT cotton-ginning mill at Madaoua, which employed 222 persons.

The increase noted at Zinder is the result of the reopening of the oil-extraction plant at Matameye.

In the Niamey area, the main manufacturing enterprises are the following:

(*a*) Power: SAFELEC;

(*b*) Building materials industry: brick works, manufacture of tiles and structural metal-work;

(*c*) Industry on the output side of agriculture and stock-raising: a rice-mill (at Tillabéry) and a flour-mill;

(*d*) Miscellaneous: printing-press, metal furniture, furniture in polymerized wood, aerated beverages (Braduni, Sem, Roze, Sodafrique), sugar confectionery, plastic shoes.

E. Foreign trade

All industrial equipment is imported, and all the local industries are dependent upon foreign countries. The importance of foreign capital, foreign management and foreign equipment has been pointed out. Imports of foreign commodities in 1964 included electrical machinery to the value of Fr CFA 310 million, other machinery to the value of Fr CFA 340 million and transport equipment amounting to Fr CFA 566 million, none of this material being manufactured in the Niger. All hydrocarbons are imported, and there is no other source of industrial energy in the Niger.

Some industries find both their raw materials and their markets in the Niger: e.g., the brick works, the rice-mill and the cement factory, which is soon to go into production; others obtain all their raw materials in the Niger, but rely upon foreign outlets for their produce, e.g., the oil-extraction mill and the cotton-ginning mill. A third category of industries imports raw materials and sells its products in the Niger, i.e., those engaged in the manufacture of perfume, sugar confectionery and plastic shoes, the flour-mill (in view of the current state of wheat production in the Niger), the joinery works and the enterprises manufacturing metal furniture and soap.

F. Electric power

Electric power is produced by power-stations belonging to SAFELEC, which have the following installed capacities: Niamey, 600 kW; Maradi, 500 kW; Zinder, 580 kW; Tahoua, 168 kW.

A research programme is currently under way, covering different sources of energy, e.g., solar energy and the utilization of charcoal and of ground-nut shells.

In the years to come, an expansion of the existing electric-power stations is planned, together with the construction of two new stations giving an increase in installed capacity of 10,260 kW.

IV. Industrial programmes and major projects

A. The plan and its major projects

Ten-year projections for the 1965-1974 period and a four-year plan for 1965-1968 have been submitted for government approval. As these texts are still unofficial, it is difficult to give detailed information regarding them. It can, nevertheless, be said that the planners have directed industrial development, ever since the first provisional plan of 1961-1963, towards industries that would reduce building costs and industries connected with agriculture (see Chapter V, section A).

In the first group, there are under construction a cement factory that will produce 45,000 tons of cement per annum, and a brick works that will supply 12,000 tons of bricks, tiles and filler blocks. A plant manufacturing particle board agglomerated with millet straw or ground-nut shell binders may be set up before 1968.

A disdinction has then been drawn between industries

on the input side of agriculture, i.e., the manufacture of agricultural machinery, cattle-feed and possibly compost; and industries on the output side of agriculture—cotton-ginning,[2] the textile complex, cotton-seed oil mills, the ground-nut shelling plant,[3] the ground-nut oil mill,[2] enterprises engaged in the manufacture of ground-nut confectionery, soap[3] and sacks and bags, a millet flour-mill, the *abattoir*,[2] a tannery for hides and skins, industries canning meat and tomatoes, a brewery and a dairy.

The total of these investments represents more than Fr CFA 6,500 million, with almost 2,000 jobs created during the period covered by the 1965-1968 four-year plan. The share of the industrial sector in the gross domestic product will rise from 3 per cent in 1962 to 8.5 per cent in 1968 and to 13.5 per cent in 1974 (the final year covered by the ten-year projections) with value added of Fr CFA 6,300 million and 11,500 million, respectively.

These new industries will allow for a reduction in imports and an improvement in agricultural yields, and will also supply additional outlets for existing products (ground-nuts, millet, cotton, hides and skins, milk and meat) or create outlets for new products (*dah*, tomatoes).

These industries are in keeping with the broad lines of policy mentioned in the ten-year projections: i.e., to ensure independence in interdependence and to improve the level of living of the masses.

B. Methods of industrial planning

As the Niger is a country with few resources and without many supervisory personnel, it could adopt only simple methods of planning and endeavour, on the one hand, to explore potentialities, and, on the other hand, to avoid inconsistencies; it thus has an industrial programme rather than a plan.

Over-all consistency is maintained by the fact that many industrial projects are studied by the BDRN, which then participates in the capital of the industrial companies and can thus control their activities. Measures have been advocated in the four-year plan to promote a better co-ordination of investments in the private sector (see chapter V, section B, 7). Requests are made for bilateral or international private foreign-aid, according to the projects concerned, to the organizations that will be the most interested in them; such aid is usually indispensable for the implementation of projects in view of the small size of the development budget and the difficulty in collecting private capital from the Niger itself (full details have already been given on this subject in chapter III, section C).

C. Regional co-operation

The Niger has always favoured the harmonization of industrial policies at the regional or subregional level, and it promoted the first subregional conference held for this purpose at Niamey in July 1962.

At the United Nations Economic Commission for Africa Conference on Industrial Co-ordination in West Africa (Bamako, 5-15 October 1964), the Niger decided, in co-operation with Mali, to set up an iron and steel plant and two factories manufacturing phosphate fertilizers. Provision has been made in the plan for funds to finance these studies, which should lead to concrete developments in about 1970.

[2] Expansion of existing industrial units.
[3] Under construction.

V. Industrial policy

A. Policy of industrial development

Industry in the Niger is practically non-existent. In view of this state of affairs, the Government has drawn up a "minimum programme" for the decade, aimed at satisfying consumption from 1975 onwards. In the four-year plan, the Government will concentrate its efforts upon:

(*a*) The reduction of the cost of power;

(*b*) Prospecting for raw materials;

(*c*) The development of industries that will lead to a reduction in the cost of investments in building (building materials industries);

(*d*) The development of industries on both the input and output sides of agriculture and livestock raising, upon which their development in turn depends. Activities in the immediate future will be concentrated upon industries connected with agriculture. The Niger has adopted a consistent policy in the sphere of basic industries in support of supranational integrated African industries. As a result of the Bamako Conference mentioned above, Niger and Mali agreed to co-operate in the sphere of iron and steel manufacture and the exploitation of phosphates (see chapter IV, section C).

B. Specific measures

1. Savings

Thus far, nationals of the Niger have played little part in the industrialization of their country, owing to lack of technical "know-how" and, above all, lack of capital. The policy might be adopted of conducting a wider publicity campaign in the Niger when capital is being formed for the new enterprises, and a method will be sought to enable local capitalists to regroup within the framework of joint stock companies, for example, so as to raise adequate capital sums comparable to the contributions of the Government, BDRN and the foreign private sector. During the implementation of the three-year plan, the Government took the fortunate step of floating national loans, to which the population subscribed a relatively large share. These loans were intended for various categories of investments, including industrial investments, *inter alia*, through BDRN.

2. Fiscal policy

The Investment Code of the Niger, promulgated on 12 July 1961, establishes a list of priorities according to the type of enterprise. The Code lays down in particular that, in order to enjoy any of the

types of preferential treatment, the enterprises must fulfil the following conditions:

(*a*) They must make an investment that is particularly valuable for the development of the economy;

(*b*) They must have been established after the Investment Code became effective. In order to be entitled to benefit under the Code, enterprises must receive the approval of the Investment Commission, which is presided over by the Minister of Finance.

Under system A, enterprises are exempted for ten years from Customs duties on capital goods necessary for the installation of the plant and granted a reduction of 25 per cent on turnover tax. System B grants exemption from taxes on industrial and commercial profits, and on trade tax for ten years, as well as exemption from Customs duties on capital goods and raw materials. System C is reserved for enterprises of particular importance (e.g., the cement factory, the textile complex, etc.) and consists in an establishment agreement granting benefits specified in each particular case.

3. Monetary, price and wage policies

The issue of currency in the Niger is undertaken by the Banque centrale des Etats de l'Afrique de l'Ouest (BCEAO), to which six other West African States belong. The unit of currency employed is the franc CFA, for which the rate of exchange is Fr CFA 1 = 2 French centimes.

Price control of common consumer goods has been practised in the Niger for a considerable time. The 1964 annual report of the Ministry of Labour shows that the subsistence level and the guaranteed minimum wage remained constant for the years 1962, 1963 and 1964. This was due to the fact that the lowest possible prices had been fixed for such products as cement and metal furniture. Such bodies as COPRO-NIGER were set up for this purpose. This policy of price maintenance allowed some adjustment in wages, which are following the same trend.

4. Customs policy

The Niger has adopted a policy of Customs protection for domestically produced goods. Sales abroad are promoted by such semi-public bodies as SONARA for ground-nuts, or such private bodies as CFDT for cotton. Trade margins are thus considerably reduced, to the advantage of the producers. Customs duties have sometimes been relaxed in order to lower the prices of certain basic necessities and as part of the campaign against smuggling.

5. Foreign-exchange policies

The Niger has the same obligations towards France regarding foreign exchange and foreign currency as do the six other States for which BCEAO issues currency.

6. Private foreign capital

In spite of the Government's constant efforts to encourage investors from outside the Niger, scarcely any private capital is invested there under prevailing circumstances. It should, nevertheless, be pointed out that some industrial investments have been made, particularly of Lebanese and French capital (see chapter III, section C).

7. Regulation and control

At the current time, barely any control is applied to industrial enterprises; as a result, a certain anarchy is militating against the projects of the plan. However, appropriate measures will probably be taken in the future to remedy this situation.

VI. Institutional framework

A. Competent bodies and departments

Changes are envisaged in the current organization since there is now no directorate of industry. There is only one industrial expert working in the Directorate of Economic Affairs of the Ministry of Finance and Economic Affairs. There is also an economist who is responsible for the study of industrial projects in the planning department. The development department of BDRN employs a number of expert engineers (in the fields of textiles, food industries and mechanical industries), who prepare projects, either alone or in collaboration with foreign firms of development consultants.

B. Autonomous agencies

Certain joint public and private enterprises carry out studies in the industrial field, which have led to the establishment of some factories (see chapter III, section C).

C. Occupational training

Engineers and management personnel are trained abroad. In 1964/1965, there were ninety-one students from the Niger at foreign institutes, thirty-eight of whom were studying scientific subjects and fourteen engineering.

Maradi has both a state and a private secondary technical school. The former enrols students at the level of the *brevet élémentaire* (a certificate taken after four years of secondary education); these students leave the school with a diploma after a two-year course. The latter recruits students at the level of the *certificat d'études* (a certificate of elementary school studies). The course lasts for three years, with a final examination (the industrial *certificat d'aptitude professionnel*, a certificate of proficiency). A training centre for technical employees of the Public Works Department also trains senior technical personnel.

The Niamey Chamber of Commerce holds evening classes for the further training of young persons already employed in industry. There is also a centre for intensive training courses, with several departments — automobile engineering, electricity, locksmithing and carpentry — where skilled workers are trained. The Berliet *Centre d'apprentissage* (apprenticeship centre) organizes short-term courses for drivers and mechanics working with Berliet equipment.

D. Research and co-operatives

There is no institute for technological research or standardization, nor are there any industrial co-operatives in the Niger.

VII. External assistance

The international and national organizations participating in the industrialization programme of the Niger are the following: Food and Agriculture Organization of the United Nations (FAO), through its ordinary programmes and through the FAO Freedom from Hunger Campaign; United Nations Children's Fund (UNICEF); International Development Association (IDA); European Development Fund (EDF); Fonds d'aide et de coopération (FAC); United States of America, Agency for International Development (AID). The projects in which these organizations are involved, or about which they will be approached, are listed below:

(*a*) FAO: An expert has perfected a conservation process for millet flour and will spend two years in the Niger in order to get the factory under way;

(*b*) FAO Freedom from Hunger Campaign: This agency will supply the equipment for a small cattle-feed industry;

(*c*) UNICEF: Two experts have studied the project for a dairy to supply Niamey, for which more than half of the funds will come from UNICEF.

(*d*) IDA: This agency seems to be the most helpful in financing the textile complex (with an investment exceeding Fr CFA 2,500 million);

(*e*) EDF: The Government of the Niger will seek assistance from EDF for industries promoting diversification of crops or providing outlets (e.g., a canning industry, sack and bag manufacture, or a flour-mill);

(*f*) FAC has provided a large share of the funds for the cement works (Fr CFA 550 million out of Fr CFA 1,600 million) and has been almost completely responsible for the financing of the *abattoir* at Niamey.

(*g*) AID has financed a study on the industrial potential of the Niger.

VIII. Appraisal of the conditions and prospects for accelerating the rate of industrial development in the Niger

The Niger lacks power resources, raw materials, capital, supervisory personnel and industrial traditions: its industrialization prospects are thus, perforce, modest, and industrial development is not currently considered an end in itself but rather a means of improving the level of living of the masses and of providing new markets for agriculture and livestock raising. The measures envisaged within the framework of the plan should provide for a better harmonized development than in the past, when the industries which were established sometimes required support and subsidization shortly after going into production because they proved unprofitable.

It is possible that in a few years' time more capital and more supervisory personnel will be available, and that thus the industrialization of the Niger will become one of the principal objectives of economic policy; it is to be expected that even the second plan for 1969-1972 will give a considerably larger place to industry than the first plan, since the development of the country is conditional upon industrialization.

The first three-year plan clearly expressed confidence in the private sector, in the hope that the benefits granted by the investment code would suffice to attract investors. It has been shown that this was not the case, however. The few investments made by that sector have been in marginal areas of the economy (with the exception of tile manufacture), and government aid has been required to keep these projects going. Furthermore, the vast majority of the industries that are important for the economy of the country have been financed by BDRN or by joint public and private enterprises.

Developments during the last five years have made it plain that the confidence in the private sector was misplaced and have indicated what policy should be followed: i.e., basing the industrialization of the Niger on the semi-public sector and on bilateral or international external assistance. Participation by the private sector is still hoped for, but, henceforth, it will be expected to support national projects. Development prospects for the next few years indicate that this is the only realistic policy since only one private enterprise is ready to plan and finance an industrial project in its entirety between now and 1969; this project is a brewery, which is to be built in 1966.

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5. INDUSTRIAL DEVELOPMENT IN THE SUDAN

Presented by the Government of the Sudan

CONTENTS

I. Historical background

Industry in the Sudan has passed through some major stages in its development. Before the Second World War, industry was in the handicraft stage, and there is actually very little to report about this period. During the war period, however, it seemed impractical to go on importing all goods, and the country was obliged, therefore, to adopt the policy of self-sufficiency whenever possible. An industrial investigation committee was set up to advise the War Supply Department of feasible projects to be encouraged. It had also to examine individual applications for the creation of new industries. Great interest was shown in import-substitution industries. The Government, therefore, encouraged the erection of mechanical oil-mills to produce vegetable oils in sufficient quantities for both domestic consumption and export purposes. As soap could easily be manufactured from these vegetable oils, the importation of soap was restricted. These two industries appear to have been by far the most important and successful industries established during that period. Other industries, for example, those producing confectionery, syrup and squash, tomato *purée* and hand tools, and the spinning and weaving industries, did well during the war years and were continued in the post-war period.

