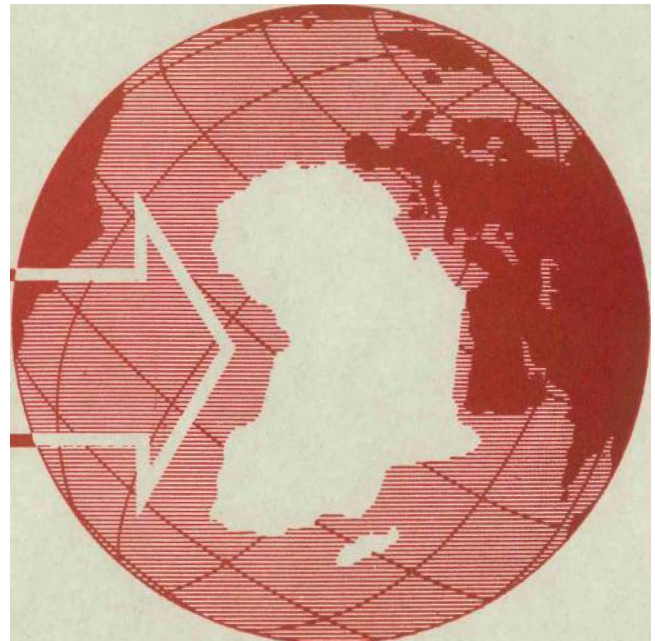




Supplement to
WORLD ECONOMIC REPORT, 1949-50
UNITED NATIONS

**Review of
ECONOMIC CONDITIONS
in AFRICA**



REVIEW OF ECONOMIC CONDITIONS
IN AFRICA

Supplement to

World Economic Report, 1949-50



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FOREWORD

The Secretariat of the United Nations has prepared the present *Review of Economic Conditions in Africa* in response to resolution 266 (X) of the Economic and Social Council, which requests the Secretary-General "to include in the world economic report, to be prepared for the twelfth session of the Council, a special section relating to economic conditions in Africa, using material readily available and such further information as may be provided by the Governments concerned". This report, and its companion volume, the *Review of Economic Conditions in the Middle East*, are issued as separate sections of the *World Economic Report, 1949-50*; these volumes are intended to complement the regional surveys prepared annually by the secretariats of the United Nations economic commissions for Europe, for Asia and the Far East and for Latin America. The reports, in preliminary form, were made available in February 1951 to the twelfth session of the Economic and Social Council.

The Division of Economic Stability and Development of the Department of Economic Affairs, which is primarily responsible for the preparation of the present *Review*, wishes to acknowledge the assistance it has received from the Department of Trusteeship and Information from Non-Self-Governing Territories, from the Statistical Office of the United Nations and, in connexion with the statement on demographic matters, from the Population Division of the Department of Social Affairs.

The following symbols and abbreviations have been used in the report:

Two dots (..) Not available

Dash (—) Nil or negligible

Full stop (.) Indicates decimals

Comma (,) Distinguishes thousands and millions

Slash (/) Crop year, e.g., 1949/50

Hyphen (-) Annual average, e.g., 1934-38

"To" between certain years indicates the full period, e.g., 1947 to 1949 means 1947 to 1949, inclusive

Minus sign (—) Deficit, e.g., in balance of payments tables.

A blank space in a table indicates that the item is not applicable.

References to "dollars" indicate United States dollars unless otherwise specified.

Details and percentages in tables do not necessarily add to totals because of rounding.

"Pre-war" usually refers to 1934-38 or to 1937.

Unless otherwise specified, Egypt is not included in the totals for Africa.

Readers will find information concerning rates of exchange in issues of the United Nations *Monthly Bulletin of Statistics*.

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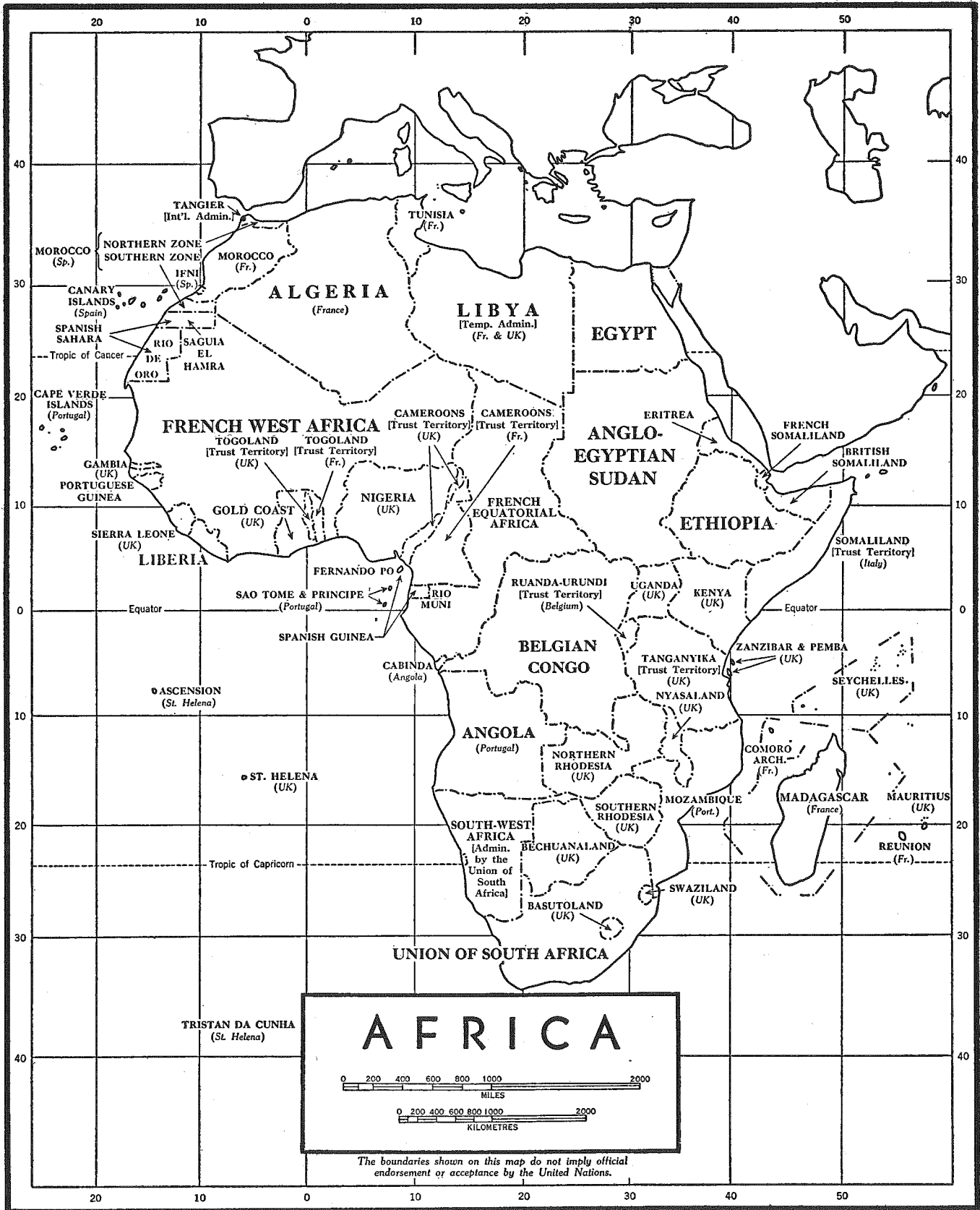
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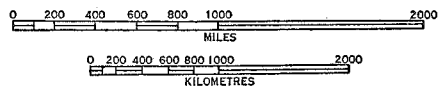
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INTRODUCTION



AFRICA



The boundaries shown on this map do not imply official endorsement or acceptance by the United Nations.

Chapter 1

BASIC CHARACTERISTICS OF AFRICAN ECONOMY

For the purpose of the present report, Africa consists of the whole of the continental land area, except Egypt, and of outlying islands in the Indian and Atlantic Oceans, of which the chief are Madagascar, Réunion, Mauritius and Zanzibar. Egypt is omitted from the present review since it is included in the parallel study on the Middle East.¹ In the few statistical series dealing with Africa as a whole from which it has not been possible to abstract data relating to Egypt, this fact is indicated at the appropriate places in the report.

AREA AND POPULATION

Inclusive of Egypt, the continent is inhabited by about 198 million people, representing 8 per cent of the world's population in 23 per cent of the world's land area. If Egypt is not included, the population is about 178 million. The indigenous peoples or peoples long resident in the area, who are of various ethnic derivations, comprise about 97 per cent of the total. People of European origin number about 5 million in the whole of Africa. About 2.5 million of these live in the Union of South Africa, about 320,000 in eastern and central Africa and about 80,000 in western Africa. The remainder are mostly concentrated on the north-west coast of Africa, particularly in the French territories. The Asian peoples are principally represented by about a half-million persons, derived mainly from fairly recent immigration from the Indian sub-continent to southern and eastern Africa.