The policy behind the setting up of these industries was actually to meet the wants of the people during the difficult war-time period and afterwards, before importation could be resumed. Those industries that were established without adequate feasibility studies soon began to turn out products that were wanting in both quality and quantity. As competition was non-existent during that period, profiteers found a good chance to serve their interests and made handsome profits.

During the post-war years, the policy adopted by the Government was the discouragement of inexperienced operatives and profit-hunters. However, due to the inflow of imports, many of these factories closed down and never recovered again. This has left a very bitter experience to which many businessmen refer whenever the question of industrial development is discussed. They always mention the poor production of the glass factory and the failure of the tomato *purée* factories, the inadequate production of sweets etc.

In 1956 and after the country declared its independence, the Government announced its policy towards investment in the field of industry. In that policy, which is still recognized, the Government stressed the fact that the field of industry would be left to private capital and that no discrimination should be made against foreign enterprises. However, the Government may participate when private capital is not forthcoming, or when private enterprise is inactive and knowledge is wanting in industrial development. This does not imply that the State intends to create a monopoly or to nationalize those particular industries.

The Government has established an Industrial Advisory Committee to which all applications for government assistance from private enterprise, whether local or foreign, are referred. The Committee includes some members from outside the Civil Service and forwards its recommendations to the Minister of Commerce, Industry, Supply and Co-operation.

The Committee, in considering any application for assistance, is guided by the criteria set forth in the Approved Enterprise (Concessions) Act of 1956, the Act which spells out the government policy towards investment in industry.

The criteria for consideration of any project for assistance are:

(*a*) It must be beneficial to the public interest. Under this heading, the project is considered as to whether it adds to the national income, the number of workers it employs, the savings in foreign exchange that will result, the strategic aspects and the importance of the project in the industrial structure;

(*b*) It must have a favourable prospect of successful development. Under this heading, studies are carried out to determine the following factors: the proposed production compared with similar imported products; the chances that the product will have in the market, i.e., whether it will be able to compete or whether

protection is necessary; the profitability of the project and whether it will be able to go ahead with the assistance extended under the Act;

(*c*) Its function must not already be adequately performed within the country. Similar production in the country is examined and compared with the request, taking into consideration the growth in demand and expansion in production;

(*d*) Adequate capital and efficient management should be available: the capital requirement, sources, method of finance and debt service coverage are considered, together with the managerial qualifications and experience that will be required by those who run the concern. The prime importance of such criteria is that investment will not have a good chance of success if the scheme is not fully remunerative and cannot cover itself, and the investment will not be worth while if no proper management is available.

Having satisfied the said criteria, the Committee then assesses the assistance that the project shall have. All enterprises which satisfy the above-mentioned criteria are known as "approved enterprises", and they are automatically entitled to relief from the business-profit tax for a period which varies according to the capital employed:

(*a*) If the capital employed is less than 20,000 Sudanese pounds (£S) at the end of two years, the period of relief will be two years;

(*b*) If the capital employed is more than £S 20,000 at the end of two years, the period of relief will be three years;

(*c*) If the capital is more than £S 100,000 at the end of three years, the period of relief will be five years.

In the period of relief, the following easements are given for the purpose of assessing the business-profit tax: (*a*) depreciation at double the normal rates; (*b*) profits up to 5 per cent of the capital employed will be exempted from taxation and those in excess of the said percentage will be taxed at half the normal rates; and (*c*) any net loss incurred over the period of relief will be regarded as a loss incurred in the last year of such period.

Approved enterprises may be given assistance in one or another, or several of the following forms, the list being informative rather than exhaustive: (*a*) waiver or reduction of import duties on plant machinery and equipment; (*b*) waiver or reduction of import duties on raw materials; (*c*) facilities for entry of necessary and qualified technicians and other foreign employees; (*d*) a suitable plot of land at a nominal price; and (*e*) other assistance in trouble-shooting, provision of commercial technical and expert advice, etc.

Foreign investors are expected to provide training arrangements for Sudanese personnel so as to enable them to take over from foreign personnel in the future.

The Sudanese Government has also accepted the principle that foreign investment in the Sudan should have the right to remit *bona fide* profits to the country of origin of the investor. It is not compulsory for foreign capital to participate with local capital; neither is it required by law that a certain proportion of the board of directors should be Sudanese. The Government also gives an assurance against discrimination between foreign and national enterprises. It also guarantees a fair and equitable compensation in case of the nationalization of an approved industrial enterprise, which is most unlikely to happen in a country that is trying to attract foreign capital and has basic confidence in private initiative.

After the venture is set up and goes into production, the product is assessed as to both quality and price. The quantity of production is compared with the existing demand and the potential demand in years to come. If found satisfactory, the Government will be prepared to extend further assistance through: (*a*) putting a protective duty on similar imported commodities; or (*b*) prohibiting or restricting imports of competitive commodities; or (*c*) imposing a protective duty and, at the same time, restricting imports to a certain quota to be imported during the year.

In considering a case for the protection of a firm or firms, a thorough study is made of the following: the process of manufacture; the raw materials used and their costs; a detailed analysis of the cost of production and the selling expenses; and why the product is unable to compete with the imported product, i.e., whether it is a question of quality, of cost or of the consumer preferring the imported product for no reason. By examining these points, a decision is taken as to what measures to adopt. So far, enterprises which are considered protected industries are not absolutely protected. An import quota is assessed every year in order to induce the local enterprises to work for good quality and reasonable prices. The exportation of domestically manufactured commodities is encouraged through a drawback of the duties paid on the raw materials and exemption from export tax, if any.

The Minister of Commerce, Industry, Supply and Co-operation may put conditions on the application of any of the facilities and assistance recommended by the Committee. It is intended, however, to introduce industrial licensing, as the current procedure permits any holder of a traders' licence to engage in any business covered by that licence. By introducing specific industrial licensing, the Ministry would be able to control and guide all industrial activities in the country, whether they were considered approved enterprises or not, and also to follow up their progress and the problems confronting their development. Such a system would also make it possible to keep a record of statistical information, which is lacking now.

II. Institutional framework

The Ministry of Commerce, Industry, Supply and Co-operation is the agency solely responsible for industry. The Industries Section of the Ministry is responsible for:

(*a*) Receiving applications to the Industrial Advisory Committee for the status of "approved enterprises" and for acquiring the facilities gained from such classification;

(*b*) Study of the applications and preparation of a covering note for submission to the Minister;

(*c*) Secretarial work for the Committee;

(*d*) Follow-up of the Committee's recommendations and facilitation of the execution of the concessions given to industry;

(*e*) Liaison work between industry and the different government units;

(*f*) General development work and contacts with international organizations and conferences.

A. Industrial Development Corporation

In accordance with government policy towards the private sector, the State is expected to step in and engage in industrial undertakings if private initiative is not forthcoming, or if the activity in question is deemed to be of strategic importance to the country. The Industrial Development Corporation (IDC) was set up for this purpose. Its specific duties are: (*a*) to take over and manage the factories already established by the State; (*b*) to negotiate on behalf of the Government with a view to acquiring shares in different enterprises or setting up new industries; and (*c*) to investigate possibilities of establishing new industries.

Thus far, IDC owns two sugar-mills, two fruit- and vegetable-canning factories (not yet in production), one cardboard factory, one milk-hydrogenation factory, one onion-dehydration factory, one tannery and one date-processing factory. It also owns shares in a cement factory.

B. Industrial research institute

The Government is now actively engaged in the preparation and study of the Act governing the establishment of the first Sudanese industrial research institute, which will be located in Khartoum.

To effect an orderly development of industry, to provide technical assistance to existing industries and to promote the use of local raw materials, an industry service and research institute is needed. While the institute is needed now, some time will be required for its establishment (building, equipping, organization and staffing); meanwhile, the expansion in industry will intensify the need.

While the country will not be able to spare enough trained staff to carry out fundamental research, yet it is the acknowledged policy to encourage this type of research through the University. Staffing and equipping of the different University departments is currently being undertaken to meet this end. Generally speaking, the institute will be designed to aid and promote the industrial and economic development of the country through the application of scientific research and technology, its adaptation to the country's conditions and resources; and by the creation of a broadly available local source of practical information, assistance, professional advice and counsel on processes, studies and efficient techniques of industrial production, costing, organization and management technology. The institute will also encourage the development of the Sudanese scientific and technical personnel who are essential to the accelerating economic development of the country.

When established, the institute will be designed to serve the following objectives:

(*a*) Performing tests, investigations, researches and analysis;

(*b*) Furnishing advice and consultation on problems of industrial planning, process engineering, production management, efficiency, market development, cost and quality control;

(*c*) Assisting in the formulation of standards for industrial and commercial products;

(*d*) Making surveys and studies of natural resources, raw materials and by-products of industry, mining and agriculture, and their utilization;

(*e*) Maintaining a modern technical reference library and public information service on industrial technology and related matters;

(*f*) Undertaking or collaborating in the preparation, publication and dissemination of useful technical information;

(*g*) Co-operation with other bodies and institutions in promoting scientific and technological research and the training of technical experts, craftsmen, artisans and specialized production personnel;

(*h*) In general, advising and assisting on scientific and technological matters affecting the development of the natural resources and industries of the Sudan, and on the proper co-ordination and employment of scientific and technological resources to those ends.

In order to fulfil these objectives to the best possible end and in order to gain the recognition and trust of the private sector, the institute will be under the aegis of the Ministry of Commerce, Industry, Supply and Co-operation as a corporate institution operated by an appointed board of directors, which will be the policy-making body. The board is expected to include representatives of the Government Industrial Bank and private industry, as well as the director of the institute. Though the director will be a prime mover in policy-making, yet he will bear the executive responsibility under authority delegated by the board to whom he reports, thus becoming the top man in the hierarchy of the institute. Under his direction will come the different departments which will be created from time to time as the need arises. As the institute is not yet established, these departments will be under the public relations department, which will be responsible for, among other things making both industry and government groups aware of the need for industrial research. In order to attract private industrialists and encourage them to engage the institute to do research in their factories or solve their problem, the proposed Act when finally passed, will definitely allow tax exemption on expenditures by industry for industrial research. The industrial research institute will be operated as a non-profit undertaking, and it will be subsidized considerably by the Government, although industries will be expected to pay for its services at cost only, as, of course, such services are expected to result in less expense and more profit. The work done by the institute will be for private industry as well as for the Government, and for this and other reasons, it will maintain a close informal relationship with both the private and the public sectors, as well as with such independent bodies as the University and individual consultants, the exception being the Government Industrial Bank, which, as mentioned previously, will be represented on the board. Such informal contact will not only facilitate effective co-ordination, but will result in co-operation between the different bodies.

The institute will also be engaged in doing confidential work and assigning patents, as well as in carrying out research on contract. The results of

research done by the institute, other than private and confidential work, will be made available through its offices in the form of bulletins, various publications, demonstrations, etc.

1. Specifications and quality control

It has been the feeling of the Ministry since the establishment of the Industries Section that industrial development will not go in the right path unless a quality-control system is introduced and put into practice. Accordingly, a senior technical officer from the International Bureau of Standards was invited to visit the country and prepare a report with recommendations on the setting up of an organization for standard specifications. The report was submitted and the steps towards finalizing the establishment of a nucleus for quality control and standards specifications will proceed after the industrial research institute goes into operation.

C. Labour Department

The Labour Department comes under the Ministry of Information and Labour. Its duties and branches include:

(*a*) The Factory Inspectorate, which carries out inspection of factories and issues certificates of conformation with the provisions of the Factories Act and regulations. It is the inspectors' function to ensure that safety devices are introduced in factories and that the working conditions are up to the required standard;

(*b*) Responsibility for the labour market and the supply of the right type of labour for each industry, and, at the same time, looking into the matter of wages;

(*c*) Facilitating the employment of foreign technical personnel and making sure that local personnel receive the right training to take over at a specified period.

(*d*) A vocational training and productivity centre, which is aimed at giving more training to skilled workers, with the view to raising their productivity and training them on the most modern techniques;

(*e*) The Management Training Institute. It is realized that management plays an important role in the success of industry. If an inefficient management is entrusted with the running of industry, the general purpose is defeated, as it is not likely to make a success out of it nor will it be possible to make progress towards development. It was, therefore, decided to set up a Management Training Institute under the Department of Labour, and the United Nations and the International Labour Organisation (ILO) agreed to participate in financing and equipping it with the necessary staff. It is expected to begin operations during the early part of 1966.

In order to maintain good industrial relations, mutual understanding is of importance, and the Department of Labour is entrusted with the regulation and direction of trade unions and also with mediation between labour and management when they fail to agree.

D. Industrial Bank

It was realized from the beginning that the lack of capital in the Sudan would hamper the establishment of new industries and would always be a handicap in industrial development. It was decided that one of the ways to overcome this difficulty was to set up an Industrial Bank to give medium- and long-term loans and to act as a guarantor for foreign loans secured by industry. The functions of this Bank are:

(*a*) Extending financial assistance by granting secured medium- and long-term loans for the establishment, expansion and modernization of private industrial enterprises;

(*b*) Giving guarantees for the acquisition of machinery, equipment, material and services necessary for the establishment, modernization and expansion of private industrial enterprises;

(*c*) Extending management, technical and administrative advice;

(*d*) Co-operation with appropriate government institutions for furthering industrial development.

The policy adopted by the Ministry of Commerce, Industry, Supply and Co-operation with regard to industry, as explained earlier, is based on leaving the field of industry to private concerns; and, on this understanding, it was considered inappropriate to draw up a programme or to produce a list — in other words, to restrict applications for setting up industries in a limited field of activities — although the Industrial Bank subsequently did publish a list arranging the industries into first, second and third priority groups for purposes of securing loans for them.

It is the policy to consider applications as they are received. They are scrutinized by the Secretariat and put before the Committee, which meets four times a year. Every application is considered on its own merits and in accordance with the provisions of the Act. In this case, as there is no set programme to consider, it is useful to survey the important industries so far approved.

III. Manufacturing industries in the Sudan

A. Textile industry

Serious efforts to establish this industry date back to 1956, when the Government invited an Indian textile expert to report on the possibility of setting up a textile industry in the Sudan. The report was submitted to the Government, and it showed that such a project was feasible and would be successful. This report was followed by another report prepared by an expert sent by the Calico Printers Association of England, at the request of the Government of the Sudan. The second report went into detailed study of the aspects of the industry and arrived at the same conclusion.

At a later date, however, the Government, in compliance with its policy for leaving the field of industry to private capital, withdrew, but promised to extend all facilities that would enable the project to go ahead. Six applications were received, and after processing them, it was decided to approve them all. The following facilities were therefore extended to them:

(*a*) The status of "approved enterprises", which

meant relief from taxes for a period of five years in this case;

(*b*) Importation of plant, machinery and equipment, and spare parts without paying duty;

(*c*) Importation of steel structures and building materials not available in the Sudan without the payment of duty;

(*d*) Importation of chemicals and other materials, e.g., dye-stuffs, duty-free;

(*e*) Importation of office equipment duty-free.

Of these applicants, two have actually gone into production.

1. Sudan-American Textile Company

The first spinning and weaving mill established in the Sudan, the Sudan-American Textile Company, was approved in October 1954 and began production in 1961. At the current time, it has 1,980 looms working twenty-four hours per day. The firm annually consumes about 40,000 bales of cotton costing approximately £S 1,250,000. It employs a labour force of 3,705 Sudanese and 82 expatriates.

The firm is still working below capacity. Production amounts to 52 million yards per annum, with an approximate value of £S4 million. It is mainly grey and bleached sheeting, with some poplin and khaki. It is anticipated that in the near future the company will be able to double its capacity.

2. Khartoum Spinning and Weaving Co. Ltd.

Khartoum Spinning and Weaving Co. Ltd. began production in July 1964, working two shifts per day, and it is expected to add a third shift. As a result of the absence of trained operatives and the low initial efficiency of the local operatives, current production costs are very high. The firm is producing about 18 million to 20 million yards of Damoria annually and is able to supply one-third of the needs of the country. When its labourers have been well trained, the firm plans to introduce bleaching, dyeing and printing methods to produce other varieties of cloth.

3. Kronfli's Weaving and Finishing Co. Ltd.

A new firm established solely for weaving and processing of cloth, Kronfli's Weaving and Finishing Co. Ltd. plans to buy yarn and threads from the previously mentioned firms and to use them for production of qualities other than those produced by those two firms. Kronfli's also hopes to buy ready manufactured cloth from either of the two above-mentioned firms and to process it at their works, either for their account or for selling by the processing firm. The company is still in the planning stage, and construction is expected to begin towards the end of 1965. It is financed by a combination of local and foreign capital amounting to £S300,000, which will be increased as work permits.

4. Other mills

There are also other mills manufacturing special ladies' dresses, a sheet approximately 10 yards long and 36 inches wide, which is wrapped round the body like the Indian sari. These mills have existed for a long time and formerly worked on hand-looms. They are now mechanized and produce towels, sheets and linen as well.

Another industry which is dependent upon the textile mills considered above is the knitwear industry, which converts the yarn obtained from the factories into knitted garments — their production is now sufficient for the country's requirements. A total of approximately £S500,000 is involved in this industry.

The textile industry, though new to the Sudan, has been successful so far and is expected to expand in the very near future. Demand is rising, and there is always a market for new companies which are interested in this field of activity.

Both long-staple and short-staple cotton are available in abundant quantities, and the Government is very interested in assisting this industry.

B. Pulp and paper

Two pulp and paper factories are currently operating in the Sudan, one producing ordinary paper from waste paper and the other producing cardboard from cotton stalks. Studies are being made on the possibility of producing paper from wheat straw at this factory. However, these two factories are not able to satisfy the growing demand of the country. Consideration has been given since 1910 to the possibility of exploiting papyrus grass for paper-making, but no serious efforts were actually made, except in 1913 when a German group set up a pulp and paper-making plant at Lake No in the southern part of the Sudan. Due to the First World War, the company was liquidated before it began production.

The Sudd region of the Sudan would appear to be one of the greatest unexploited sources of cellulose raw materials in the world, and there is a dense area of papyrus growth amounting to some 150 million tons, covering an area of about 5,000 square miles and yielding about 5,000 tons per square kilometre. Furthermore, since the plant grows to its full height in just over three months, there is a possibility of three crops per annum.

Many reports have been made on the possibility of using papyrus for pulp and paper-making, the most recent of which is a report prepared by the Japan Consulting Institute. One of the reports concluded by saying: "Sudan papyrus produced a well-digested pulp and pale brown paper of excellent strength and quality. The pulp bleached readily, producing a white paper of high quality." One mill test has been carried out on the initiative of the Sudanese Government, when merchantable paper was produced from a consignment of about 10 tons of dried papyrus. The report mentioned that the quality was satisfactory.

The only obstacle facing the development of this industry is that concessions have failed to secure foreign loans or foreign participation that would enable them to proceed. If the necessary finance is secured, the country would be able not only to supply the local demand, but also to export pulp and paper to other countries. It is hoped that at least one firm will be able to proceed by 1966.

C. Foot-wear industry

Like other industries, the foot-wear industry has been introduced into the country recently. The first factory to be set up began production in 1957. In fact, it was one of three applications considered under the approved Enterprises Concessions Act (1956). Later

on, five other factories were approved for the same purpose.

1. Types of production

(a) *Canvas shoes*

The total imports of canvas shoes into the Sudan had reached 4 million pairs per annum, and as it is one of those items which can be manufactured easily, Bata Co., Sudan Ltd. was the pioneer in this field and set up the first factory for shoe production in 1952. The production of this company, together with other companies, satisfies the demand of the country.

(b) *Plastic shoes*

Plastic shoes were also introduced by Bata, followed by other firms. Production of this type of shoes is so high that the company can export to other countries.

(c) *Leather foot-wear*

As leather foot-wear is the type least sold in the country, it was the last item of production in the firm's schedule. It requires good skill and more effort in production. Owing to the restricted size of the market, coupled with the higher prices of the local production, two factories out of the three which were in this business closed down. Many of the works set up small shops for the production of slippers and ladies' shoes by hand. They are operating very well, and their products are selling without difficulty. No doubt, their expenses are very limited, thus keeping their selling price as low as it can be.

D. Flour-milling

The consumption of wheat flour was very low during the early 1940's. The *per capita* consumption was only 1 kg in 1949. As a result of urbanization, large development schemes, growth in industry and changes in living habits, the *per capita* consumption rose to 9 kg in 1963, and it is still rising.

Wheat is grown traditionally in the extreme northern parts of the country. In 1957, a group of businessmen began studies regarding the erection of a flour-mill, which was put into operation late in 1961, producing 240 tons of wheat per day to meet the rapidly growing demand. Wheat is imported from the United States of America under Public Law 480, but last year it was grown in two areas and an over-all yield of 50,000 tons was obtained. It is hoped that in years to come the requirements of the country will be met locally. However, the mill has met with problems regarding selling prices, which are fixed by the Government, and with regard to the adaptation of the machinery to suit all types of wheat, whether soft or hard. These difficulties, together with the training of personnel, are being solved.

The possibility of erecting additional mills in different parts of the country is being studied by other groups of businessmen, and at least one is expected to be erected in the central part of the country, which is the main wheat-growing area.

Other industries which have been established on the basis of the flour produced locally include factories producing biscuits, macaroni and vermicelli scattered all over the country.

The industries considered above are mentioned only to illustrate the types of industries and the difficulties with which they are confronted. Some of the major problems standing in the way of industrial development are considered below.

IV. Problems facing industrial development

A. Capital

One of the most important problems facing the progress of industry in the Sudan is that of capital. It has been pointed out that in most developing countries, the spirit of enterprise and confidence in the future are lacking. Capital may be available, but no one is prepared to run a risk and invest it in an entirely new industrial field. Thus, the role of the Government is to shoulder the responsibility of leading the economy towards industrialization. To achieve this, the Government of the Sudan formed an Industrial Bank in order to extend loans to enterprises. The Bank, according to its regulations, cannot extend more than two-thirds of the capital required by an individual industry. In spite of this, industry has found it difficult to obtain even the one-third. This is partly due to the fact that many of those who obtain the concession to set up an industry are, in fact, not genuine in their application. They estimate the cost of the project, hoping to get a financier who can take over the project, or at least buy the concession.

It may also be attributed to the fact that, as may be the case in other developing countries, the people like to work either individually or in family-owned firms. Were it possible for them to get together, there is no doubt that they could all raise the required share for the Bank to extend the loan. The difficulty is not only the acquisition of capital to begin a project; experience has shown that existing industries are suffering from the lack of working capital also. Commercial banks are extending short-term loans, financing raw-material imports, providing credit facilities for finished goods etc. But even though working capital is lacking, it is not the current policy of the Industrial Bank to advance loans for working capital. It is felt that this should now be amended, as many industries are suffering from lack of resources.

As industrial undertakings are a new sphere of economic activity and experience is scanty, local *entrepreneurs* are usually hesitant to invest. Their preference is for such fields as commerce and real estate, where returns can be quick and sizable, rather than for manufacturing, where risks are involved, profits may not be large and investments (e.g., in research and development) may not bring quick returns.

B. Labour

In a country newly venturing into the field of industry, labour presents a serious problem. To begin with, it is very difficult to get trained labour in industry. It is essential that they be trained on the job. In the higher level of supervisors, foremen and middle management, it is also not an easy job to find suitable local personnel. They either should be trained or foreign

personnel should be engaged until such time that the local personnel are able to carry on with the job.

The Department of Labour is fully aware of this problem and is doing its best in establishing vocational training schools and productivity centres. The Ministry of Education is now giving more attention to technical schools at different levels of education. It is felt that managerial skills are lacking in industry, as is the case in developing countries, and industrialists tend to place their relatives in managerial posts in industry even though they know nothing about management. The Government felt that they had to be trained; otherwise, they would be a burden on industry. It was agreed that a Management Training Institute should be set up under the supervision of the Labour Department to cater for this end. The Institute will be set up with the assistance of the United Nations, and it is hoped that it will be ready to commence work early in 1966.

C. Need for United Nations assistance

It is requested that the United Nations, and especially the Centre for Industrial Development, give emphasis to scientific and industrial research. The Sudan considers that the development of this type of research is of paramount importance to sound industrialization. It will not only help industry, but will guide it to the right path.

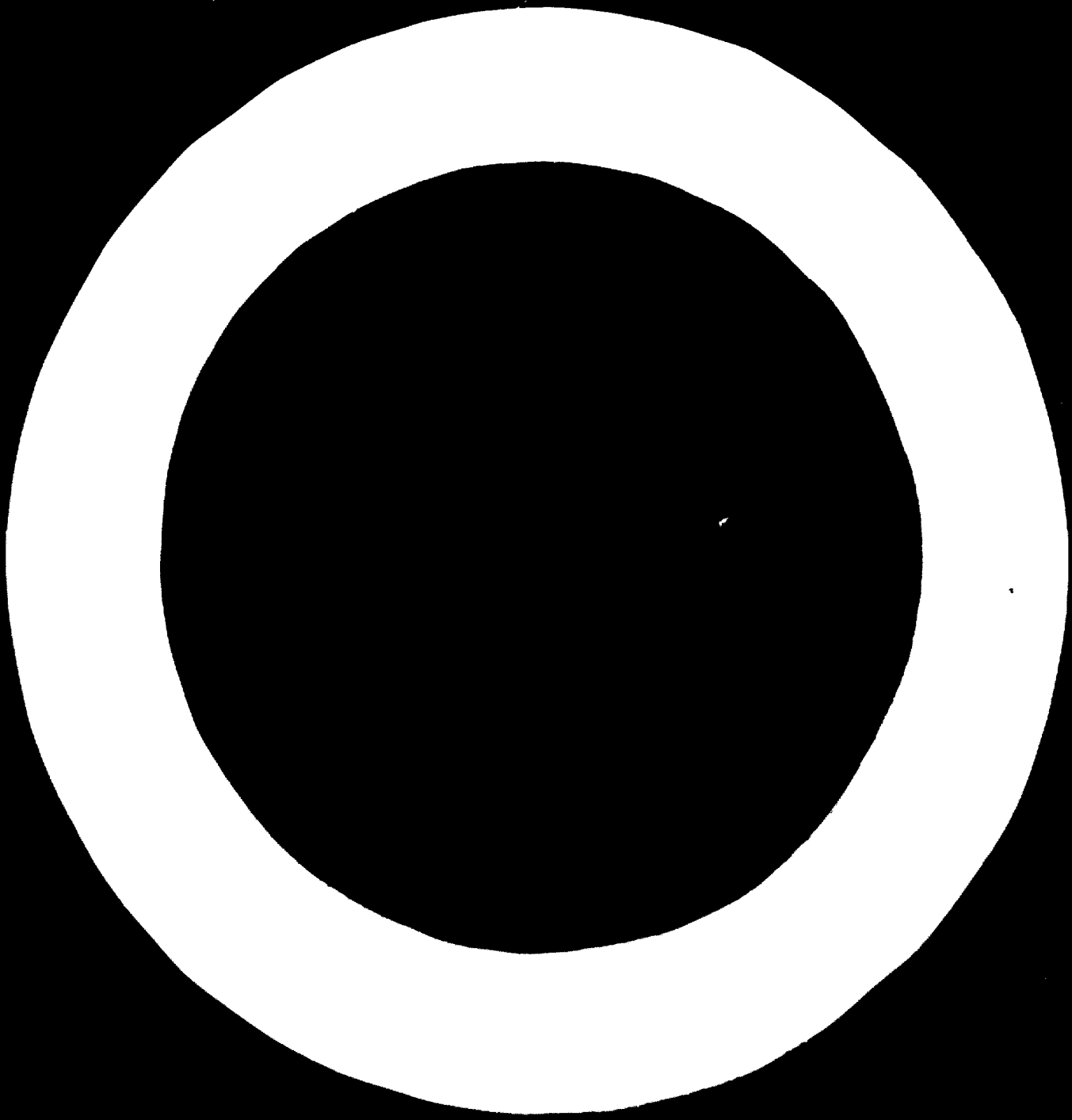
Research cannot be successful if sufficiently trained personnel from within the country are not made available. This point leads also to the importance of training in both numbers and quality.

1. Standards and specifications

To ensure that industry is meeting the consumers' needs and, at the same time, is getting the best raw materials for its money, a standards and specifications organization should exist. It is believed that the United Nations could extend help by sending experts to the developing countries to establish such an organization and to run it until local officers are trained to take over the job.

2. Training in the field of industrial development

The need for trained men to look after industrial development is a prerequisite in itself. This point need not be stressed, as the United Nations is giving attention to it, but it is requested that more attention should be given and that specialized courses should be held frequently for both senior and junior officers.



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6. INDUSTRIAL DEVELOPMENT IN THE UNITED ARAB REPUBLIC

Presented by the Government of the United Arab Republic

CONTENTS

I. Historical background

The revolution of 1952 opened the door for a radical transformation of all aspects of life in Egypt. This revolution was the culmination of the people's long struggles to eliminate feudalism and to free the country from exploitation and backwardness.

Prior to the revolution, Egypt was considered to be an agricultural country, or primarily a source of low-cost raw materials, as well as a market for finished products. Under those circumstances, no real industrial development could take place. After the revolution, a new era of industrial growth began.

Industrial activity in Egypt before 1952 was limited to some industries which originated during the conditions existing between the First and Second World Wars and which were based on the processing of agricultural raw materials. Those industries were mainly textile mills and certain food-processing enterprises. The production of those industries did not fully meet local needs, and the country remained dependent upon foreign sources, thus spending large sums of foreign currency. Moreover, no planning of any kind existed, and spontaneity and personal motives gave rise to some industries which eventually collapsed under varying objective conditions.

In many cases, industrial projects were executed against the dictates of basic economic principles. For example, Egyptian cotton, which is one of the finest in the world, was utilized for the production of thick fabrics rather than the thin fabrics which would be economically advisable.

Proper techniques were not always used, and the utilization of by-products was not seriously considered. The results were lower quality and higher cost. The burden, of course, rested on the shoulders of the people and the owners were only interested in quick profits. Investments were mainly directed towards producing consumer goods, and no attention was given to basic industries.