The continent contains only four independent countries: Egypt, Ethiopia, Liberia and the Union of South Africa. In 1949 these four countries contained about 50 million people, or 25 per cent of the total estimated population of Africa and about 11 per cent of its total area. Of the remaining area, by far the largest part is under United Kingdom or French administration.

¹ United Nations, *Review of Economic Conditions in the Middle East*, New York, 1951.

The United Kingdom territories have a total population of approximately 57 million, of whom about 31 million are in West Africa, about 25 million in East and Central Africa, and just over a million in the three protectorates of Basutoland, Bechuanaland and Swaziland. This total includes Southern Rhodesia, which has a population of just over 2 million and is in large measure self-governing. The former Italian colonies of Cyrenaica, Tripolitania and Eritrea, which are under temporary United Kingdom administration and have a combined population of almost 2.3 million, are not included in the list of United Kingdom territories noted above, nor is the Anglo-Egyptian Sudan, with a total population of about 8 million in an area of 2.5 million square kilometres. The latter territory is a condominium administered jointly by Egypt and the United Kingdom.

The French territories cover approximately 10 million square kilometres and have a population of about 42 million, of whom about half are in North Africa and the remainder principally in West and Equatorial Africa and Madagascar. The Fezzan in southern Libya, with a population estimated at about 50,000, is under temporary French administration.

The Belgian Congo and the Trust Territory of Ruanda-Urundi under Belgian administration have an area of 2.4 million square kilometres and a population of approximately 14.8 million.

Portuguese territories in Africa comprise approximately 2.1 million square kilometres and about 11.5 million inhabitants; the Spanish territories have about 1.6 million inhabitants. The Trust Territory of Somaliland under Italian administration has a population of approximately one million, and South-West Africa, administered by the Union of South Africa, about 400,000. Tangier, under international administration, has a population of about 150,000.

The seven United Nations Trust Territories—the Cameroons, Togoland and Tanganyika under United Kingdom administration; the Cameroons and Togoland under French administration; Ruanda-Urundi under Belgian administration; and Somaliland under Italian administration—have a total population of approximately 17.6 million, nearly 9 per cent of the total population of Africa (including Egypt). In addition, African territories in respect of which information is submitted by the Administering Powers under Article 73 e of the United Nations Charter contain approximately 95.2 million inhabitants, about 48 per cent of the total population of the continent. Thus the two groups of territories include about 57 per cent of the total population of Africa.

In so large an area—the continent of Africa is second only to Asia in size—there is great diversity of climate, natural resources, peoples and modes of life. In the northern and southern extremities of the continent both European capital and permanent European settlement have had a decisive influence on economic development. Elsewhere in Africa economic development on modern lines has depended largely on the adaptation of the local population to techniques and capital supplied from Europe and America. In quantitative terms, a considerable part of the modern economic development of the entire area is concentrated in the Union of South Africa, which has the only large-scale iron and steel plant on the continent and the only substantial concentration of industrial production serving an internal market. Furthermore, the Union of South Africa² accounts for approximately 25 per cent of the total merchandise foreign trade, exclusive of gold exports.³ Its population, however, is only 7 per cent of the total population of the area. The industrial development in Southern Rhodesia and the Belgian Congo, the coastal regions of West Africa and parts of East Africa is small by comparison, though highly significant in the immediate localities. North Africa, bordering on the Mediterranean and separated from the rest of Africa by the vast wastes of the Sahara desert, is by history and geography closely associated with southern Europe, of which in an economic sense much of it forms an integral part. With about

12 per cent of the total population, North Africa accounts for 22 per cent of the total merchandise foreign trade, most of it attributable to the three French territories of Algeria, Tunisia and Morocco. By contrast, the predominant form of economic organization in much of Africa south of the Sahara is that of largely self-sufficient tribal and village economies, both agricultural and pastoral, presenting a wide variety of climate, of systems of cultivation and land tenure and of degrees of economic stabilization and social custom. However, the development of commercial agriculture, mining and, to a lesser extent, secondary industries, is exercising an increasing influence in “inter-tropical” Africa.⁴ The patterns of economic development differ considerably from region to region. These differences arise in large measure from differences in basic resources, customary forms of land use and the impact of governmental policies regarding land questions, investments and settlement of non-indigenous people.

This heterogeneity of economic and social conditions limits the significance of quantitative data relating to the area as a whole. For some purposes it is desirable to divide the area into broad, if not always precisely defined, regions. The most obvious example is a distinction between Africa north of the Sahara and inter-tropical Africa, which embraces virtually the whole of Africa south of the Sahara with the exception of the Union of South Africa. The fact that the Union of South Africa is economically much more highly developed than any other part of Africa south of the Sahara places it in many respects in a category by itself.

LEVELS OF PRODUCTION AND INCOME

In common with other undeveloped areas of the world, Africa has low per capita levels of production and consumption. Over most of its area the main economic activity consists, in one form or another, of subsistence agriculture, much of it based on shifting cultivation carried out with simple tools and, in many places, without draught animals. Consequently, except in the case of a small number of tropical agricultural products and some minerals, such as gold and diamonds, its contribution to world production and world trade is relatively low. The magnitude of agricultural

² Together with South-West Africa.

³ Area totals exclude Egypt.

⁴ Generally, the area between the tropic of Cancer and the tropic of Capricorn.

**Table 1. Agricultural Productivity, by Continents and for the World,^a
Pre-war and 1947/48**

(In metric tons)

Continent	Yield per hectare			Per capita yield ^b		
	Pre-war	1947/48	1947/48 as per cent of pre-war	Pre-war	1947/48	1947/48 as per cent of pre-war
World average	1.24	1.30	105	0.42	0.42	100
Africa ^c	0.77	0.73	95	0.12	0.12	100
Asia	1.26	1.20	95	0.24	0.22	92
Europe	1.51	1.34	89	1.04	0.88	85
North and Central America	1.07	1.50	140	1.80	2.57	143
South America	1.28	1.39	109	0.58	0.48	83
Oceania	1.06	1.20	113	1.94	2.38	123
African yield as per cent of world average	62	56		29	29	

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, September 1949 (Washington, D.C.). Data are based on the production of eight crops: wheat, rye, oats, barley, rice, maize,

sugar and potatoes.

^a Excluding the Union of Soviet Socialist Republics.

^b Per person engaged in agriculture.

^c Including Egypt.

production in Africa is particularly difficult to estimate accurately because a large proportion of the agricultural output is for direct subsistence and not for sale. There can be little doubt, however, that, compared with similar crop areas elsewhere, output, whether measured per unit of area or per capita, is low. A comparison presented by the Food and Agriculture Organization of the United Nations of the yield by continental areas of eight crops supplying 85 per cent of the world's food intake, namely, wheat, rye, oats, barley, rice, maize, sugar and potatoes, indicates that, by and large, African agricultural yields are extremely low. This comparison is set out in table 1.

According to these figures, production per unit area in Africa is rather more than half the world average and production per capita is even less than this—between one-quarter and one-third of world average.

It should be noted that the choice of these crops for the purpose of comparison is unfavourable to Africa, particularly to West and Central Africa, and also, to a lesser extent, to Asia, since such foods play a less important role in the food production of these continents. This defect may be corrected in part by comparing the yield of various other crops, some of which play an important part in African production, with average world yields, as given in table 2.

Thus it will be seen that the yield of maize, millets and sorghums, sweet potatoes and yams,

most beans and peas, soy-beans, cotton, rice, ground-nuts, tobacco and linseed has been below the world average while only lentils (in 1948), chick peas, sesame-seed and sugar-cane have been at about the world average.

In the timber-yielding forest areas of Africa indications are that productive efficiency is below world average. Per capita figures are not available, but roundwood output of Africa south of the Sahara in 1948 was 0.3 metric tons per hectare compared with the world average of 0.7 metric tons per hectare.⁵

Estimates of national income are available in only a very few instances in Africa owing mainly to lack of statistical organization and of basic data. There are also inherent difficulties in evaluating subsistence production, which introduces a considerable conjectural element into the estimates. Much more work remains to be done in this field before the facts can be established quantitatively for most of Africa.

Official estimates of national income exist for Kenya for 1948; for Northern Rhodesia, Southern Rhodesia and the Union of South Africa estimates are available for a number of recent years. Unofficial estimates for the Union of South Africa on a more or less comparable basis are available for pre-war years. An official estimate for Ruanda-

⁵ Food and Agriculture Organization of the United Nations, *Yearbook of Forest Products Statistics*, 1949 (Washington, D.C.).

Urundi for the year 1948 is contained in the report of the Belgian Government to the General Assembly of the United Nations.⁶ For the Belgian Congo, unofficial estimates are available for the years 1946 to 1949.⁷ Per capita incomes, in terms of United States dollars in contemporary prices and rates of exchange, for these countries were approximately as follows: the Belgian Congo (1949), \$37; Kenya (1948), \$46; Northern Rhodesia (1948), \$50; Ruanda-Urundi (1948), \$17; Southern Rhodesia (1949), \$101; and the Union of South Africa (1948-49), \$264.