Such industries could not absorb large numbers of workers; unemployment remained high; a low standard of living was prevalent; and, even for industrial workers, no real effort was made to raise the technical skill and productivity of the worker.

These being the prevailing conditions, investment in industry was approximately 12 per cent of all investment in 1952, and the contribution of the industrial sector to the national income did not exceed some 10 per cent in the same year.

This haphazard development in the industrial sector, together with the continuous increase in population, led to serious economic problems, and the country was faced with an increasing trade deficit that reached its maximum in 1952. In that year, the value of imports was 280 million Egyptian pounds (£E), of which industrial machinery and equipment, as well as raw materials, did not exceed 7 per cent.

In other words, the country was faced with serious economic problems and showed little sign of growth. But the success of the revolution created faith and enthusiasm to rebuild the country on a firm foundation which would enable it to exercise full freedom.

II. Establishment of the National Production Council and the Ministry of Industry

A. National Production Council

The Government realized, from the very beginning, that the sound elements required for industrial development were available in the country and that, in order to achieve that objective, work should proceed on a well-defined basis supported by an organized scientific study of the possibilities of establishing new industries and the availability of raw materials, fuel, electric power and manpower. In 1952, therefore, a National Production Council was established to deal with the country's problems of economic development.

With the establishment of the National Production Council, preliminary studies were carried out and at the same time a series of enactments were issued to promote industrial development:

(*a*) Raw materials for industry were exempted from customs duties;

(*b*) The drawback of customs duties and excise taxes on exported goods was regulated;

(*c*) The investment of foreign capital in development projects was defined and such investment was promoted;

(*d*) Priority was given to the importation of the machinery and equipment required for industry;

(*e*) Concessions were given to companies to prospect for oil in different areas of the country;

(*f*) Investment in building operations was restricted so that investments would be directed to industrial development;

(*g*) The Industrial Bank was established to promote industry by granting loans or becoming itself a shareholder in some industrial projects.

As a result of these steps, industrial development began to surge forward.

The Government's point of view was that at that stage special attention should be given to projects of strategic importance and to fundamental industries which had a clear priority in industrial development. The idea was to create a basic foundation on which other industries could be established. On this basis, the policy of industrialization was directed to projects concerning the generation of electric power, oil-refining, the building of more roads and communications, the carrying out of a survey of mineral resources and the building of an iron and steel industry and a nitrogen fertilizer industry. Conditions were favourable for the generation of power from the old Aswan Dam. The project was put into effect, and, as a result, a nitrogen fertilizer industry was established at Aswan in 1960.

B. The Ministry of Industry

The need was felt for an organ to assume special responsibilities for industrial development. The Ministry of Industry was thus established in July 1956, with the main objectives of drawing up a well-defined industrialization plan and supervising its execution.

The Ministry began its work under the shadow of an economic blockade which was imposed on Egypt after the reclamation of the Suez Canal.

III. The first industrialization programme

A. Policy considerations

In drawing up the first industrialization programme, the Ministry of Industry faced the important questions which must be answered by every developing country in every stage of building up its industry, namely: "What is the direction of industrial development, and what is the relative emphasis to be given to basic heavy industries, on the one hand, and to consumer goods industries, on the other hand?".

The National Production Council defined its answer to this question by giving "Special attention to the basic industries", but the Ministry of Industry, which was faced by the economic blockade, was obliged to give equal attention to the production of consumer goods, in order to meet the requirements of the people and, at the same time, to save the hard currency which would be spent in foreign markets to purchase such goods.

The first industrialization programme, therefore, was characterized by the maintenance of a balance between the development of basic industries and the development of consumer goods industries. On the basis of this general principle, the Government established the following three goals:

(*a*) To attain self-sufficiency in all goods which could be produced locally and which were imported for local consumption;

(*b*) The expansion of industries which could find favourable export markets, as long as the elements of success of these industries existed in the country. In this way, such industries would serve as a means of earning foreign currency;

(*c*) Establishment of basic industries, which are the foundation of industrial progress, with particular attention to those industries which had not previously been covered by development.

In order to realize this policy, it was necessary to guide industrial development in two directions simultaneously.

The Government began the task of achieving the above-mentioned goals, first, by enlarging existing production units and establishing new industries; and, secondly, by raising productivity through the vocational and administrative training of workers at all levels and through elaborating specifications for industrial products as a guarantee of raising the standard of production, increasing its volume and cutting down its cost.

In general, preference was given to those industries where there was a reasonable prospect of efficient competition with imports and where the contribution to the national income would be more strongly marked. To establish that plan on a sound and balanced basis, it was necessary for the programme to include all sectors of industrial activity. The importance of a well-trained labour force as a basic factor in successful industrial development could not be overlooked.

B. Implementation of the programme

The first industrialization programme aimed at increasing the national income by £E100 million, namely, from £E900 million to £E1,000 million, thus increasing the contribution of the industrial sector to the national income from 11 per cent to 19 per cent. This planned increase of £E100 million in the national income from industry alone required new investment of the order of £E300 million.

The plan for the industrialization programme, which was approved in November 1957, comprised the following four main sectors of industrial activity:

Table 1. Egypt: The First Five-Year Industrial Plan

Industrial sector	*Number of projects*	*Total cost (millions of Egyptian pounds)*
Manufacturing industries	456	258.1
Mining industry	14	15.0
Petroleum industry	14	55.7
Training centres	18	1.7
TOTAL	502	330.5[a]

[a] Foreign currency required was about £E144 million, i.e., about 47 per cent of the total.

The Organization for Executing the First Five-Year Industrial Plan was established in the Ministry of Industry towards the end of 1957 for the implementation of the Plan. Despite the economic blockade which the country faced at that time, the first industrialization programme was implemented immediately following its approval in November 1957.

To finance the foreign currency component of this programme, the Government received loans from the Union of Soviet Socialist Republics (equivalent to £E61 million), the Federal Republic of Germany (equivalent to £E45 million), Japan (equivalent to £E12.5 million) and Eastern Germany (equivalent to £E7.5 million).

When the Five-Year Plan for Economic Development was adopted in July 1960, it took over the remaining part of the First Five-Year Industrial Plan (first industrialization programme) mentioned above. During the period from December 1957 to June 1960, substantial progress was realized, and 105 projects were put into operation at a total cost of more than £E83 million. At the same time, most of the remaining projects of the First Plan had been given on contract or were actually under construction.

The projects in the following sectors began production before June 1960:

Table 2. United Arab Republic (Egypt): industrial projects under way prior to June 1960

Industry	*Number of projects*	*Total cost (thousands of Egyptian pounds)*
Petroleum	3	9,166
Mining industry	9	416
Manufacturing industry		
Food	24	2,478
Chemicals	16	8,929
Metallic products	30	34,687
Metallurgical industry	1	395
Textiles	17	27,100
Training centres	5	294
TOTAL	105	83,465

Foremost among the projects being undertaken were the following:

(a) *Petroleum projects:* prospecting operations, geophysical researches, oil prospecting and drilling, oil-tankers;

(b) *Mining projects:* exploitation of manganese ores in the Elba area, of phosphate in Safaga and of dolomite in Ataqua;

(c) *Food-technology projects:* Automatic production of biscuits and cakes, and of canned fruits and vegetables; the production of frozen shrimps;

(d) *Chemical projects:* expansion of the production of calcium nitrate at Suez; the production of paints, varnishes and lacquers, ceramics and china products; expansion of two pharaceutical factories; production of motor-car accumulators, cosmetics and slag cement;

(e) *Metallic products projects:* the manufacture of lorries and buses (first stage), nails and screws, electric meters, bottled-gas cylinders, bicycles, transistor-radio receivers and railway wagons; extension of the iron and steel plant; production of transformers, brake linings, dry batteries, leaf springs, Ramses passenger motor-cars, electric-recording discs, electric washing-machines, pencils, spare parts for the textile industry and electric cables;

(f) *Textile projects:* extension of Misr Helwan Factory, of the jute factory at Shubra, of the various units of Misr Weaving and Spinning Mills at Mehalla El Kobra, of Misr Weaving and Spinning Mills at Fafr El Dawar and of Misr Rayon plant; new jute factory at Belbeis;

(g) *Training centres:* the Metals Training Centre in Alexandria, the Metals Training Centre at Dokki, Cairo, the Cars and Metals Training Centre at Embaba, Cairo, the Building and Carpentry Training Centre in Cairo and the Mechanics and Car Training Centre in Alexandria.

In June 1960, it was decided to draw up an over-all plan for economic development which would take ten years and which would double the national income. This ten-year plan was divided into two five-year plans, the first to begin on 1 July 1960 and the second to begin on 1 July 1965.

It was decided to include in the First Five-Year Industrial Plan (second industrialization programme), which was part of the over-all Economic and Social Plan, the residual projects of the first programme which had not yet begun production.

IV. The second industrialization programme

In accordance with the aims set by the State to raise the standard of living, an over-all plan for economic and social development was drawn up with the ultimate object of doubling the national income in ten years.

The plan was drawn up with total investment for the first five years amounting to £E1,697 million, out of which £E434 million was allocated for industry, to cover the actual investment in projects included in the second industrialization programme and the financial obligations left over from the first programme.

A. Policy considerations

In selecting the projects for the second programme, special attention was given to their regional distribu-

tion, the objective being to prevent major regional-income inequalities.

Moreover, care was taken to ensure that the new projects would be capable of a production that would favourably compete in foreign markets. Another factor which was considered in choosing the projects was to utilize to the utmost the local raw materials, including agricultural waste. Production of pulp and paper, for instance, was based on the utilization of rice straw and bagasse to the highest possible degree.

Projects were analysed from the economic point of view so as to select those which had high rates of return and high surplus, and which could add substantially to the national income and save more foreign currency or could be a source of foreign currency through exportation.

Strategic factors were also considered, and the soundness of all the projects of the plan was carefully examined.

Along with the above-mentioned policy considerations, the President of the United Arab Republic passed, in July 1961, certain resolutions which had a substantial impact on industry, namely:

(*a*) Establishment of a minimum daily wage of 25 piastres (£E0.25);

(*b*) Positive participation in management through representation of the workers by secret ballot of the Board of Directors;

(*c*) Actual sharing in the profits of production, amounting to 25 per cent, of which 10 per cent was directly distributed among the workers, 5 per cent was devoted to social and housing services and the remaining 10 per cent devoted to social and central services;

(*d*) The working day became seven hours, which means forty-two hours of work per week.

B. Organization of the programme

The first Five-Year Industrial Plan (second industrialization programme) included 734 projects with a total cost of £E885 million and 622 supplementary projects with a total cost of £E49 million were included. During the execution, 84 projects were added, with a total cost of £E99 million, thus making the total cost of £E1,033 million.

It is estimated that about 220,000 workers are required for the projects of this Plan. In addition, the execution of new industrial projects would raise employment in other sectors which serve the industrial sector such as transport, marketing etc.

Table 3 shows the distribution of the above-mentioned projects according to the different sectors of industry.

Table 3. United Arab Republic (Egypt): distribution of projects in First Five-Year Industrial Plan, July 1960-July 1965

(Cost in thousands of Egyptian pounds)

Industrial sector	Original projects		Supplementary projects		Additional projects		Total	
	Number of projects	Total cost	Number of projects	Total cost	Number of projects	Total cost	Number of projects	Total cost
Mining	85	102,215	1	064	9	3,061	95	105,340
Petroleum	22	97,758	—	—	—	—	22	97,758
Petrochemicals	1	55,000	—	—	—	—	1	55,000
Chemicals	80	186,365	126	15,497	8	29,709	214	231,571
Building materials	5	2,112	10	3,249	2	207	17	5,568
Metallurgical industry	27	105,852	3	0,722	2	832	32	107,406
Engineering industry	115	128,512	183	10,394	21	12,797	319	151,703
Food processing	115	101,320	187	5,508	37	50,815	339	157,643
Textiles	70	89,672	112	13,577	5	1,681	187	104,930
Training centres	40	7,401	—	—	—	—	40	7,401
Rural and vocational industries	174	8,229	—	—	—	—	174	8,229
TOTAL	734	884,436	622	49,011	84	99,102	1,440	1,033,549

Table 4 shows the situation as regards the execution of the original projects of the Plan as of 31 December 1964 (the date of the last report in hand when writing this paper).

Table 4. United Arab Republic (Egypt): execution of original projects in First Five-Year Industrial Plan as of 31 December 1964

Particulars	Number of projects	Total cost (thousands of Egyptian pounds)
A. Projects which actually began production during the period from 1 July 1960 to 31 December 1964	381	294,216
B. Projects in which test runs have begun	17	44,596
C. Projects for which the equipment has been received and is being installed	46	61,690
D. Projects for which the equipment is being received and installed	14	1,515

Table 4. United Arab Republic (Egypt): execution of original projects in First Five-Year Industrial Plan as of 31 December 1964 (*continued*)

Particulars	Number of projects	Total cost (thousands of Egyptian pounds)
E. Projects for which the constructional work has been completed and the equipment is being supplied	11	10,792
F. Projects for which the constructional work is being carried out and the equipment is supplied and installed	30	71,822
G. Projects for which the constructional work is being carried out and the equipment is being manufactured	28	58,855
H. Projects for which the constructional work is being carried out	14	28,858
I. Projects for which sites have been chosen and equipment is being manufactured, but whose constructional work has not yet begun	7	6,197

Table 4. United Arab Republic (Egypt): execution of original projects in First Five-Year Industrial Plan as of 31 December 1964 (*continued*)

Particulars	*Number of projects*	*Total cost (thousands of Egyptian pounds)*
J. Projects for which sites have been chosen but for which the supply of equipment and constructional work have not yet begun	8	6,469
K. Projects for which contracts for supply of equipment were signed	25	105,458
L. Projects already studied and awaiting final decision	29	66,271
M. Projects for which contracts have been signed for detailed studies	5	13,113
N. Projects still under study	76	77,109
O. Projects concerned with mining and petroleum research	43	37,475
TOTAL	734	884,436

The over-all situation as of 31 December 1964, was as follows:

(*a*) Of the 827 projects already realized, with a total cost of £E367 million, 786 projects were in actual production, at a total cost of £E322 million, and 41 projects were undergoing tests, at a total cost of £E45 million;

(*b*) There were 58 projects for which equipment had been received and was being installed; the total cost involved was £E62.2 million;

(*c*) There were 46 mining and petroleum research projects functioning, the total cost of which was £E38 million.

The total number of projects in the three foregoing categories was 931, i.e., about 65 per cent of the total, and their total cost was £E467 million, i.e., about 45 per cent of the total.

As a result of the development which the United Arab Republic achieved in the field of industrialization, the value of industrial production was more than trebled from 1952 to 1964, rising from £E313.9 million in 1952 to £E1,046 million in 1964.

The main features of development in the different sectors of industry are outlined below.

1. The petroleum industry

Until 1952, this industry remained the almost exclusive domain of foreign capital. Egyptians held barely £E2.7 million of the total capital invested in that industry, which was £E13.3 million.