It is probable that the Belgian Congo, Kenya and Northern Rhodesia are fairly representative

⁶ *Rapport soumis par le Gouvernement belge à l'Assemblée générale des Nations Unies au sujet de l'administration du Ruanda-Urundi pendant l'année 1948* (Brussels, 1949), page 48.

⁷ United Nations, *National Income Statistics, 1938-1948* (1950).

of tropical Africa as a whole, and that the average annual per capita income in tropical Africa is probably not more than \$50. The Union of South Africa, which in respect of per capita income compares with Austria, Hungary, Italy and Portugal, provides a significant point of comparison with the rest of Africa. The over-all average figure of income per head, however, obscures the fact that in the Union of South Africa the average income of about four-fifths of the population, consisting mainly of non-Europeans, is far below the average level of income of the European population and is probably nearer to the general average for other parts of Africa than to that of the European population of the Union of South Africa or Southern Rhodesia. Considerably more than half of the non-European population of the Union of South Africa is engaged in agriculture, either in the Native Reserves—mainly on a subsistence basis—or as agricultural workers, frequently on

Table 2. Average African and World Yield of Certain Agricultural Products, 1934-38 and 1947 or 1948

(In quintals)

Commodity and period	Yield per hectare		Commodity and period	Yield per hectare	
	Africa ^a	World ^b		Africa ^a	World ^b
Maize:			Lentils:		
1934-38	6.5	13.0	1934-38	2.4	7.5
1948	6.4	18.0	1948	7.2	7.1
Millet and sorghum (grain):			Ground-nuts:		
1934-38	5.0	7.3	1934-38	5.9	9.9
1947	5.3	6.8	1948	6.3	9.4
Rice (paddy):			Sesame-seed:		
1934-38	9.5	17.7	1934-38	3.1	3.6
1948	10.1	16.8	1947	4.3	3.7
Sweet potatoes and yams:			Cotton-seed:		
1947	44.0	67.0	1934-38	2.2	3.7
Dry beans:			1948	2.7	4.3
1947	4.2	5.7	Linseed:		
Dry peas:			1934-38	4.1	5.1
1934-38	4.9	9.1	1948	5.0	5.4
1948	6.5	9.5	Tobacco:		
Broad beans:			1934-38	5.8	9.6
1934-38	5.4	10.6	1948	6.1	10.4
1948	5.1	10.2	Cotton (ginned):		
Chick-peas:			1934-38	1.1	1.9
1934-38	5.3	5.8	1948	1.4	2.4
1948	5.7	5.8	Sugar-cane: ^c		
Soy-beans:			1934-38	33.6 ^d	35.9
1947	3.1	11.1	1947	38.6 ^d	35.9

Source: Food and Agriculture Organization of the United Nations, *Yearbook of Food and Agricultural Statistics, 1948, 1949* (Washington, D.C.).

^a Excluding Egypt.

^b Excluding the Union of Soviet Socialist Republics.

^c In metric tons.

^d Including Egypt.

a labour-tenancy relationship on farms owned by Europeans. Standards of non-European agricultural production, in these conditions, are relatively low, as they are in other parts of Africa. In urban employment the overwhelming proportion of non-European wage earners are in unskilled or semi-skilled occupations.

SHARE IN WORLD TRADE AND PRODUCTION

These low levels of per capita income should be considered in relation to two basic facts of the African economy. On the one hand, a large part of production within the framework of modern exchange economy consists of production for export on the basis of imported capital and technical skill; on the other hand, a considerable proportion of total economic activity is concerned with subsistence agriculture. It is probable that Africa's share in world income is lower than its share in world exports on any rational valuation of subsistence output. How great a proportion of national income in Africa is accounted for by subsistence agriculture cannot be determined accurately. The 1948 estimates for Kenya, however, set the value of subsistence agriculture at £16.5 million, about 26 per cent of total output.

In 1949 Africa, exclusive of Egypt, accounted for about 8 per cent of the value of total world imports and 5.9 per cent of the value of total world exports. Expressed in per capita terms, Africa's share in world trade is higher than that of the Far East but lower than that of Latin America. However, the African share of world trade is higher than its share of world production, a fact which emphasizes both its extreme dependence on foreign capital and its concentration on the production for export of certain products within the framework of a mainly subsistence economy.

Although Africa's relative share in total world trade and total world production is small, its importance as a source of supply of a small range of commodities is very great. Thus, in 1948 Africa produced 98.4 per cent of the world's output of diamonds, 80 per cent of the total output of cobalt, 58.9 per cent of the gold,⁸ 35.5 per cent of the phosphates, approximately 30 per cent of the

chrome ore and manganese and 18 per cent of the copper. On the other hand, African production of iron ore and coal, the basic materials of heavy industry, was only 2.8 per cent and 2.2 per cent of world totals,⁹ respectively. African consumption of fuel and power was less than 2 per cent of the world total.

As regards agricultural products, in 1948 Africa produced 68.3 per cent of the world's cocoa, 69.5 per cent of the palm oil (palm kernels and palm oil), 75.5 per cent of the sisal, 40.4 per cent of the hard fibres and 15.3 per cent of the coffee. On the other hand, the share of Africa in the world production of cereals⁸ is low: 7.3 per cent of the barley, 3.7 per cent of the maize, 2 per cent of the wheat, 1.4 per cent of the rice and 0.5 per cent of the oats. African production of some characteristically tropical products, though important in the economy of a number of territories, is small in relation to total world output. This is true, for example, of tea (3.3 per cent of world output) and cane sugar (5.7 per cent).⁸ The number of cattle, which have special significance in the economic and social life of certain African peoples, was estimated at 12.6 per cent of the world total in 1948; and of sheep, at 16 per cent. However, vast areas of tropical Africa which might otherwise be suitable for animal husbandry are excluded from such use by the presence of the tsetse fly.

ENVIRONMENTAL FACTORS

In attempting to appraise the basic characteristics of the African economy, in regard to both its present state of internal development and its place in the world economy, several features need to be stressed. Apart from its northern and southern fringes, Africa had no real contact with external economic activities before the closing decades of the nineteenth century. Even the substantial modern economic development of the Union of South Africa did not begin until the discovery of diamonds in the Cape Province in 1867 and of gold in the Transvaal in 1885. On the west coast, besides a small trade in ivory and gold begun by Portuguese sailors, there was indeed, from the

of South Africa. The only steel industry of considerable size is in the Union of South Africa. Known deposits of coking coal are small, except possibly in Southern Rhodesia. About 80 per cent of the total output of African iron ore is exported.

⁸ Based on world figure excluding the Union of Soviet Socialist Republics.

⁹ Substantial deposits of iron ore are reported in French North Africa, French West Africa, Liberia, Sierra Leone, Southern Rhodesia, Tanganyika and the Union

sixteenth century to the end of the eighteenth, a traffic in slaves which, to say nothing of its moral implications, proved a very one-sided sort of commerce and did nothing to further Africa's knowledge of modern scientific and technical advancement, or to promote the more fruitful development of African economic possibilities.

Firstly, note should be taken of geographic and climatic features which go far to explain Africa's retarded economic development. The fact is that much of Africa was difficult of access and was infested with virulent tropical diseases. Of its few rivers only the Congo has a deep-water estuary and none offers easy approach to the interior. There are few good natural harbours, and along almost the entire coast line the construction of anchorages capable of handling heavy shipping involves heavy initial expenditures, which the prospective economic returns have in most cases not yet made worth while.

Problems of internal transport are equally great. In the equatorial belts dense rain-forests and, in the east and south, a series of high plateaus, make railway and road construction difficult and costly. Moreover, Africa has in the past offered only meagre economic returns to justify the heavy capital expenditure required to build the internal transport facilities which must be the basis of eventual economic development. Investment in other parts of the world often seemed to hold out better prospects of return. To a considerable extent it has been the attraction of mineral wealth which has provided the economic incentive to railway construction in Africa, and many of its railways would probably never have been built but for traffic to and from the mine fields. Even so, railway building in Africa has generally required governmental assistance or direct participation, and over long periods practically all African railways have been faced with the basic problem of traffic too small to cover the full cost of operation. In some parts of Africa, particularly East Africa, non-economic considerations played a part in railway construction.

About four-fifths of Africa lies within the tropics; a temperate climate is found only in the north-western and southern extremities, which lie outside the tropics, and in some tropical areas of high altitude. In the equatorial belt, heavy year-round rain produces dense forests, which in the

west coastal region reach as far north as Sierra Leone. On the other hand, for some six to eight hundred miles on either side of the equatorial zone, rain occurs in the summer season only; with increasing distance from the equator the length of the rainy season shortens from about eight months to fewer than three months, with a corresponding fall in precipitation. North Africa and the extreme southern tip have a Mediterranean type of climate with winter rainfall. In the north and east the absence of rainfall creates arid conditions on the coast even in the equatorial belt. The east African highlands have only a moderate annual rainfall too low for dense forest. South of the equator the high plateaus tend to confine heavy precipitation to the margin of the east coast, and the climate becomes more arid to the west, with desert conditions appearing at the coast. Nearly one-quarter of the continental area of Africa is composed of deserts and lakes and about one-quarter is forest land, while most of the remainder consists of savannah or grassland, of which not a little is comparatively arid.

Over many large areas of Africa the soil is deficient in certain minerals important to plant growth. In the arid regions there is lack of humus, and in many other areas calcium and phosphates are lacking. Shifting cultivation is the traditional method by which the African with his simple techniques has met the problem imposed by poorly endowed soils which rapidly erode and decline in fertility under constant cropping. As a result of the growth in population and expansion in the production of cash crops, the practice of shifting cultivation is becoming increasingly difficult. Furthermore, in some areas the migrant labour system has disrupted the village economy and has lowered the standards of cultivation. In these circumstances less wasteful uses of land become imperative, but these in their turn demand, among other things, alteration in land tenure systems, better cultivation methods and the regular application of fertilizer. However, over large areas of tropical Africa the presence of the tsetse fly precludes the keeping of cattle, and thus the most obvious and the cheapest form of fertilizer is not available. Even in the cattle-producing areas of southern Africa where tree growth has been largely destroyed, animal dung may not be available for fertilizing since it is frequently used for fuel. In

many parts of Africa soil erosion has already become a serious problem.

A second feature to be stressed in appraising the present-day African economy is the relative sparseness of the African population, arising largely from the geographic and climatic conditions referred to above, which have both kept Africa isolated from the rest of the world and retarded its internal growth. In 1947 the average density of population of Africa was 6.1 persons per square kilometre or 15.9 per square mile. Of the major continental land areas only Oceania, with 1.4 persons per square kilometre or 3.6 per square mile, and South America, with 5.8 persons per square kilometre or 15 per square mile, had lower average densities. Asia (exclusive of the Union of Soviet Socialist Republics) had an average density about 19 times that of Africa—123.3 persons per square kilometre or 319.3 per square mile. Figures of population density applied to areas as large as Africa need to be interpreted with caution. There are, of course, some relatively small areas with high population density. In relatively populous West Africa, for example, Sierra Leone in 1947 had an average density of 30 persons per square kilometre, Nigeria had 27 per square kilometre, Gambia had 24 and the Gold Coast, 18. Ruanda-Urundi, with a density of 69 person per square kilometre in 1947, was the most densely populated territory in tropical Africa. In North Africa, Tunisia had an average density of 25.8 per square kilometre, Morocco 22 per square kilometre and northern Algeria 31.4 per square kilometre. In certain areas, given existing techniques and fluctuating rainfall, even low and intermediate densities represent considerable pressure on land resources. Moreover, population density expressed in relation to existing political boundaries fails to indicate the fact that there are districts of very high density within these areas, as for example in the coastal regions of West Africa. Nevertheless, there are no extensive areas in tropical Africa with population densities equal to those, for example, of India, Indochina and Indonesia.

DUAL NATURE OF ECONOMY

No true appraisal of the present state of African economy, or of the forces presently at work within it, is possible without consideration of the relationship between its activities within the sub-

sistence sector of the economy and those in the exchange sector. The organization of village life varies widely with differences in climate, soil and other local conditions, from the large village concentrations located some distance from the cultivated fields to single homesteads surrounded by a cultivated plot. Indigenous political organization also varies, from a complete lack of centralized organization to highly unified systems.

The predominant form of social organization in Africa is still tribal. Among the Bantu-speaking peoples who make up the great majority of the inhabitants of eastern and southern Africa, including the Belgian Congo and Angola, agriculture is combined with cattle raising, except in the forest regions and areas infested with the tsetse fly. Since cattle play a highly significant extra-economic role in the culture of most of these Bantu-speaking peoples, over-stocking has become a serious problem in many areas where there has been increasing pressure on the available land.

The number of indigenous inhabitants of West Africa is approximately the same as that of the Bantu-speaking peoples in eastern and southern Africa. On the whole the people are agriculturalists, though village organization and systems of land tenure vary widely throughout the area. The areas along the southern coast of West Africa are more densely populated than most of the other parts south of the Sahara. Indigenous economic development, particularly in the more densely populated coast regions, has given rise to a significant degree of specialization in crafts and trading. Several urban concentrations of considerable size are found in this area.

The proportion of the population of Africa dependent on agriculture for a livelihood can be estimated only approximately. Certainly, however, the proportion is high. According to figures quoted by the Food and Agriculture Organization of the United Nations, the proportion engaged in agriculture in 1948, together with their non-working dependants, was 74 per cent of the total population. This compares with a figure of 70 per cent for Asia, 60 per cent for South America, 33 per cent for Europe, 31 per cent for North and Central America and 40 per cent for Oceania. It is characteristic of an advancing economy that, as the productive power of society increases and

more diversified economic activities develop, a declining proportion of the population is employed in agriculture. The high proportion engaged in agriculture in Africa provides an indication of the under-developed state of the region as a whole.

It is impossible, however, to know accurately to what extent African agriculture is on a direct subsistence basis. As previously stated, this portion of agricultural output in Kenya in 1948 was estimated to be about 26 per cent of the total national income, by value. This may be fairly representative of a considerable part of tropical Africa, but it throws no clear light on the proportion of the population involved mainly in subsistence agriculture. The proportion is doubtless high in relation to output since subsistence agriculture employs virtually no capital equipment and is likely to be less efficient than other sectors of the economy. The situation is rapidly changing, and no doubt there are few, if any, large tribal groups entirely untouched by the influence of market economies. Increasing attention is being given by colonial administrations to improvement in agricultural methods and to the production of cash crops. This process received additional impetus during the war when Far Eastern sources of supply were cut off, and again after the war partly as an attempt by western European colonial Powers to overcome the effects of the dollar shortage, and also as part of general plans for the economic development of African territories. Cotton, ground-nuts and tobacco are among the principal crops production of which has been encouraged. Production of rice, both for local consumption and for export, is being successfully developed in West Africa, especially in the French Sudan in connexion with the Niger irrigation schemes. In British Africa price guarantees and the establishment of marketing boards for specific export crops, as well as instruction and research, have been the means adopted to bring about increased production. Cash crops produced in many parts of Africa by African agriculturists include cocoa, coffee, ground-nuts, palm oil and palm kernels, cotton and tobacco. The chief plantation crops, grown on estates owned mainly by non-African producers, are sisal, sugar, tea and coffee.

Some indication of the extent to which the production of cash crops has increased in Africa

in recent years may be obtained from a comparison of the areas under typical export crops before and after the war. Partial data on six export crops—ground-nuts, sesame-seed, cotton, tobacco, tea and coffee—reveal an expansion of 27 per cent in the post-war period over pre-war from a combined pre-war total of about 5.2 million hectares to about 6.7 million hectares under cultivation in the post-war period. The average area under tobacco increased from 113,000 hectares in 1934-38 to 205,000 in 1948, or 81 per cent; sesame-seed acreage increased by 66 per cent between pre-war and 1947; acreage in ground-nuts increased by 22 per cent between pre-war and 1948; tea acreage (for five African territories, including the principal producers) was 29 per cent higher in 1948 than in 1937; cotton acreage increased by 19 per cent between pre-war and 1949; and coffee acreage (for six African territories) was 47 per cent higher in 1948 than in 1937. However, during the period 1937-48 acreage devoted to coffee in Tanganyika and Kenya decreased.

An expansion in the area devoted to food crops is evident also from the data available. The cultivation of barley, maize, wheat, rice and oats—crops grown both for subsistence and for market—increased from a total of about 17.9 million hectares in the pre-war period (1934-38) to about 21.6 million hectares in 1949, a rise of some 21 per cent. Increases in the acreage devoted to rice and maize in this period amounted to 34 per cent and 33 per cent respectively, and the acreage of oats and barley increased by 22 per cent and 18 per cent. Wheat acreage, however, has remained constant during the decade. No estimates are available of the acreages under other basic food crops, such as millet and yams, which are produced almost entirely for local consumption and very largely as subsistence crops.

The extent of dependence on cash crops varies considerably in different areas. In West Africa and particularly in the cocoa, ground-nuts and palm oil producing areas of the Gold Coast and Nigeria, a successful form of peasant agriculture highly dependent on export markets has developed. Internal markets for locally produced foods are also fairly well developed in West Africa. Elsewhere also, especially in Northern Rhodesia and the Belgian Congo, mining and other developments giving rise to wage incomes have led to

the growth of internal markets for locally grown foods, which African growers are learning to exploit.

LABOUR AND LAND UTILIZATION

In the conditions arising out of the dual nature of the African economy, two groups of problems, the problem of labour and, in the broadest sense, the problem of land utilization, have acquired a special significance. The characteristic features of African economic development hitherto and the prospects for future development cannot be fully appreciated without an understanding of these two problems.