Invested capital in the petroleum industry reached £E120 million in 1964. The number of producing oilfields increased from four in 1952 to seventeen in 1964. Production of crude oil rose from 2.3 million tons in 1952 to 6.5 million tons in 1964, and it is expected to reach 20 million tons in the next few years.

The number of people employed in this industry rose from 12,160 workers, with a total wage bill of £E5.3 million, in 1952 to about 25,000 workers, with a total wage bill of about £E15 million. The average wage per worker increased from £E438 per annum in 1952 to about £E600 per annum in 1964. The petroleum industry's contribution to the national income rose from £E21.2 million in 1952 to approximately £E60 million in 1964.

The following table illustrates the growth in production of the main petroleum products during the period 1952-1964:

Table 5. United Arab Republic (Egypt): Growth in production of major petroleum products, 1952-1964

(*Tons*)

Product	*1952*	*1964*
Crude oil	2,379,000	6,500,000
Bottled gas	3,700	44,400
Benzene (gasoline)	190,000	753,000
Kerosene	218,000	907,000
Fuel oil	1,826,000	3,800,000

2. The mining industry

Prior to the revolution, the entire allocation of the mining industry in the budget was no more than £E20,000. In the 1964/1965 budget, a total of about £E9 million was allotted to this industry. The number of technical personnel engaged in this industry increased from thirty-three in 1952 to about 4,000 in 1964. The number of parties carrying out geological, mining and exploration surveys increased from five in 1952 to eighty in 1964.

The increased activity by geological parties searching for minerals, collecting geological data and carrying out analyses of samples gathered has increased the supply of basic raw materials available for a large number of industries. The following are a few of the minerals made available for local industries: phosphate for the manufacture of superphosphate fertilizer; iron-ore for the iron and steel industry; white sands for glass manufacture; limestones for the cement, iron and steel, and fertilizer industries; dolomite for lining furnaces in many industries; kaolin for the manufacture of earthenware, ceramic and porcelain, and for the paper industry; talc for insecticides, medicines and paper; granite, marble and ornamental stones for building and mosaic; and gypsum for agriculture, building and the cement industry.

The mining projects included in the Plan fall into two main categories:

(*a*) Exploitation of mineral deposits, foremost among which are the exploitation of copper and coal deposits, and the increased exploitation of iron-ore and phosphate;

(*b*) Prospecting for minerals, foremost among which are researches in connexion with iron-ore in the Baharia Oases; copper in Sinai and near Aswan; coal in Abu Rawash, Khatatba and other locations in the western desert; aluminium, phosphate and other minerals in the western desert.

The Plan also included a project for the manufacture of ferro-manganese alloys used in the iron and steel industry.

The steady increase in the production of minerals made it possible to export some surplus to a number of countries in various areas of the world, the value of which amounted to about £E3.5 million and which included mainly rock-phosphate, manganese ore and common salt.

3. Chemical and pharmaceutical industries

Most of the chemical industries which existed in Egypt before the revolution consisted of small production units, the majority of which produced soaps and other consumer commodities, as well as a relatively

small quantity of fertilizers. As a result, the country had to resort to imports so as to satisfy the domestic need for chemicals and chemical products. The value of imported chemicals and chemical products amounted to £E33 million, approximately 14 per cent of the average value of the country's total imports during the period from 1950 to 1952. Of this £E33 million, 38.5 per cent went to fertilizers and about 48.5 per cent to consumer goods, mostly paper, pharmaceutical products, cosmetics, glass and ceramic and porcelain products.

In the field of basic chemicals, a considerable increase took place in the production of sulphuric and nitric acids, caustic soda and chlorine during the period from 1952 to 1964, as is shown in table 6.

Table 6. United Arab Republic (Egypt): Increase in production of basic chemicals, 1952-1964

(*Tons*)

Item	*1952*	*1964*
Sulphuric acid (100 per cent)	51,000	170,000
Nitric acid (100 per cent)	77,000	342,000
Caustic soda (100 per cent)	2,000	16,300
Chlorine	1,600	14,000
Ammonia	20,800	185,000

Moreover, production is planned for 100,000 tons of soda ash per annum, more caustic soda through causticification of the soda ash, calcium carbide, ferro-silicon, formaldehyde urea, formaldehyde and phenol formaldehyde resins, chlorosulphonic acid and other basic chemicals.

In the field of chemical fertilizers, including both nitrogen and phosphate fertilizers, important developments have taken place.

Before the revolution, there was one factory at Suez for the production of nitrogen fertilizers. Its actual production was about 110,000 tons of calcium nitrate per annum. After 1952, its production was raised to about 270,000 tons per annum. Another large factory was built in Aswan, which utilized electrical energy generated from the old dam to produce about 700,000 tons of calcium ammonium nitrate (calculated as 15.5 per cent N) per annum. Moreover, 135,000 tons of ammonium sulphate (as 15.5 per cent N) per annum were produced at Suez. After executing all the projects included in the Plan, production of nitrogen fertilizer will reach about 2,250,000 tons (15.5 per cent N) per annum, the quantity needed for domestic consumption.

Before the revolution, production of phosphate fertilizers did not exceed 106,000 tons per annum. This production will be raised to about 616,000 tons per annum after execution of the projects included in the Plan, a figure which will satisfy domestic demand.

With regard to different types of paper, production in 1952 was about 24,000 tons per annum, which did not satisfy local needs, and the country had to import about 65,000 tons annually during the period from 1950 to 1952. This was valued at approximately £E6 million. The Plan envisaged an increase in the production of different types of paper to about 146,000 tons per annum. The amount of pulp needed for this production is already being produced from local raw materials, such as rice straw, sugar-cane, bagasse and reeds.

Particle board and hardboard, which were not produced before the Plan, are being produced in sufficient quantities, using rice straw, flax, sugar-cane and bagasse as raw materials.

With regard to the production of the coke required to feed the blast-furnaces of the iron and steel industry, the first coke battery, with a capacity of 330,000 tons per annum, began to produce in 1964, and the second industrialization programme envisages increasing this capacity to meet the demands of a growing iron and steel industry. Distillation of coal-tar to produce naphthalene, phenol, cresol and anthracene is envisaged also in the second programme.

As to rubber products, no rubber-tire industry existed before the revolution. The total production of various rubber products amounted to about 700 tons per annum in 1952. This figure reached about 7,500 tons in 1964. Motor-car tires, as well as tires for bicycles and motor cycles, with a value of approximately £E4.5 million, were produced in 1964.

A project for the production of dye-stuffs and intermediates was included in the Plan and is already under execution.

In the field of pharmaceutical products, the value of local production in 1952 did not exceed £E700,000, while the domestic consumption of pharmaceutical preparations, in the same year, amounted to about £E5.5 million, which meant that the country was dependent upon imports. The situation has changed radically since then, and the country now produces sulpha compounds, salycilic acid compounds, penicillin and its derivatives, streptomycin and its derivatives, chloroamphen-icol and vitamins. Production of patented pharmaceutical preparations is now carried out with Hoechst, Pfizer and Swiss Pharma (Ciba, Sandoz and Wander). In 1964, the value of pharmaceutical products was over £E12 million.

As for medical supplies, the country's needs were all imported, except for medical cotton. The Plan included projects for the manufacture of surgical instruments, surgical catgut sutures, bandages and medical gauze, neutral glass and ampoules, as well as laboratory equipment.

In the field of perfumes and cosmetics, the country was also wholly dependent upon imports. The value of imports amounted to about £E136,000 in 1952. In 1964, imports dropped to less than £E1,000, and local production of world brands and local brands amounted to about £E2 million.

4. Building materials industries

In the field of building materials, refractories and glass, the value of various products rose from about £E9 million in 1952 to more than £E27 million in 1964.

Production of other new products, which had previously been imported, was also begun, e.g., sanitary and domestic appliances, chinaware, electric insulators, ceramic tiles, white cement, slag cement, translucent flat glass and glass for medical purposes.

Production of Portland cement in 1952 amounted to about 950,000 tons per annum. In 1964 this production was raised to 2.1 million tons. In addition, about 600,000 tons of slag cement and 40,000 tons of white cement were produced.

The production of cement pipes and concrete products rose from 25,000 tons (valued at £E730,000) in 1952 to more than 200,000 tons (valued at over £E4.5 million) in 1964.

Stoneware and china were completely imported in 1952. Available raw materials are now used to produce such items, and a new plant with a capacity of about 9,000 tons per annum has been built.

Production of refractory bricks and blocks rose from about 8,000 tons in 1952 to more than 65,000 tons in 1964.

The glass industry witnessed a similar increase. Local production amounted to about 12,000 tons in 1952 and rose to more than 52,000 tons in 1964.

5. Food industries

The food industries are closely connected with the country's agricultural wealth. They also have a direct effect on the level of agricultural income. Considerable effort has been made in the past years in the development of these industries. New industries which have been introduced into the country for the first time include the canning of sardines, cheese processing, frozen-shrimp production and the extraction of oil from rice bran. Many existing industries, such as sugar, pasteurized milk, canned food, carbonated beverages, hydrogenated oils and dehydrated onion, were expanded also.

The value of industrial production in the food industries sector was about £E122 million in 1952 and became more than £E222 million in 1964.

Table 7 shows the development of production of some of the food industries during the period from 1952 to 1964.

Table 7. United Arab Republic (Egypt): Increase in production of selected food industries, 1952-1964

Production	*Unit*	*1952*	*1964*
Canned sardines	Thousands of tins	—	5,330
Canned shrimp	Thousands of tins	—	45
Pasteurised milk	Thousands of tons	—	15.1
Dehydrated fruit	Tons	—	291
Canned meat	Tons	—	672
Canned tomato juice	Tons	...[a]	606
Sugar	Thousands of tons	188	378
Cotton-seed oil	Thousands of tons	100	124
Hydrogenated oils	Thousands of tons	12	46
Carbonated beverages	Millions of bottles	156	702
Animal fodder	Thousands of tons	—	67
Processed cheese	Tons	140	1,240
Cigarettes and tobacco products	Thousands of tons	11.4	14.9

[a] Not estimated.

6. Engineering industries

The engineering industries draw most of their raw materials from the products of the metallurgical industries. These products, e.g., metal sections, sheets and alloys, are shaped, machined and assembled into end-products for consumer use.

In 1952, minor items of such industries were produced, namely, metallic furniture, steel drums, motor-car batteries, dry batteries, electric bulbs and insulated electric conduits, but in small quantities. Since then, an ever-increasing number of items has been produced, as may be seen from table 8, which indicates the growth of some engineering industries during the period 1952-1964.

Table 8. United Arab Republic (Egypt): Growth of selected engineering industries, 1952-1964

Product	*Quantity produced*[a]	
	1952	*1964*
Passenger motor cars	—	4,844
Buses	—	621
Trucks	—	1,328
Railway-goods wagons	—	282
Television receivers	—	51,732
Tube radios	—	35,250
Transistor radios	—	211,997
Bicycles	—	43,293
Sewing-machines	—	11,279
Electrical transformers[b]	—	115,150[b]
Electric washing-machines	—	16,056
Metallic furniture[c]	3,000	6,370[c]
Steel drums	200,000	238,600
Motor-car batteries	18,000	171,000
Dry batteries	1,200,000	20,200,000
Electric bulbs	2,000,000	10,000,000
Electric refrigerators	—	32,900
Air-conditioning units	—	8,433
Kilowatt-hour meters	—	101,000
Bottled-gas cookers	—	78,821

[a] Number of units produced, except as noted in foot-notes [b] and [c].
[b] Kilovolt-amperes. [c] Tons.

7. Metallurgical industries

Considerable attention has been devoted to the metallurgical industries, which are the foundation of a large number of the industries which would lead to the improvement of the country's standard of living and the realization of self-sufficiency in many basic commodities.

The most important projects included in the industrialization programme are: the concentration of iron-ore at Aswan; the iron-ore sintering plant; completion of the small-sections mill at the Iron and Steel Company's works; the strip mill; production of wire ropes; increase in the production of the rolling-mill at the Egyptian Copper Works; and the manufacture of forged products, chains, transmission chains, cast-iron alloys and electrolytic zinc.

Table 9 illustrates the growth in various branches of the metallurgical industries between 1952 and 1964.

Table 9. United Arab Republic (Egypt): Growth of selected metallurgical industries, 1952-1964

Product	*Unit*	*Quantity produced*	
		1952	*1964*
Hot-rolled steel billets	Ton	—	64,769
Railway rail-fittings Railway rails Steel sections	Ton	—	57,151
Hot-rolled steel plates	Ton	—	33,919
Steel castings	Ton	—	3,794
Screws, bolts and rivets	Ton	—	5,825
Cast-iron high-pressure water-pipes	Ton	—	5,389
Reinforcing bars and bars for the manufacture of wire	Ton	50,000	200,569
Wires	Ton	1,000	6,774
Cast-iron pipes for sanitation Sanitary installations Other cast-iron products	—	16,800	17,865 7,264 27,180

8. Textile industries

The industrialization programme has brought about such an expansion of the textile industry that not only has domestic demand been fully satisfied, but export earnings have also benefited.

During the period from 1952 to 1964, progress was effected in the coarse, medium and fine spinning of cotton, as well as the spinning in cotton waste. Simultaneously, progress was effected in the weaving of cotton and in the bleaching, dyeing, printing and finishing of cotton fabrics. A similar growth was effected in the wool industry, as well as in the bast fibre industry.

In the field of synthetic fibres, nylon fibres and yarns were produced, and the second industrialization programme envisaged the production of polyacrylonitrile, which can replace, completely or partially, natural wool. Envisaged also is the production of nylon 6, from caprolactam, which can be used for the production of the tire-cord needed for the manufacture of tires.

Table 10 shows the development of production in the various branches of the textile industry during the period from 1952 to 1964.

Table 10. United Arab Republic (Egypt): Growth of various branches of the textile industry, 1952-1964

Product	Quantity produced[a]	
	1952	1964
Cotton yarn	55,700	129,460
Cotton fabrics	40,000	84,900
Woollen yarn	2,000	9,400
Woollen fabrics	800	3,600
Rayon and synthetic fibres and yarns	4,000	13,700
Rayon fabrics	4,200	7,700
Flax yarn	300	1,057
Linen fabrics	245	848
Jute yarn	1,700	25,800
Jute fabrics	1,600	23,200
Ready-to-wear clothes	10,000	28,000
Knitwear[b]	1,649,000[b]	8,826,000[b]

[a] Production in tons except as noted.
[b] Production in dozens.

V. The third industrialization programme

A. Policy considerations

As a result of the speed at which the first and second industrialization programmes were carried out and the realization of targets for production, employment and national income, favourable circumstances prevailed for the expansion of many important industries, particularly heavy industries.

Guided by the following considerations and directives, the third industrialization programme was drawn up. Its major features are outlined below.

Industry in the United Arab Republic should continue supporting over-all national growth and should continue its substantial contribution to the realization of the country's great aspirations in the field of economic and social development. In this respect, the new programme realizes an increase in the number of workers directly employed in industry, estimated at about 180,000, in addition to the large number of those who will be employed in construction operations and other services connected with the operation of these projects, such as transport and marketing. It is estimated that about 500,000 workers will be employed in these services. Moreover, the implementation of this programme signals a surge forward on the part of the United Arab Republic, to catch up with the major industrial countries. The programme will bring about an increase in the value of industrial production which will amount to about £E250 million in exports.