In tropical and southern Africa especially, the problem of labour shortage has been a theme of African economic life since the first contacts of Europeans with Africa. As early as the seventeenth century the Dutch East India Company introduced labourers from the Far East into Cape Colony. Again, in the latter half of the nineteenth century, the Natal sugar estates were developed on the basis of imported Indian labour, while for a short period after 1905 the critical shortage of labour in the Transvaal gold mines was met by bringing in Chinese labourers, who were subsequently repatriated. In East Africa, Indian labourers were used in the development of the Kenya-Uganda railroad, while in French Central Africa and the Belgian Congo imported labourers from Indochina and from Cuba were employed in railway construction. Attempts to supply labour from local sources in Africa have involved, in the earlier days of colonization, various forms of pressure from direct impressment to the levying of taxes on the male population.

Within the framework of his local economy, the African formerly had little incentive to exchange his labour for wages. Now, under the influence of modern economic development, such incentives are developing, both as a result of an increase in the African's desire for products of modern industry and through the emergence of conditions which make his subsistence economy increasingly precarious. These two pressures are, however, exerted with uneven force; even where they are at a maximum, as in the Union of South Africa, they have not resulted in the emergence of a homogeneous economic system. In that country and in certain other areas of permanent Euro-

pean settlement, the development of a homogeneous economic society is restrained as a matter of policy and of institutional practice by the European settlers. In the Union of South Africa, in Southern Rhodesia, Northern Rhodesia and Kenya, the system of Native Reserves tends to perpetuate the dual nature of the economy by governmental policies which attempt to segregate the indigenous subsistence society from the impact of modern economic development. These Native Reserves, by being maintained as areas of tribal life, are to a large extent cut off from the direct effects of the developments taking place outside them. With practically no internal capital resources, as they become increasingly unable with their existing techniques to support growing populations, they become exporters of labour.

From this point of view the reserves of the Union of South Africa, Southern Rhodesia, Northern Rhodesia and Kenya represent a special instance of a more general case. A very considerable proportion of African workers employed in the gold mines in the Union of South Africa is, in fact, recruited from territories outside that country, a fact which has influenced the development of African wage rates there. In the Gold Coast, where the most substantial economic development in West Africa has taken place, it is estimated that 50 per cent of the industrial workers are migrants whose homes are elsewhere. Similarly, in the Belgian Congo, though relatively few migrant workers enter the Congo from other territories, there are considerable numbers of these workers who originate in the Belgian Congo itself. The plantations of East Africa are also largely dependent on migrant labour. In those parts of Africa south of the Sahara where both the rate and the quantity of economic development have been small, the influence of the prevailing tribal economies on the nature and composition of the wage-earning population is even more considerable. Taking Africa as a whole, despite the steady increase in most territories in the number of wage earners, the proportion of workers who are migrant and not permanently established wage earners is high.

Despite the steady increase in the number of Africans partly or wholly occupied in wage-earning employments, complaints of labour shortages are still frequently heard, implying that more

workers could profitably be employed at existing wage rates. In part, the shortages are local and may be explained by the necessity for redistribution of the population in accordance with the location of new economic developments. In some of the more developed areas labour shortages may be confined to certain occupations, and even accompanied by unemployment in other occupations. Thus, in the Gold Coast, 2,000 industrial workers were unemployed at the end of 1948, though there was a shortage of labour on the cocoa farms, in the timber industry and in road construction. Similarly, in Kenya in 1949 there was a shortage of labour in agriculture, but some unemployment in urban areas.

It is a significant paradox that, in the face of almost constant complaints of shortage of labour in Africa, the wages of Africans in many parts of Africa and over long periods have remained relatively static. During and since the war nominal wages have risen with the rise in general prices, resulting in some cases in improvements in living standards of employed workers, but general wage levels are still extremely low. An increase in the demand for labour exerted over a long period such as has taken place in Africa might have been expected to bring about more substantial increases in wage levels in view of the fact that supply has, in general, failed to keep pace with the demand. That wage rates have not in these conditions risen more materially is explained by the fact that the majority of African wage earners are members of a labour force serving two economic systems. A fairly continuous and increasing supply of migrant workers accept work for wages on a temporary basis; this supply has been maintained partly by the increasing pressure of growing populations on the available resources of land and simple techniques of cultivation, and partly by the need for cash income both to pay taxes and to obtain commodities offered in trade. Export industries were built up on the basis of this low-priced labour, which enables these industries to compete in world markets. The use of migrant labour as a means of avoiding the costs involved in providing for a permanently established labour force has been favoured by the fact that much of the development of export industries, particularly of mining, took place in remote areas where public utilities did not exist. The practice of recruiting

labour over wide areas through large recruiting organizations has often had the effect of reducing the competition of employers in search of labour, at the same time increasing the supply available to the areas where the demand existed. Thus, considerable effort has been directed towards maintaining the supply of low-priced labour, a supply which did not become exhausted because of the slow pace of internal development in Africa and the existence of a large mass of subsistence agriculturists.

The situation is one in which by and large African workers both actual and potential are in a weak bargaining position, since not only have they few alternatives but in general they have no precise knowledge of employment opportunities in places far distant from their homes. Control of migration by government regulation and through recruiting organizations has to a considerable extent limited the development of uncoordinated migrations. Nevertheless, recruiting organizations of private industries have been concerned with maintaining the flow of labour at the wage levels on the basis of which their investments have been made. So long as economic activities are considered to depend largely on low-wage migrant labour, and so long as the supply of such labour is forthcoming, the low-wage structure tends to be perpetuated even though at the prevailing wage rates there are frequent complaints of labour shortage.

In Africa south of the Sahara almost all administrations have been faced with this double problem: the need to develop the sort of labour incentive normal to a fully developed exchange economy and the consequences of the disruption brought about in African society by its increasing contacts with the world economy. Indeed, throughout a large part of Africa a complex sociological situation has emerged in which economic and other social aspects are deeply involved. Since a profound disruption of African tribal life is the inevitable consequence of modern economic development in Africa, the problem of replacing what is breaking down with institutions more suited to the new economic environment faces every African administration. The existence of a migrant labour system of a non-seasonal type is one aspect of this situation which is evident in many parts of the continent. Where shortages of

labour are sufficiently severe, and where the disruption of African tribal life associated with the migrant labour system is substantial, it has already become necessary to attempt to build up a more normal type of stable labour force. Thus, in the Belgian Congo, for example, the Government has applied restrictions on recruitment of workers, and the mining companies have built up a stable labour force providing the necessary amenities for permanent residents at the place of work and have set up facilities for training. On a smaller scale similar developments have taken place in the mining areas of Northern Rhodesia. In the Union of South Africa, where industrial production has developed on a large scale, there is a considerable and increasing volume of permanently urbanized indigenous labour employed in industry and commerce at wage rates appreciably higher than those prevailing in similar employment elsewhere in Africa south of the Sahara. This labour force has been built up despite the fact that practically all African labour in the mines is recruited migrant labour and that highly paid skilled work is performed almost entirely by European workers. Secondary industries in particular require for their efficient operation a stable labour supply. Hence, both in private industry and in the government-owned steel works at Vereeniging, for example, provision is made on an increasing scale to attract and retain a stable labour force of both Europeans and non-Europeans.

Migrant labour is relatively inefficient for several reasons. In the first place, the labour turnover is exceptionally high. Secondly, an enormous amount of time is lost in travelling, much of which is done on foot over great distances, in conditions which have bad effects on health. Thirdly, the discontinuous nature of employment results in loss of efficiency owing to the need for some re-training or readjustment after prolonged absence while it makes difficult, if not impossible, the acquisition of skill requiring long training and steady application. The migrant labour system has grown up in Africa as part of the process of development from a subsistence to an exchange economy, but in the resulting state of hesitancy and confusion between two forms of economic life, African labour—often lacking the opportunities and inducements to engage in permanently settled employment—has been slow to develop the

efficiency of which it is potentially capable. An increase in wage rates depends, of course, in part upon more efficient use of labour and an increase in opportunities for training. It also depends in part upon further development of labour organizations, through which an understanding of the labour markets and a stronger bargaining position would be acquired by the workers themselves. At the same time an increase in the price of labour would tend to bring about more efficient use of it. In the existing circumstances, however, the achievement of a higher labour efficiency is a slow and uneven process. Consequently, the earning power of African labour tends to be restricted, and the range of products in which Africa can compete in world markets on the basis of its present labour efficiency tends to remain narrow.

Migrant labour is one characteristic feature of the general problem of social upheaval in Africa resulting from the impact of modern economic development on the simple and mainly self-sufficient tribal economies. A closely related aspect of the same general problem is land utilization. Because African production is mainly agricultural, a more effective exploitation of Africa's economic resources can only be realized by a more effective utilization of the land. Loss of soil fertility, under constant cropping especially in tropical Africa, presents a problem to which no over-all solution has yet been found. The traditional system of shifting cultivation is now seen to have been a rule-of-thumb method by which soil fertility was maintained. Shifting agriculture, however, is only possible where cultivable land is plentiful in relation to population; it is not an efficient means of production for a market. Increasing pressure of population on the land, the need to produce for markets and the disturbances in African traditional life created by contact with the world economy make it necessary to find means of adapting African tropical agricultural production to new techniques of non-shifting agriculture which will not destroy the fertility of the soil. Experience has shown that this cannot be accomplished merely by transfer of methods which have proved effective in temperate zones. Hence, great importance is attached to the multifarious efforts now being made by the governments in African territories to put African agriculture on a sound basis.

The difficulties are great and the cost involved may be material. In some areas, particularly in West Africa, deforestation has already resulted in considerable deterioration. In parts of East and South Africa soil erosion, intensified by unsuitable farming methods, is serious, and it is doubtful whether even the substantial efforts now being made to deal with the problem are adequate.

In areas where the migrant labour system exists, the problem of standards of agricultural production is particularly acute. Absence from villages and farms of a large proportion of male labourers tends to bring about a deterioration in agricultural standards, leading often to loss of soil fertility and to soil erosion—effects which are most marked in eastern and southern Africa. This, in its turn, tends to increase the economic pressure forcing workers to seek outside employment. Thus, a vicious circle tends to be set up in which the outflow of migrant workers leads to declining productivity of the subsistence farming areas, and the decline in productivity increases the pressure upon the workers to migrate. In the Union of South Africa the Native Mine Workers' Wage Commission concluded in 1943 that, with the low level of average agricultural return in the Transkei, the average total family income derived from agricultural production and the mining wage earned in the Transvaal mines by the migrant workers was insufficient to maintain existing standards of health and efficiency. Reference has already been made to the serious effects upon indigenous village agriculture in the Belgian Congo of haphazard recruiting of workers for mining and other employment; these have led the administration to limit the numbers of workers who may be recruited for work outside their villages, while at the same time a very considerable effort has been made in the copper mining areas to limit the demand for migrant labour by providing for a fully established labour force on the spot. In Nyasaland the Government has set a limit on the numbers who may be recruited for mining outside the territory.

The shift from subsistence activities to production for the market is the process by which both the incentive and the means to improve the technique of agricultural production in Africa must in large measure come. It is clear, however, that the train of consequences set in motion by

this process results in difficult problems of adjustment. On the one hand, it is often difficult to adapt indigenous systems of land tenure and use to the requirements of efficient production for markets. On the other hand, development of production for markets has frequently resulted in excessive dependence on one or two products, and it is increasingly recognized that improving standards of output of locally consumed food products is important to meet the needs of a population which in most parts of Africa is expanding at a fairly rapid rate.

As regards conditions of land tenure, the variety of customs in Africa makes generalization difficult. The development of a peasant agriculture based on production of commercial crops tends towards individual holdings and, in some cases, freehold possession as in the Gold Coast. More commonly, however, individual rights in land are derived from the tribe or clan, and based on use regulated by custom, the nature of which varies from region to region. Everywhere the trend toward individualization of holdings by peasant cultivators is restrained and modified by the existence of systems of communal ownership. Under pressure of changing conditions individual and community interests frequently clash. In some cases the traditional systems of tenure have resulted in a haphazard distribution of land, making the development of up-to-date farming methods difficult. The problem facing all administrations in Africa is that of encouraging the development of systems of land tenure which, while suitable to the agricultural possibilities of specific areas, will at the same time provide an adequate incentive to maintain and improve the fertility of the soil.

Partly under the influence of economic forces and partly as a result of government policies, a process of adaptation is taking place in a variety of ways with varying degrees of success or failure. In West Africa, where individualization of indigenous holdings has gone farthest, the main trend is toward peasant agriculture, but in the cocoa and palm oil producing areas of the Gold Coast and Nigeria and in the cotton areas of Uganda, there is also a tendency for peasant holdings on a family basis to become transformed into African estates worked by hired labour. In the Belgian Congo, where, historically, development was begun on the basis of large concessions, the ad-

ministration has sought to develop an African peasantry as a complement to mining and industrial activities. Elsewhere also, in areas where there is no considerable permanent European settlement, the problem of conflicting claims between indigenous inhabitants and agricultural development for the market on a concession basis gave rise to the necessity for dealing with the question of land alienation. Land in tropical Africa not currently in use is in fact frequently lying fallow within the system of shifting agriculture. Failure to realize the full significance of this fact in the granting of concessions for commercial development has been of considerable importance, as in French Equatorial Africa.

In the temperate areas of East and South Africa, as also in Algeria, the situation is complicated by the presence of immigrant European or Asian settlers, whose claims have exercised a powerful influence on the land policy of the administrations concerned, especially as regards alienation of land and definition and protection of the rights of indigenous inhabitants. In Kenya, Northern Rhodesia and the Union of South Africa this has led to the establishment of reserved areas where, except for limited purposes such as trade, only Africans may acquire rights of use; outside these reserved areas African rights of land use are severely restricted. In these cases a major problem is the adequacy or otherwise of the reserved areas to support their inhabitants. Plantation agriculture occurs more frequently in East and Central Africa, especially in the production of certain crops, such as sisal, sugar, tea and coffee, though the prevailing system even there is that of peasant production. In Uganda, for example, in addition to cotton, which is the main crop, coffee, tobacco, ground-nuts and oil-seeds have been successfully developed as peasant crops. In Uganda, indeed, European plantations have declined in relative importance, and the adaptation of the indigenous systems of production to the requirements of commercial crops has been successfully achieved. An example of a highly successful adaptation of African producers to commercial agriculture based on a large-scale irrigation and government-planned development is afforded by the Gezira scheme for cotton production in the Anglo-Egyptian Sudan. In French West Africa, the Niger project, similar in conception and still under development, has

already resulted in successful production of rice and cotton.

In the Belgian Congo, efforts are being made to develop peasant agriculture on an allotment system which provides for the allocation to peasant families or groups of an area of forest or savannah for cultivation on a system of rotation which will obviate shifting cultivation without developing over-intensive cropping. By the end of 1948, almost 16,000 families had been settled in such allotments. Similar experimental efforts are being made in British East Africa to meet the problem of haphazard land distribution by a group system under which a local group is induced to rearrange holdings on a co-operative basis permitting the adoption of a crop rotation applying to the group as a whole.

Though conditions in North Africa are in many ways different from those in Africa south of the Sahara, there are some similarities in regard to land utilization. Thus, in Algeria there has been considerable alienation of land to French settlers, giving rise to problems similar in some respects to those in many parts of eastern and southern Africa. In Tunisia commercial exploitation of the land was mainly achieved through the development of large estates, many of which were dependent on imported Italian labour.

In the cattle-producing areas further complications are frequently introduced by the effects of over-stocking and the high degree of social significance which many of the tribes attach to the possession of cattle.

PRODUCTION AND INVESTMENT PROBLEMS

Even where indigenous agriculture has been successfully adapted to the production of commercial crops, there exists the danger of excessive dependence on the sale of a small range of products. Lack of diversity in production is one of the major weaknesses in African development in relation to the world economy. In 1949, of twenty-seven African territories for which data were available, fifteen obtained more than 70 per cent of their export receipts from only three products and only in the case of French Morocco and Tunisia did the three main products account for less than 50 per cent of the total exports. During and since the war, demand and

prices have been generally favourable to exports, with the main exception of gold, the price of which has remained unchanged in the United States of America. Internal economic development which would represent an increasing diversity of economic activities has been relatively small except in the Union of South Africa, Southern Rhodesia, French North Africa, and a few localized areas, such as parts of the Belgian Congo. Especially in tropical Africa, there is a high degree of dependence on external capital and imported services in administration and technical work. The conditions do not exist there for the accumulation of the capital which is necessary for an extensive development of transport, communications, and other public works on which African development depends. The Union of South Africa is unique among African countries south of the Sahara in being able to provide a large part of the capital for its industrial development from its own resources.

Capital investment in Africa from external sources has been almost entirely devoted to production for export, which not infrequently could be developed only after extensive expenditure on transport and other facilities had been undertaken. The almost complete dependence on external capital and technical skill involves a considerable annual transfer abroad out of gross export receipts; this, together with the lack of internal capital for development, concentrates attention on investment to serve export needs, both directly and in the development of transport and other undertakings of a public nature. Even so, on a per capita basis, exports of most African countries are relatively low. This may be clearly seen if the countries are grouped according to the per capita values of their exports. When exports for thirty African countries for 1948 are expressed per capita in United States dollars, it appears that:

Eleven countries had per capita exports of less than \$10: Angola, British Somaliland, Eritrea, Ethiopia, French West Africa, Liberia, Mozambique, Nigeria, Nyasaland, Sierra Leone and Tanganyika;

Eleven countries had per capita exports of over \$10 but less than \$20: Anglo-Egyptian Sudan, Belgian Congo and Ruanda-Urundi, French Cameroons, French Equatorial Africa, French

Morocco, French Togoland, Kenya and Uganda, Libya, Madagascar and Comoro Islands, Portuguese Guinea and Tunisia;

Five countries had per capita exports of over \$20 but less than \$50: Algeria, Gambia, the Gold Coast and British Togoland, the Union of South Africa and Zanzibar and Pemba;

Four countries had per capita exports of over \$50 but less than \$100: Mauritius and Dependencies, Northern Rhodesia, Réunion and Southern Rhodesia.