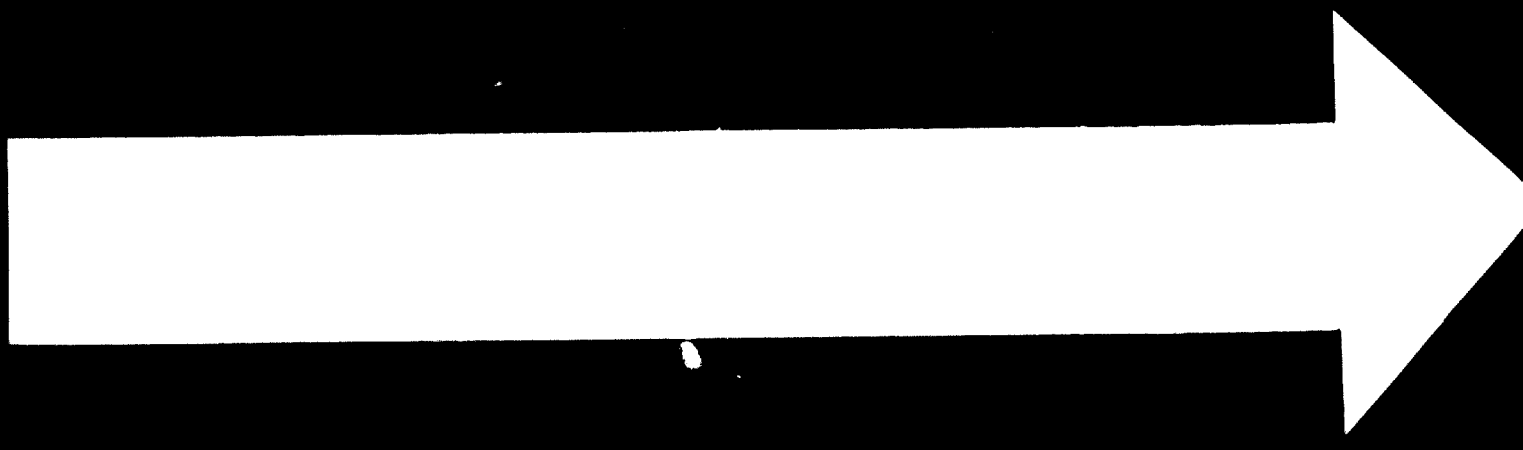
There is wide scope for industrial development in the United Arab Republic. Much of the nation's natural and mineral wealth is still unknown, and only through industrial and scientific work can this hidden wealth be unearthed. Towards this end, industrial institutes—for example, the metallurgical institute—are being planned. The third industrialization programme thus includes fifty-three projects requiring a total invested capital amounting to £E158 million.

The new resources of mineral wealth can easily constitute the backbone of heavy industries, which can, in turn, provide instruments of production. Special importance should be given to heavy and basic industries, through which the basis of modern industry can be firmly founded. Complying with this consideration, proceeding towards the revolutionary target set by the United Arab Republic, the national income will be doubled at least once every ten years; and facing the industrial under-development and the race towards progress, the third industrialization programme will give special attention to the growth and creation of heavy industries.

The Government of the United Arab Republic is also giving attention to the latest achievements of science in using the industrial and agricultural waste and refuse by introducing such new industries as the production of paper-pulp and particle board from bagasse and rice straw. Refuse of oil-extraction and canning mills is also transformed into animal fodders. Moreover, in view of the great drop anticipated in the production of red bricks as a result of the precipitation of great amounts of silt in front of the High Dam, the third industrialization programme includes eleven new projects for the production of sand bricks in various governorates, with a total productive capacity of 1,500 million bricks per annum.

Great attention is also given to consumer goods industries. Besides offering many opportunities for employment, they meet a major part of the demand of consumers. They also save for the country large amounts of foreign currency. In addition, they give the United Arab Republic the chance to increase its volume of exports to neighbouring markets. It is natural that heavy industry is a sound basis for a rapidly growing economy, but the building of heavy industries, with the definite priority which should be given to them, need not stop the production of consumer industries. Food industries, among consumer industries, are certainly important in stengthening the economy of the country.

Generally speaking, the projects included in the third programme envisage the partial or total utilization of



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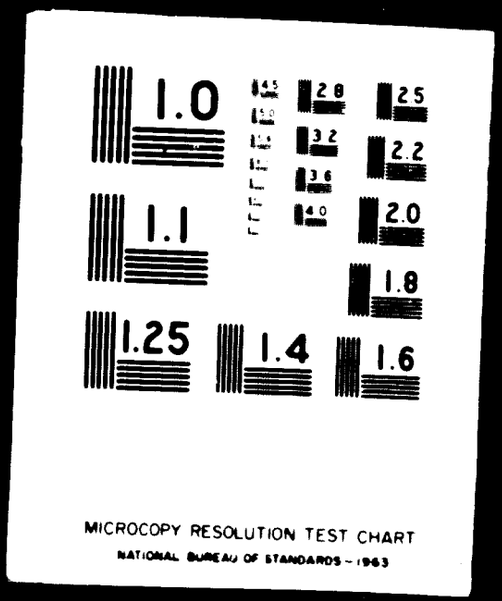


the raw materials available in the country to the highest possible degree. This achieves the major goals of the development scheme and also leads to the increase in production which, in turn, provides the country with foreign currency, which would help in meeting the ever-increasing demands of development.

The industrial and agricultural sectors are to co-operate in the industrialization of the rural areas in order to open a new scope for employment in these areas. Besides increasing production, the industrialization of the rural districts supplies the workers in the fields with new power and skills, which will enable them to change life there radically and effectively. Coping with this understanding, the third industrial programme includes quite a large number of units of small-scale and handicraft co-operative industries, namely:

(*a*) There are 150 units for strengthening the maintenance and production units in the main cities and governorates for the service of mechanical and agricultural machinery, as well as medium and small units and mobile workshops to provide these services in villages and small towns;

(*b*) There are 214 units of agricultural projects in order to utilize local raw materials, such as bast fibres, wood-dust, rice straw and other materials;

(*c*) There are 92 units of new vocational-service projects of greater volume, to increase the possibilities of exporting high-quality products;

(*d*) There are 10 industrial estates for small-scale industries to provide more favourable circumstances for small industries and to overcome any difficulties that may confront them.

In drawing up the third industrialization programme, much attention was given to an equitable distribution of industrial projects among the various governorates. Gone is the time when a certain area, town or city of the governorate alone enjoyed the benefits of industry. Location of industries, although subject to an equitable regional distribution, is, none the less, based upon a detailed and comprehensive study of all factors affecting production costs and investments.

Accordingly, a revised survey was made of industrial, agricultural and mining raw materials, and their geographical distribution. The availability of skilled labour, power and fuel, transportation facilities, water-supply and means for waste disposal were also studied.

As a result of this detailed study, projects included in the third programme were distributed among the various areas and regions.

The State exerts every effort to increase exports in order to make industry the prime source for gaining foreign currency, thereby changing the pattern which had prevailed in Egypt for centuries, that is, dependence upon the cotton crop as the main export item. During the last few years, the United Arab Republic has been able to export 248 types of industrial products. Although some of them might not appear to be of major significance, yet improving the quality or introducing some scientific modifications, as well as improving the foundations of our export policy, will achieve the maximum quantities of export.

The third industrialization programme has given attention in extending the vertical expansion of industry by raising the productivity through vocational and administrative training of individuals on all levels. In this respect, 20 vocational training centres are included in the programme.

B. Organization of the programme

The third industrialization programme has already been drawn up, to be implemented within the Second Five-Year Plan for Economic and Social Development (1965-1970). The total cost of the programme has been estimated at about £E1,128 million, out of which a sum of £E960 million is invested capital.

Table 11 shows the distribution of these investments among the various industrial sectors.

Table 11. United Arab Republic: distribution of investments in third industrialization programme, by industrial sector

Industrial sector	*Number of projects*	*Estimated total cost* (millions of Egyptian pounds)	*Estimated invested capital* (millions of Egyptian pounds)	*Estimated number of workers to be employed* (thousands)
Mining industries	27	59.1	52.5	23.8
Petroleum industries	23	96.9	94.9	3.8
Petrochemical industries	1	55.0	50.0	2.3
Chemical industries	68	212.8	189.9	14.8
Building materials and refractories industries	57	65.2	60.8	12.5
Metallurgical industries	48	202.5	175.3	18.5
Engineering industries	64	185.6	119.5	51.4
Food industries	43	84.3	70.0	16.3
Textile industries	103	87.3	80.1	26.9
Handicraft, rural and small industries	488	22.3	12.4	11.4
	922	1,071.0	905.4	181.7
Vocational training centres	20	6.6	6.6	1.3
	942	1,077.6	912.0	183.0
Unforeseen small projects		20.0	18.0	
Replacements and renewals		30.0	30.0	
TOTAL		1,127.6	960.0	

The third industrial programme may be classified according to the value of projects, as follows: (*a*) 185 projects requiring an investment of over £E1 million each, totalling about £E820 million; and (*b*) 757 projects requiring an investment of less than £E1 million each, totalling £E92 million.

It is worth mentioning that the above-mentioned total investments are not to include projects relating to: (*a*) the electric-power plan; (*b*) the pharmaceutical plan; and (*c*) utilities needed for industrial projects, as long as these exist outside the premises of the said projects.

Moreover, experience gained during the last eight years, in both planning and execution, proved valuable in drawing up the third industrialization programme. Upon reviewing some projects of the second programme, it was found feasible to include them in the new one in their revised form, such as the petrochemical industries based on steam-cracking of benzene, the production of electrolytic aluminium, extension of the iron and steel industry and thirty other projects for which allocations totalling £E117 million had been made in the First Five-Year Plan. This sum is now raised to £E237 million.

The expected development in the different sectors is given below:

1. Mining industries

The third programme includes three projects for geological and mineral surveys estimated to cost around £E10 million and to provide work for 2,800 workers. The increase of the potentialities of the Central Mineral Research Laboratory is also taken into consideration.

Furthermore, twenty-four projects for the exploitation of mineral deposits are included under the programme. These projects will yield production worth £E43 million per annum and offer employment to 16,500 new workers. Besides, a surplus of mineral products worth £E278 million is expected to be exported after local requirements have been met. The following table shows the quantities of forecasted exports:

Table 12. United Arab Republic: forecasts of exports of mineral products

(*Tons*)

Product	*Annual quantity*
Rocket phosphate	3,000,000
Titanium tetrachloride	115,000
Steatite	8,000
Plaster of Paris	8,000
Gypsum	230,000
Salt	475,000
Kaolin and white clay	5,000

2. Petroleum industry

The third industrialization programme includes four large projects in oil prospecting and production, the cost of which is estimated at approximately £E72 million and whose anticipated annual production is estimated at about £E15 million.

As regards refining and processing, there are sixteen other projects which will provide briefly for the enlargement of existing refineries in order to raise their capacity, improve the quality of their products and permit the production of lubricating oils and their blending. These projects are estimated to cost approximately £E18 million, and their anticipated production is considered to be on the order of £E28.1 million. They will open 920 new jobs.

Moreover, special attention is given to petroleum transport and storage by including projects in the programme.

The following surplus is expected to become available for exportation as a result of the above-mentioned projects:

Table 13. United Arab Republic: estimate of surplus petroleum products to become available for exportation

(*Tons*)

	Quantity per annum
Crude oil	1,500,000
Butane gas and propane gas	77,000
Gasoline	700,000
Fuel oil	1,054,000
Asphalt	241,000
Lubricating oils	28,000
Petrolatum	5,000
Petrolatum solvents	800

3. Petrochemical industries

This project is based on the steam-cracking of the surplus naphtha produced at the refineries to produce various petrochemicals, the most important of which are as shown in table 14.

Table 14. United Arab Republic: planned production of selected petrochemicals

(*Tons*)

	Annual production
Polyethylene and polyvinyl chloride	35,000
Synthetic rubber (polybutadiene)	12,000
Acrylonitrile	5,000
Caprolactum (nylon yarn and tire cord)	4,000
Methyl alcohol (manufacturing formaldehyde)	10,000
Calcium ammonium nitrate fertilizer (20.5 per cent N)	200,000

4. Chemical industries

The programme planned for the chemical industries sector is outlined in table 15.

Table 15. United Arab Republic: projects planned for chemical industries in third industrialization programme

Subgroup and main products	*Number of projects*	*Total estimated cost* (*Millions of Egyptian pounds*)	*Total estimated value of annual production* (*Millions of Egyptian pounds*)	*Number of works to be engaged*
I. *Basic chemicals*	20	48	28	2,650
Plasticizers				
Extension in coking				
Phosphoric acids and salts				
Tar distillation				
Textile auxiliaries				
Metal stearates and resins				
Lead nitrate				
Formaldehyde				
II. *Chemical fertilizers*	4	45	13	2,585
Ammonium sulphate				
Urea				
Calcium ammonium				
Organic fertilizers	6	3.8	0.8	360

Table 15. United Arab Republic: projects planned for chemical industries in third industrialization programme (*continued*)

	Subgroup and main products	Number of projects	Total estimated cost (Millions of Egyptian pounds)	Total estimated value of annual production (Millions of Egyptian pounds)	Number of workers to be engaged
III.	*Rubber goods*	6	13	9.7	1,215
	Rubber parts				
	Tires				
	Reclaimed rubber				
	Battery cases				
IV.	*Miscellaneous chemical products*	19	15	18	1,785
	Plastic bags, polyethylene containers, polyvinyl chloride flooring				
	Wettable powders				
	Paints, carbon electrodes, etc.				
V.	*Pulp and paper industries*	13	88	43	6,200
	Paper, newsprint				
	Pulp				
	Paper transformation project				
	Industrial wood				
	TOTAL	68	212.8	112.5	14,775

When the projects listed in table 15 reach the full-operation stage, it is anticipated that about £E32 million worth of such production is to be exported. Products to be exported are mainly fertilizers, paper, particle board and tires.

5. Building materials and refractories industries

There are eight projects for manufacturing cement; the total estimated value of the annual production reaches £E12.5 million.

Besides, some eleven other new projects are drawn up for manufacturing 1.5 million sand bricks annually. The programme also includes some projects for the production of asbestos sheets and pipes, reinforced-concrete pipes and columns, and clay pipes.

As far as refractories are concerned, the programme includes six projects with an estimated annual productive capacity of 17,000 tons of ceramic tiles, electric insulators for low and high voltage and porcelain tableware.

Furthermore, five projects are included for developing glass industry.

6. Metallurgical industries

Forty-eight metallurgical projects are included in the third industrialization programme. These projects, which are expected to yield production worth £E187 million, may be classified as follows:

Table 16. United Arab Republic: metallurgical projects in third industrialization programme

Projects	Number of projects	Total cost (Millions of Egyptian pounds)	Cost of production (Millions of Egyptian pounds)	Number of workers
Ferrous group	30	157.0	148.8	14,500
Non-ferrous group	16	42.4	36.8	3,700
Miscellaneous	2	3.1	1.5	300
TOTAL	48	202.5	187.1	18,500

Development in the ferrous group includes mainly the expansion of the annual capacity of steel ingots from 300,000 tons to 1.5 million tons in the Helwan Iron and Steel Mill, the setting up of a complete and integrated steel mill with a capacity of 300,000 tons per annum at Aswan by using Aswan iron-ore and electric power generated by the High Dam hydroelectric power-station, the erection of a wide-plate rolling-mill with an annual capacity of 200,000 tons and fifteen foundry projects. This group also includes eleven projects for the manufacture of steel and cast-iron pipes, chains, forged-metal parts etc.