Outside the direct expenditures which investments in export production involve, governments are the largest employers of labour in many African countries and particularly in the Non-Self-Governing Territories. On a per capita basis, nevertheless, total government revenues out of which employment in government activities are financed are exceedingly low. In 1948, of thirty-three African countries:

Fourteen countries had government revenues of less than \$5 per capita: British Cameroons, British Somaliland, British Togoland, French Cameroons, French Equatorial Africa, French Togoland, French West Africa, Liberia, Madagascar and Comoro Islands, Nigeria, Nyasaland, Ruanda-Urundi, Tanganyika and Uganda;

Seven countries had government revenues of over \$5 but less than \$10 per capita: Anglo-Egyptian Sudan, Angola, Basutoland, Bechuanaland, Belgian Congo, Kenya and Sierra Leone;

Seven countries had government revenues of over \$10 but less than \$20 per capita: Algeria, Gambia, the Gold Coast, Mozambique, Northern Rhodesia, Swaziland and Zanzibar and Pemba;

Three countries had government revenues of over \$20 but less than \$40 per capita: French Morocco, Mauritius and Dependencies and Southern Rhodesia;

Two countries had government revenues of over \$40 but less than \$60: Tunisia and the Union of South Africa.

SUMMARY

In summary it may be said that Africa as a whole is economically among the least developed areas of the world, with very low levels of pro-

duction and consumption. The basic facts behind these low levels of production and consumption are, first, that a very large proportion of the total population of Africa is engaged in and dependent upon subsistence agriculture carried on with backward techniques. Secondly, investment in the developed sector of the economy is concentrated on the production of primary products for export. Thirdly, practically all of the capital upon which this production has been developed had to be imported from outside Africa, and, with the exception of the Union of South Africa and parts of North Africa, this investment has had a relatively small effect in generating secondary incomes and investment. Gross export receipts, in considerable proportion, are transferred as incomes abroad in the form of loan charges and dividends on invested capital.

Throughout Africa south of the Sahara there thus exists what may best be described as a dual economy in which by far the larger section of the population, being involved in subsistence activities, is only partially influenced by advanced techniques. Again, with the exception of the Union of South Africa and more recently and to a much lesser extent such areas as parts of Southern Rhodesia and the Belgian Congo, internal capital formation is almost entirely lacking, since in a subsistence economy the conditions for its formation are not favourable. There is consequently a great lack of internal capacity for investment in transport and other basic facilities

of an economic and social nature upon which development of inter-regional specialization and trade must in large measure depend. Specialization and trade on an inter-regional basis are therefore very little developed. Available evidence suggests that the population of Africa is increasing at a fairly rapid rate, and though in fact the continent as a whole is relatively sparsely populated, under existing techniques there is, in some areas, considerable pressure on land resources. Rapid improvement in agricultural techniques for products intended for local consumption is, as recognized by all African governments, a necessary condition for raising the standards of living. Such improvement in agricultural techniques is not, however, something which can be brought about in isolation from other forms of economic development. Within the local economic and social setting any effective improvements in agricultural practices and output will depend in part upon the development of related industries and services, including scientific and technical institutions essential for the adaptation and dissemination of already available knowledge, and its application in accordance with the particular natural and sociological conditions of the area. To the extent that it is successful, such economic development would open up the way to the further development of other natural resources both to serve the growing domestic needs and markets and to provide the required foreign exchange through exports demanded on world markets.

RECENT ECONOMIC TRENDS

Chapter 2

AGRICULTURAL PRODUCTION

The great majority of the people of Africa are dependent on the land for their living. On the continent as a whole, about three-fourths of the population is dependent on agriculture; the proportion probably does not drop below 60 per cent in any country. Although there has been a gradual decline in the proportion, it is unlikely that the shift away from agriculture will be sufficient for a long time to weaken the preponderant role of agriculture in African economy. As a consequence, the welfare of most of the population is dependent on progress in this economic sector.

GENERAL FEATURES

The forms of agricultural organization vary. It is convenient—especially for the area south of the Sahara—to distinguish between traditional indigenous and non-indigenous agriculture. A modified form of traditional agriculture is still employed over the greater part of the cultivated area and continues to furnish the main part of the continent's food supply. The method is characterized by poverty of equipment, by absence or limited employment of domestic animals and fertilizer, particularly in districts infested by the tsetse fly (mainly between 10 degrees north latitude and 15 degrees south latitude) and by low and irregular yields which, by and large, leave little surplus above subsistence requirements. The amount of land which a family or village group can cultivate in any year is limited by reliance on human labour as a prime mover. In most instances, after several years of cultivation, the land is rested under a long fallow;¹ accordingly, the land required to sustain a family unit is a multiple of the land actually in use. It is for this reason that statistics of land use in Africa are

¹ In overcrowded areas, and in some districts where an increasing proportion of the land has been devoted to industrial crops, the fallow period has been much reduced, with harmful effects on the soil.

difficult to interpret accurately. The Food and Agriculture Organization of the United Nations has estimated that Africa contains about one-fifth of the total agricultural area of the world, but only 5.9 per cent of African land is arable; 17.2 per cent is natural and seeded grassland, 28.4 per cent is forest and nearly half is wasteland, part of which is potentially productive.

The traditional system of agriculture has, in the past, admitted important innovations. Certain staple foods of parts of Africa, among them maize and manioc, are not indigenous. Equally important, production of various cash crops has entailed adjustments in the system, and many other factors have directly or indirectly had an impact on the institutional structure and on methods of production.

The large non-indigenous plantation, devoted almost exclusively to commercial agriculture and relying on an African wage-earning or tenant class, is at the other extreme from the traditional indigenous type of agriculture; between the two forms there are numerous variations. The Territorial Government is a substantial partner in the large-scale Gezira cotton-growing scheme in the Anglo-Egyptian Sudan, where also subsistence crops are grown by the tenants. In many areas the indigenous cultivator devotes a part of his land and his activity to cash crops. In areas of European settlement in southern and eastern Africa, European farmers employ indigenous labour in comparatively small-scale agriculture. As indicated in chapter 1, the evidence available on land use suggests that over the past decade and a half the amount of land devoted to commercial crops has been extended.

At the present time African agricultural practices range from the simplest techniques of indigenous subsistence farmers to modern methods of cultivation utilized by both indigenous and non-indigenous agriculturists. Agricultural credit

institutions and co-operative societies, which are at various levels of development, have been officially fostered. In recent years much emphasis has been placed upon research as related to technical innovation in tropical Africa, and on community development as an essential phase of rural welfare. Indeed, experimentation in the Belgian Congo and Northern Rhodesia has recently been extended to fish-farming.

Products produced in large quantity by indigenous enterprises include, among others, cocoa in the Gold Coast and Ivory Coast, ground-nuts in Senegal and Nigeria, palm oil in Nigeria and Dahomey and cotton in Uganda. In certain territories, European agriculture, organized mainly along plantation lines, has concentrated on a few products mostly destined for export: for example, palm oil in the Belgian Congo, sisal in Tanganyika, pyrethrum in Kenya and tea in Nyasaland. Certain crops, such as coffee in British East Africa, are produced on a large scale by both indigenous farmers and European settlers; however, in a few areas certain commercial crops are reserved exclusively for European enterprise.

Africa contains a great variety of agricultural sub-regions, each with individual patterns of production and of food consumption. These show marked variations in livestock and crop balances and in the relative roles of production for subsistence, for internal markets and for export. This heterogeneity limits the significance of measures applied to the region as a whole. However, the Food and Agriculture Organization has made broad distinctions between, first, cereal and root

crops, which are produced mainly for local consumption and which provide the principal elements in the diet of much of the region, and, second, export crops, including oil-seeds, sugar, coffee, cocoa, citrus fruits, tobacco, pyrethrum, cotton and sisal. This distinction is not rigid since the export food crops also enter into local consumption.

In the Mediterranean littoral, barley and wheat are the dominant cereals. South of the Sahara, root crops, millets and sorghums, pulses and maize assume a larger importance. The root crops are especially significant in the nourishment of peoples in the tropical forest zones and are also important in the savannah districts. Indeed, for the region as a whole, in 1947 and 1948 the estimated weight of cassava, yams and sweet potatoes was, respectively, 178 and 165 per cent of the weight of the principal world cereals—wheat, barley, oats, maize and rice. The estimated weight of millet and sorghum produced in 1947 was 71 per cent of that of the principal world cereals. The diversity of foodstuffs consumed in different parts of Africa is suggested in table 3.