The non-ferrous group comprises mainly an aluminium smelter with a productive capacity of 40,000 tons of pure aluminium, based on the utilization of the High Dam's electrical energy, and two plants for the production of zinc and lead metals.

7. Engineering industries

The projects included in this sector aim at providing self-sufficiency in the United Arab Republic and producing a large part of the country's requirements for heavy machinery instead of importing them, in addition to the manufacture of equipment required by the projects which are carried out by the United Arab Republic in other countries.

Sixty-four projects were included in the programme. Foremost among these projects is the building of four large mechanical workshops at a cost of about £E64 million and with a productive capacity of 200,000 tons of heavy capital equipment per annum. A fifth large mechanical shop for building railway wagons of 75 tons pay load will have an annual productive capacity of 1,500 wagons.

In view of the increasing requirements of electrical equipment and machinery, as a result of the generation of hydroelectric power from the Aswan High Dam, which will require the building of new transmission lines, the Plan includes twenty projects at a cost of £E27 million, and their implementation will result in increasing the

production of power cables, transformers, electronic units, large cooling units and electric home-appliances.

As to the manufacture of transport equipment, the programme includes seven projects, foremost among which are the manufacture of new types of buses, heavy trucks, microbuses and passenger motor-cars.

This is in addition to the extension of several existing factories, such as the extension of the production of machine tools, springs, sewing-machines, surgical equipment, razor blades, cutting tools, files, tins and cans.

The programme also aims at the production of laboratory equipment and measuring instruments, as well as medical equipment.

8. Food industries

The programme includes forty-three projects which will cost about £E84.3 million, and the value of their production is estimated at about £E97.8 million, of which products valued at £E38 million are expected to be exported.

Special attention is given to sugar production projects in order to raise the annual production from 380,000 tons to 950,000 tons, of which 300,000 tons are anticipated to be exported.

The programme also aims at renewing and replacing the machinery for tobacco production at the existing factories and also at expanding production to meet the requirements of domestic consumption.

As regards oils and fats, the current consumption of edible oils amounts to about 130,000 tons per annum. The programme aims at meeting this consumption by changing the method of extraction of oil from hydraulic presses to solvent extraction, in order to eliminate the importation of 25,000 tons per annum, which cost £E4 million. The programme also aims at the production of 1 million tons of oilcake per annum for animal fodder. This is in addition to several projects for the development of the soap industry.

With regard to canned food and dried onions, the programme aims at raising the exports of these products to 43,000 tons per annum, valued at £E7 million, after meeting the requirements of domestic consumption, which is estimated at about 8,000 tons in 1970. The programme, therefore, includes twelve projects which will cost about £E9 million.

The programme also aims at increasing the production of glucose to meet local consumption, which is expected to reach about 80,000 tons per annum in 1970, and to provide a surplus for exports, estimated at 10,000 tons per annum and valued at about £E1 million.

As far as carbonated beverages are concerned, the programme aims at raising the production of beer from 28.5 million litres to 57 million litres per annum to satisfy domestic consumption in 1970. It also aims at increasing the production of malt by about 3,000 tons, of which 2,000 tons will be exported annually.

9. Textile industries

The third industrialization programme includes 103 textile projects. Their production is estimated at about £E60 million, the larger part of which will be exported at a value of about £E31 million. The main features of this sector are anticipated to be as shown in table 17.

Table 17. United Arab Republic: textile industries planned in third industrialization programme

	Number of projects	Total cost (Millions of Egyptian pounds)	Estimated value (Millions of Egyptian pounds)	Number of workers	Value of exports (millions of Egyptian pounds)
I. *Cotton industries*					
Cotton yarn	30	35.0	19.6	10,230	13.4
Cotton and rayon fabrics	23	15.4	10.3	2,600	10.4
Dyeing and finishing of cotton fabrics	15	6.7	4.9	2,510	1.3
II. *Wool industries*					
Woollen yarn, Woollen fabrics, Wool dyeing and finishing	11	15.0	12.0	3,000	2.0
III. *Synthetic fibres*	15	6.2	3.6	300	0.4
IV. *Bast fibres*	3	2.2	1.6	560	0.3
V. *Knitwear and ready-to-wear clothes*	6	6.8	8.4	7,700	3.0
TOTAL	103	87.3	60.4	26,900	30.8

C. Expected growth in production of major items

The expected growth in production of some of the major items after completion of the projects planned in the programme is shown in table 18.

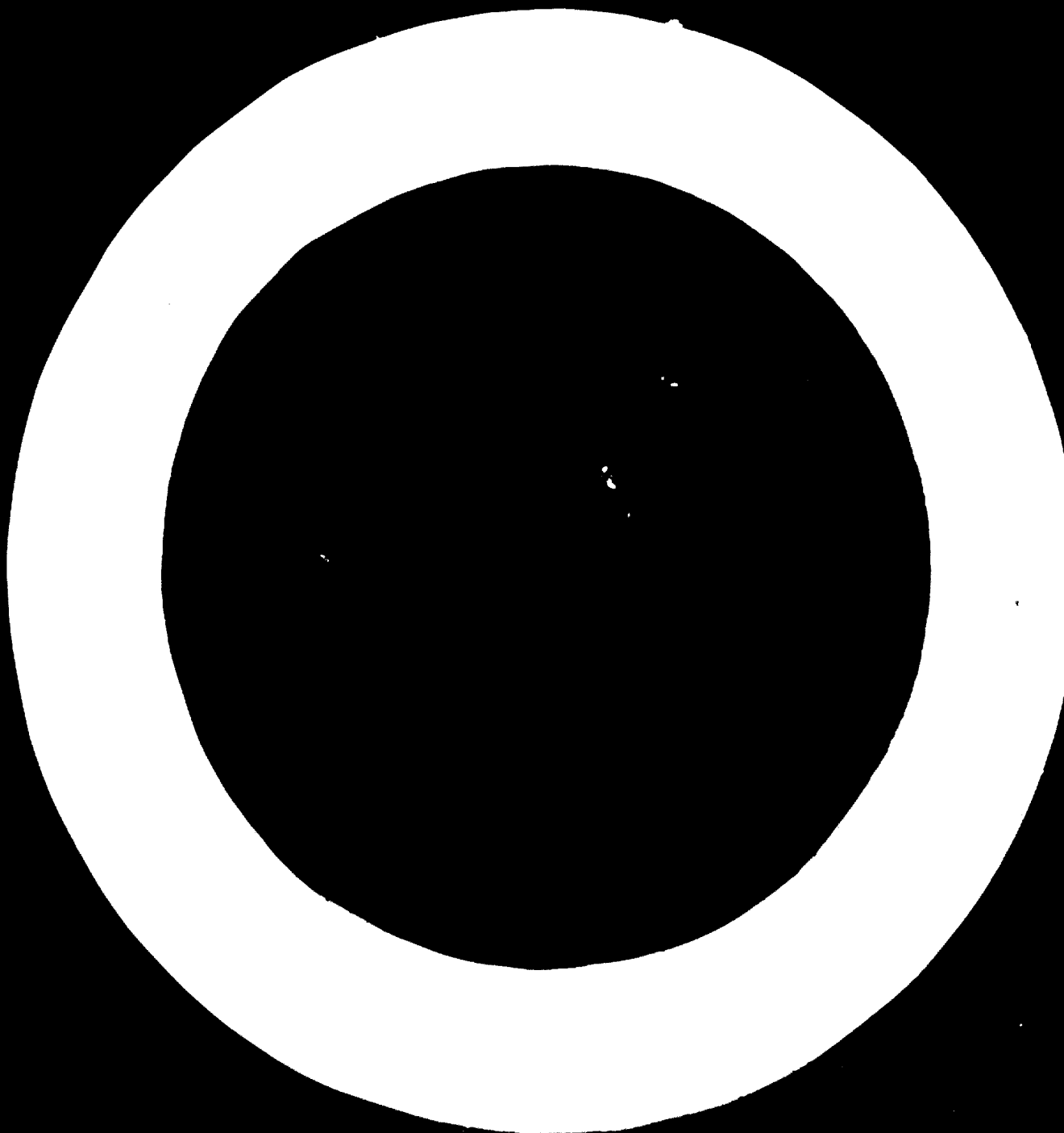
Table 18. United Arab Republic: projected growth in production of major items in third industrialization programme

Product	*Unit*	*1964*	*1970*
Rock-phosphate	Ton	500,000 (63-68% BPL)	4,000,000 (75% BPL)
Iron-ore	Ton	100,000	5,500,000
Coal	Ton	—	620,000
Salt	Ton	600,000	1,000,000
Crude oil	Cubic metre	5,900,000	12,000,000
Benzene (gasoline)	Ton	753,000	1,032,000
Kerosene	Ton	907,000	1,285,000
Bottled-gas	Ton	44,400	255,000
Petrochemicals	Ton	—	72,000
Sodium carbonate	Ton	—	100,000
Coke	Ton	48,000	1,400,000
Nitrogen fertilizers	Ton	920,000	3,280,000
Phosphate fertilizers	Ton	203,000	616,000
Organic fertilizers	Ton	76,000	496,000
Paper pulp	Ton	165,000	578,000
Paper, cardboard and particle board	Ton	107,000	593,000
Tires and rubber products	Ton	15,500	43,000
Plastics	Ton	2,700	37,500
Cement	Ton	2,440,000	5,250,000
Sand bricks	Ton	400,000	10,479,000
Sugar	Ton	380,000	950,000

Table 18. United Arab Republic: projected growth in production of major items in third industrialization programme (*continued*)

Product	*Unit*	*1964*	*1970*
Edible oils	Ton	105,000	145,000
Hydrogenated oils	Ton	31,180	56,180
Animal fodder	Ton	270,000	1,000,000
Canned food and dried onions	Ton	22,000	73,000
Tobacco	Ton	12,000	18,000
Heavy capital-equipment	Ton	100,000	250,000
Machine tools	Unit	400	8,155
Lorries	Unit	1,360	5,700
Buses	Unit	637	2,400
Tractors	Unit	900	4,000
Cables	Unit	17,000	38,000
Electronic parts[a]		—	6,800,000[a]
Railway wagons	Unit	250	2,500
Dry electric cells	Unit	20,360,000	30,000,000
Accumulators	Unit	171,000	321,000
Electric motors	Unit	—	26,000
Steel ingots	Ton	450,000	2,105,000
Reinforced-concrete bars	Ton	242,000	562,000
Pipes and fittings	Ton	1,320	119,800
Forged parts and chains	Ton	16,130	43,030
Aluminium ingots	Ton	—	40,000
Zinc and lead ingots	Ton	—	32,500
Cotton yarn	Ton	126,000	172,000
Cotton fabrics	Metre	542,000,000	825,000,000
Woollen yarn	Ton	7,600	12,400
Woollen fabrics	Metre	9,200,000	12,500,000
Knitwear and ready-made wear	Ton	—	1,350

[a] Value of production in Egyptian pounds.



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7. INDUSTRIAL DEVELOPMENT IN ZAMBIA

Presented by the Government of Zambia

CONTENTS

Introduction

Zambia attained independence in October 1964. The Zambian economy is based on copper, which, in recent years, has provided about 60 per cent of the monetary gross domestic product and over 90 per cent of the country's exports. With the soaring copper prices in 1964, the visible trade surplus was £90 million, and the balance of payments surplus was nearly £39 million. In 1964, the gross domestic product was £340 million, which was an increase of over 16 per cent, compared with 1963, and an increase in real output of 10 per cent.

The industrial development of Zambia was stifled by colonial trading policies and by the economic effects of the Federation of Rhodesia and Nyasaland, which tended to attract and concentrate industry around Salisbury and Bulawayo, in Southern Rhodesia. The independent trading and industrial policy which began to be implemented after the dissolution of the Federation on 31 December 1963, and which has been clearly formulated since Zambia attained independence, has resulted in a major upsurge of industrial growth in the country. It will be appreciated that this has been largely a period of making up lost ground, due to the stultifying effects of the Federation.

It is recognized by the Government that certain industries should be promoted by the State. The motives for state promotion are for strategic or security reasons, the industry's extreme importance in regard to national planning, or the fact that the industry is essential for the orderly development of the economy. There is no question of the Zambian Government nationalizing industries already in existence, the policy being for state ownership of certain new basic industries and for state participation, jointly with private enterprise, in certain others. The remainder of the industrial field is open to private investors, and the Government has created a tempting investment climate to encourage the inflow of capital for private investment.

The type of industrial investment envisaged by the Government, such as an iron and steel industry or a fertilizer plant, requires a great deal of study and careful analysis. It is for this reason that the transitional development plan, which is an extension of the old colonial type of four-year development plan and which is due to make way for the First Four-Year Development Plan in July 1966, contains no specific provision for industry. It should be appreciated that Zambia is only now, after the brief period of consolidation since independence, in a position to take steps to co-ordinate an industrial programme. The First Four-Year Development Plan will be the country's first attempt to use comprehensive and co-ordinated development planning to achieve social and economic goals. This Plan will include specific proposals for State-owned industries, for "mixed" private and State-owned industries, and for the private sector. The Government will be in close consultation with the private sector in order to ensure that the private sector's investment programme will be in line with over-all national development and that it will not suffer from a shortage of skilled manpower, foreign exchange etc.

These last few months have drawn attention to the peculiar communications system in Central Africa. This is a relic of the territorial split of Africa during colonial times. The countries of the southern part of Africa, including Zambia, were and are firmly tied together, while only tenuous links exist between Zambia and the countries on its northern borders. These facts led, logically, to the Zambian trading pattern. In 1964,

Zambia imported nearly £31 million of goods from Southern Rhodesia. This accounted for 39.5 per cent of the total visible imports by Zambia. It will be appreciated that to change a trade pattern of this nature and magnitude calls for not only a complete reassessment of alternative supplies and a complete reassessment of alternative routes, but also a large-scale programme for actually constructing alternative routes.

At the current time, Zambian reserves of foreign exchange do not represent a constraint on national development. It is fully realized, however, that it is necessary to implement long-term policies to ward off the eventuality of a shortage of foreign exchange, which could limit the pace of economic development.

The greatest current deterrent to development is the shortage of educated and skilled manpower. In 1963/1964, there were in Zambia no more than 1,200 Africans having school certificates and no more than 100 Africans who possessed university degrees. These facts explain the great emphasis which the Government is placing upon education and vocational training. Zambia also suffers from the problem of unemployment, which is common to all of Africa. It is estimated that in 1965, 90,000 people were seeking regular work (this figure includes both the unemployed and the underemployed in the rural areas).

I. Prospects of development in particular sectors of industry

A. Textiles

At the current time, there is no textile industry in Zambia. It is envisaged that the State will participate, along with private enterprise, in this industry. A consultant has been commissioned, and his report will be submitted to Government in December 1965 or January 1966. The local market is considered to be large enough to support a textile industry producing 10 million to 12 million square yards of cloth per annum. The total capital cost is estimated at approximately £2,250,000, giving employment to about 550 people. Cotton is grown in Zambia, and a cotton-ginning mill is in operation. It is anticipated that eventually all supplies of cotton lint for the textile industry will be supplied from local sources.

B. Food processing

Zambia is self-supporting in maize, but imports most of its other cereal requirements. Most of the cereal milling is carried out in Zambia.

Very little canning of foods is being carried out. The possibilities are being considered. Zambia is not yet self-sufficient in beef, pork or mutton, milk and milk products, or vegetables. Many of the temperate-zone fruits cannot be grown.

The sugar-refinery at Ndola will be expanded, at first to a capacity of 30,000 tons per annum and eventually to a capacity of 60,000 tons per annum. A sugar-cane estate is in the process of being established. This estate will be producing by 1968 and should supply sufficient sugar to satisfy Zambian demand.

The first essential is to increase Zambian production of most food products. The processing of food products will develop as local production increases.

C. Forest industries

To meet the projected demands of industry and mining by 1993, for both quantities and sizes, some 160,000 acres of plantations will be required, and the annual yield will then be of the order of 36 million cubic feet of poles and sawlogs. The first output of sawlogs will be in 1971. To dispose satisfactorily of the very large volume of timber, other than sawn timber, generated by thinnings and waste from sawmills, it will be necessary to establish an integrated forest industries complex consisting of sawmills and board, plywood and paper mills. By the late 1980's, the volume of material available will be sufficient to meet the needs of a pulp mill of viable size, which will be capable of supplying most of the needs of Zambia.

D. Building materials

The great burst in constructional activity deriving from the Transitional Development Plan and the general expansionary effects of independence have led to an increase in demand for construction materials. The existing cement factory at Chilanga is working at full capacity. Extensions, at a cost of £1,250,000, are being carried out at this factory. These extensions will increase the capacity by 107,000 tons per annum to a total of 300,000 tons per annum. In addition, a new factory is to be built at Ndola and is expected to be in operation in 1969. Lime and gypsum are obtainable in Zambia.

There are several Zambian manufacturers of metal door-frames and metal window-frames, and their expanding capacity should be capable of meeting demand by early 1966. A factory to supply salt-glazed pipes, tiles, bricks and hollow clay-blocks will be in production by December 1966. Sanitary-ware is not produced in Zambia.

E. Engineering industries

With regard to motor vehicles, several international groups have set up small assembly plants in Zambia. At the current time, these plants do not carry out a high degree of local manufacture.

Some forms of metal fabrication are carried out, mainly in connexion with mining. As regards secondary engineering connected with mining, wire ropes and cables, galvanized piping, steel tanks, rubber mouldings for pumps, flotation plants, drilling equipment, couplings, shanks, drill steels, etc., are produced.

F. Iron and steel: steel rolling-mill

A report has been circulated to various steel producers, asking them to submit propositions. The expected capacity will be 70,000 tons of rolled steel (bars, rods, angles, sections) and pig-iron. The estimated cost is £12 million. Domestic demand will not be sufficient to take up total production, and export markets must be obtained. Iron-ore deposits are proved, and they are of good quality and of sufficient known quantity to support a mill of the proposed capacity for at least 100 years. Zambian coal-supplies may not be of sufficient quality to produce a satisfactory coke. The

possibilities of using charcoal or an electric process are being studied.

G. Non-ferrous metals

Studies are being carried out to determine the feasibility of establishing some form of copper-fabricating industry in Zambia. Cheap copper and power are readily available.

H. Basic chemicals

Studies on a fertilizer project have reached an advanced stage. Nitrogen fertilizer appears to have the best prospects, based upon the cheap water and power available at Livingstone. It is estimated that the project would cost £8 million. The initial capacity is envisaged to be 30,000 tons per annum, in terms of nitrogen equivalent. This would mean that, depending upon the phasing of the project, a certain percentage of the output would need to be exported.

With regard to chemical plants associated with mining, Zambia produces 120,000 tons of sulphuric acid per annum, sufficient to supply the Zambian market.

I. Crude and refined vegetable oils and edible fats

Two large international organizations have set up factories in Zambia, and by the end of 1966, they will be supplying the bulk of the country's needs in the field of crude and refined vegetable oils, edible fats, non-soap detergents, soaps, margarine, polishes, disinfectants etc. Ground-nuts grown in Zambia form the main source of edible oils.

J. Cycle tires and tubes

A large international concern is expected to begin production of cycle tires and tubes and to satisfy the requirements of the Zambian market by the end of 1966.

K. Grain-bag manufacture

A bag-producing factory is to be established in Lusaka with an initial capacity of 1,250,000 bags; the demand in 1965 was for 3.5 million bags. Fibre will be drawn from two local types of raw material. Kenaf, which grows well in Zambia, will provide one source, while doum fibre will be produced from the leaves of the doum palm (*Hyphaene Ventricosa*), which grows indigenously in the Feira District. Initial capital costs will be £1 million.

Much of Zambian industry is, in comparison with the standards of developed countries, on a medium or small scale. Most of this type of industry is in the private sector. The expansion of industry has been particularly obvious in the field of clothing, where the number of firms has grown rapidly, from about six at the end of the Federation in December 1963 to thirty-eight in November 1965. It is the Government's policy to ensure that opportunities to participate in the industrial field are open to Zambians. Therefore, arrangements have been made for both individuals and co-operatives to obtain loans for projects, without regard to the normal commercial criteria of security and "know-how". The development of industry in the rural areas is being considered as a separate measure and investigations into the means of encouraging this type of development are currently being undertaken.

II. Selected aspects of industrial development

A. Industrial programming and project evaluation

Two factors have combined to delay and hinder the formation of operational industrial planning and evaluation units. The first factor is the comparatively short period of independence which Zambia has enjoyed. The second factor is that the Government of the Federation of Rhodesia and Nyasaland was directly responsible for commerce and industry, and, to this end, all industrial, commercial and industrial planning was carried out in Salisbury. The Ministry of Commerce and Industry in Lusaka was only formed in January 1964, while the Office of National Development and Planning was formed in October 1964. As an added complication, the statistics compiled during the Federation era were not given separately for the three constituent countries of, as they were then, Northern Rhodesia (Zambia), Nyasaland (Malawi) and Southern Rhodesia.

It is only in recent months that a rough industrial input-output table has been formulated. A provisional list of import-substitution industries has been drawn up.

Project evaluation is carried out by the Ministry of Commerce and Industry, aided by the Industrial Development Corporation. (This excludes all of the private-enterprise projects.) An *ad hoc* system of appointing industrial consultants to carry out project analyses has been developed. These project analyses are then studied by government experts, who present their recommendations to the Government. At the current time, the list of industries which will be State-owned is short, amounting only to grain-bag manufacture, a steel rolling-mill and a fertilizer factory. For those industries in which the Government will participate with private industry, there are several methods of assigning the responsibility for project evaluation.

Where the industry already exists and it is simply a question of an expansion to be partly financed by the State, the project evaluation is left to the established industry. This has been the case with cement and sugar. Where a new project is envisaged, the Ministry of Commerce and Industry, in close conjunction with the Government controlled Industrial Development Corporation, arranges for private consultants to carry out the required study. After the study has been completed and if the Government decides that the project is viable, approaches can be made to established and experienced industrialists to participate in the venture. This is the intended approach to the textile industry and to a tannery project. A third method is a continuation of one of the functions of the Industrial Development Corporation which originated before independence was attained. The particular function of the Corporation is to loan money or to take equity participation in viable industrial projects. This permits the Corporation to carry on independently and to enter into arrangements without necessarily consulting the Ministry of Commerce and Industry. However, co-ordination is retained because the Ministry of Commerce and Industry provides two members of the Board of the Corporation.

III. Manpower requirements and training of technical and managerial personnel

To remedy the extreme shortage of educated manpower, the Government has embarked on a major programme of secondary-school expansion which will double the secondary-school intake in 1966 alone and which will increase the intake by a similar margin in the following year. At higher levels, the Government has made plans for a national university—the University of Zambia—which will open in March 1966. In addition, each year large numbers of Zambian students have gone abroad to study at universities and training institutions. In 1965, 760 persons from Zambia were on government scholarships or were studying abroad through other means, 350 of them being due to return in 1965 alone. In the meantime, before the output of these new educational and training institutions will begin to appear, the country must continue to rely heavily upon expatriate employees. In 1965, 31,400 non-Africans were employed in the Zambian economy, and these provided the bulk of the skilled and educated labour force.

The attempt to develop comprehensive manpower planning in Zambia has followed two main lines of action. The first is the creation of a single manpower planning committee with terms of reference covering the full range of manpower planning in both the public and the private sectors. The second is to build up the information necessary for making well-grounded policies and to set up procedures ensuring that this information will continue to be available on a regular basis. A number of steps have been taken to consolidate information on the use of manpower, the output of the school system, future plans for departmental training, immigration and emigration records, the rate of resignation from government service, the number of Zambians studying abroad and so forth. In addition, private employers have been approached to obtain their current and future labour demands, categorized as to educational level and vocational ability.

The Government is currently studying the possibilities for setting up a management training institution. There are two technical-training colleges in Zambia, which are providing technicians for industry; these are insufficient for the demand and expansion to be carried out.

IV. Financing of industry

Since January 1964, the great bulk of investment in industry has been carried out by the private sector. It is estimated that actual and committed investment in the private sector during this period amounted to £18,250,000. The bulk of this investment was provided from private sources, with the Industrial Development Corporation, which is Government-owned, investing £400,000 in 1964 and £500,000 in 1965. It is estimated that 75 per cent of the capital is supplied from non-Zambian sources (roughly £13.5 million).

The Four-Year Development Plan, which will commence in July 1966, has not yet been formulated, but it is likely that £30 million of the planned expenditure will be allocated to industrial projects. It is envisaged that certain of the projects will include private-sector participation. It is estimated that such participation will amount to £4 million. It is not possible at the current time to estimate the private sector's investment programme during the period of the plan. A series of meetings will be held between government officials and representatives of the private sector with the intention of associating the private sector with the Four-Year Development Plan and of obtaining investment plans from the private sector which will allow the Planning Office to calculate total national demands for construction capacity, skilled labour, foreign exchange, etc.

The Industrial Development Corporation is a wholly-owned government institution which provides loans or takes equity interest in commercially-proved projects in the industrial and commercial fields.

Negotiations have reached an advanced stage with two international industrial development finance bodies to set up, together with the Government of Zambia, a non-Government-controlled finance institution for the provision of financial assistance to private enterprise on normal commercial terms. When this new body is established, the Industrial Development Corporation will concentrate on two main functions: the first will be as the holding, financing and managing body for all the Government's interests in industry; and the second will be to promote the abilities of Zambian *entrepreneurs*, whether as individuals, companies or co-operatives, in both industry and commerce.

V. Institutions and techniques for industrial research, standards and promotion

A. Industrial research

Zambia has no institutions to carry out industrial research. When the University of Zambia is fully operational, it is expected that industrial research will be carried out in some of the University faculties. At the moment, therefore, Zambia is almost entirely dependent upon research carried out in foreign institutions at the Zambian Government's request, or in the case of the private sector, in the foreign laboratories of companies which have Zambian subsidiaries. The only exception is in the research laboratories of the two mining groups—Anglo-American and Roan Selection Trust. At the current time, there is a possibility that the Anglo-American group have made a major breakthrough in the treatment of refractory copper ores.

B. Industrial standards

Zambian industry operates generally under British Standard Specifications. As a result of the Federation, the Standards Bureau for Malawi, Southern Rhodesia

and Zambia is situated in Salisbury. This arrangement is not acceptable, and it is the intention of the Zambian Government to establish a standards bureau in Zambia.

C. Promotion

In the field of industrial promotion, the major effort to date has been in the creation of an attractive investment climate. Examples of this are:

(*a*) The whole of capital funds brought into Zambia, including any increase in capital, may be repatriated;

(*b*) Interest and dividends are freely payable to any country in the world;

(*c*) The Customs Tariff offers protection to Zambian industries;

(*d*) Rebates of import duty are made for raw materials used in manufacturing processes;

(*e*) Drawbacks of duty are given for duty paid on goods subsequently exported;

(*f*) Investment allowances amounting to 110 per cent of cost are given for plant and machinery. In addition, generous allowances are given in respect of buildings;

(*g*) Certain companies may qualify for pioneer status in respect of specified products. Pioneer status enables a company to enjoy tax relief for periods of up to five years;

(*h*) Machinery and plant may be imported duty-free from any source;

(*i*) The Exchange Control Regulations provide no restrictions in respect of payments made to any country for purchases of commercial and industrial goods;

(*j*) Loan facilities are available.

VI. Exports of manufactured products

Zambian exports of manufactures are very small; the most important export items in 1964 were the following:

	Quantity	*Value (pounds)*
Cigarettes (pounds)	109,101	104,197
Railway-sleepers (wooden) (cubic feet)	363,950	168,487
Parquet blocks or strips (cubic feet)	414,903	203,840
Balls, steel for tube mills (centals)	52,459	94,590
Foot-wear (plastic) (pairs)	296,194	117,221

The railway-sleepers and parquet blocks and strips involve only a small degree of manufacture, as they are rough-sawn items. Exports of cigarettes and plastic foot-wear are expected to decrease substantially, as the companies responsible for their manufacture have factories in the main export markets (Southern Rhodesia and South Africa).

The exports were temporary in that the parent companies divided, in the transitional period before commencing production of all the lines, production between their factories in the three countries.

The expanding manufacturing industry and projected industrial programme of Zambia make it obvious that export markets for manufactured products will be necessary in the near future. It is for this reason that the Zambian Government welcomed the initiative of the United Nations Economic Commission for Africa in convening the recent Conference on the Harmonization of Industrial Development Programmes in East Africa (Lusaka, 26 October—6 November 1965). The Zambian Government has accepted, in principle, the recommendations adopted by the Lusaka Conference to establish an Economic Community of Eastern Africa.

VII. The role of external resources in industrial development

The rapid development of Zambian industry in the short period of internal self-government and independence (since January 1964) has been largely due to the expansion of the private sector. It is recognized by the Zambian Government that this form of development is, from the viewpoint of the nation's interest, the cheapest available. Not only is a very high percentage of the capital required brought in from foreign sources, but managerial and technical skills are also imported where Zambians are not available. This has enabled the Government to use its own scarce supply of trained Zambians for government projects. It has been impressed on foreign industrialists that if they manufacture in Zambia, they must ensure the rapid and accelerated training of Zambians to enable them to attain managerial and technical posts.

It is the policy of the Zambian Government to pursue an uncommitted role in world affairs. This enables the Government to request assistance from any foreign source.

It is considered that the most valuable long-term means of aid which the developed countries can extend to the developing countries can be given in two spheres. The first is to stabilize the world markets for raw materials at a higher and more equitable price level. The second is for the developed countries to lower drastically their tariff barriers for the less sophisticated manufactured and semi-manufactured goods which will increasingly be produced by the developing countries.


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