Since most of the food crops and other dietary elements in tropical Africa are not systematically recorded in world accounts, it is difficult to present trends in food production and food consumption for the region as a whole. It is clear that circumstances related to the war led to an intensification of efforts to meet local food needs from domestic resources in a number of areas and resulted in a significant expansion in the

Table 3. Per Capita Supplies of Major Foodstuffs in Certain Countries

(In kilogrammes per capita per year)

Commodity	Algeria 1947/48	French Morocco 1947/48	Kenya and Uganda 1934-38	Madagascar 1947	Tanganyika 1946/47	Union of South Africa 1947
Cereals ^a	82.8	109.2	58.2	121.8	90.5	170.0
Roots, tubers, starches	7.1	1.4	491.4	154.9	328.5	23.6
Sugar	9.3	11.5	5.1	2.8	2.5	33.4
Pulses and nuts	2.6	1.8	24.8	2.5	21.2	4.7
Fruits and vegetables	46.2	30.5	25.0	25.8	7.4	67.4
Fats and oils	5.9	4.8	4.1	1.9	1.8	4.7
Meat	8.9	15.2	22.4	29.1	20.4	51.2
Milk and cheese	71.0	115.3	32.1	87.7	27.0	79.9
Eggs	2.1	3.1	..	1.8	..	5.2
Fish	2.8	4.1	1.1	4.5	1.1	2.6

Source: Food and Agriculture Organization of the United Nations, *The State of Food and*

Agriculture, 1948 (Washington, D.C.), page 88.
^a Milled basis.

production of rice for example; also, retention of foods normally exported has increased. On the other hand, French North Africa, acutely affected by a series of droughts, emerged from the war with lower, though more diversified, food production. The level of agricultural exports of the continent was reduced at the end of the war but has subsequently risen in respect of a number of important commodities. Even so, on the basis of partial coverage, the Food and Agriculture Organization has computed the following indices of the African food trade, which show, in comparison with pre-war levels, lower exports and higher imports in 1948/49 (1934-38=100):

	1947/48	1948/49
Exports	72	89
Imports	98	125

Source: Food and Agriculture Organization of the United Nations, *The State of Food and Agriculture, 1949*, page 12.

The position may have shifted somewhat in the calendar year 1949 as a consequence of the French North African trade in cereals. Following several droughts, this area changed from a pre-war net exporter of about 560,000 metric tons of cereals annually to a net importer in 1946, 1947 and 1948. In 1949, however, it reverted to its pre-war position, exporting at approximately its pre-war level.

It is important to note the vulnerability of the food subsistence sector of African economy to drought. In practically every year the problem of food shortages is severe in some local districts or even over wide areas, though improvement in communications and recourse by the administrations to imports have alleviated the impact of production shortages on consumption. It is also certain that much of the population is badly nourished and undernourished. The Food and Agriculture Organization has reported that African diets "remain among the lowest in the world,"² though gross malnutrition is not so prevalent as

in some other parts of the world. All administrations have recently emphasized research in, and improvement of, nutrition. The ten-year development plan of the Belgian Congo computes specific production targets required for better nourishment of the population.

With present techniques, and bearing in mind also increase of population and climatic uncertainty, the maintenance of balance between food and non-food production is a problem which confronts African territories with varying degrees of intensity. Thus, in Southern Rhodesia, increased production of tobacco since the end of the war may have resulted in some withdrawal of productive factors from domestic foodstuffs on a scale sufficient to impair this sector; the Government has therefore been concerned with redressing any unbalance by preparing major food-production schemes.³ In the Belgian Congo, local food production and export capacity have, on the whole, expanded together. In Liberia, where the strain on the available productive factors has been less severe, the production of rice and other staples has risen simultaneously with exports of rubber.

The products of African agriculture are important not only for the subsistence of the inhabitants and the economies of the individual territories but also, in respect of several commodities, for the world economy. Africa produces and exports to world markets the largest part of world supplies of cocoa, sisal and oil palm derivatives, and contributes significant quantities of ground-nuts, coffee, sesame-seed and olive oil. Other crops, such as citrus fruits, sugar-cane, cotton, tobacco and tea, though of minor importance in world production, nevertheless have major roles in local economies. The economic development programmes of the African territories are directing attention to the expansion of agriculture production both for export and for local consumption. Table 4 indicates Africa's share in world production of a number of products.

² Food and Agriculture Organization of the United Nations, *The State of Food and Agriculture, 1948*, page 79.

³ Between 1939 and 1949 the population of Southern Rhodesia increased by about 38 per cent. For the seasons 1946/47 to 1948/49, compared with 1938/39, average annual output of certain food products was: maize (an important staple), 99 per cent; wheat, 65

per cent; potatoes, 219 per cent; pastoral and dairy products, 143 per cent; ground-nuts, 209 per cent; citrus, 34 per cent. Over the eleven-year period, the output of tobacco nearly trebled, and in 1948/49 tobacco contributed more than half of the gross value of total agricultural output. Central African Statistical Office, *Economic and Statistical Bulletin of Southern Rhodesia* (Salisbury), 21 September 1950.

Table 4. Share of Africa^a in World Agricultural Output, Pre-war and 1948
(In percentage of total)

Crop	Pre-war ^b	1948	Crop	Pre-war ^b	1948
Sisal	63.3	75.5	Barley ^d	5.5	7.3
Palm oil and kernels ^c	54.8	69.5	Cane sugar ^d	5.5	5.7
Cocoa	66.3	68.3	Cotton-seed ^d	3.4	4.9
Ground-nuts ^d	18.9	21.6	Cotton (ginned) ^d	3.1	4.4
Millet and sorghum (grain) ^d	20.1	20.6 ^e	Citrus fruits	3.3	4.3
Sweet potatoes and yams		17.9	Maize ^d	4.2	3.7
Coffee	6.2	15.3	Tobacco	2.6	3.5
Sesame-seed ^d	6.6	14.2 ^e	Tea	1.8	3.3
Olive oil	8.0	11.9	Rubber	0.9	2.8
Dry beans ^d		10.1	Wheat ^d	2.0	2.0
Wine ^d	11.0	9.7	Rice ^d	1.0	1.4
Dry peas ^d	3.5	7.7	Oats ^d	0.7	0.5
Wool	8.9	7.4	Potatoes	0.3	0.4

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*; Commodity Series, *Fats and Oils*, August 1949; Commodity Reports, *Sugar*, 22 November 1950; *Yearbook of Food and Agricultural Statistics*, 1948, 1949. Secretariat of the Rubber Study Group, *Rubber Statistical Bulletin* (London).

^a Excluding Egypt.

Many territories depend heavily on a single crop for the principal part of their export trade. These crops are therefore central in their economies since they provide income necessary for the purchase of essential consumers' goods and capital goods for further economic development. The following list of selected commodities exported in 1948 gives some examples:

Commodity and area	Percentage of total exports by value
Ground-nuts:	
Gambia	97
Portuguese Guinea	57
French West Africa	44
Sugar-cane:	
Mauritius	95
Réunion	68
Rubber:	
Liberia	90
Cotton (ginned):	
Anglo-Egyptian Sudan	67
Uganda	52
French Equatorial Africa	48
Cocoa:	
Gold Coast	59
French Cameroons	45
Sisal:	
Tanganyika	55
Tobacco:	
Nyasaland	54
Southern Rhodesia	44
Cereals, pulses:	
Ethiopia	43
Coffee:	
Ruanda-Urundi	41

^b Generally 1934-38.

^c Production of the Belgian Congo and British East and West Africa only. African territories not included in the table accounted for nearly 18 per cent of total African exports in 1949.

^d Data for world output exclusive of that of the Union of Soviet Socialist Republics.

^e 1947.

PRE-WAR AND POST-WAR PRODUCTION OF SELECTED COMMODITIES

Pre-war production and post-war production of selected commodities are compared in table 5. The totals have limited significance inasmuch as they are presented for the region as a whole; in addition, year-to-year variations reflect certain temporary factors. In the latest year specified, production exceeded pre-war levels for the following: all listed cereals except oats; all vegetable oils and seeds; citrus fruits; sugar; all beverages except wine; all fibres except wool; tobacco; and rubber. The rates of expansion were relatively high in respect of coffee, tea, dry peas, tobacco and rubber. Pre-war data relating to cassava and yams are not available on a regional basis. In 1947, a year of shortfall in much of Africa owing to drought, production of millets and sorghums was estimated at 9.0 million metric tons against 9.3 million in 1934-38. Regional estimates for years after 1947 are not available.

The expansion of agricultural production since the end of the war has been assisted by increased supplies of textiles and other consumer goods required to encourage effort and also by increased imports of agricultural requisites. Supplies made available under the European Recovery Program have contributed to agricultural reconstruction,

particularly in the case of the French territories.⁴ Furthermore, measures have been taken by metropolitan Powers in their oversea territories to stimulate the production and export of commodities that have been in short supply or that have conserved or earned scarce foreign (including dollar) currencies.⁵

⁴ By 30 June 1950 procurement of equipment and supplies required by French oversea territories, including those in Africa, totalled \$297.4 million. Machinery and equipment (mainly mining, transportation and agricultural equipment) accounted for over a third of the total; other industrial commodities represented somewhat less than a third. The cumulative total of French counterpart funds utilized by France in the oversea

Grains

Bread grains and coarse grains. The areas in which wheat, barley and oats have been cultivated in Africa are limited. Before the war, about four-fifths of these grains, by weight, was produced in French North Africa and about 10 per cent in the Union of South Africa.⁶ In the latter

territories amounted to about \$96 million, according to the Economic Cooperation Administration, *Ninth Report to the Congress for the quarter ended 30 June 1950* (Washington, D.C., 1950), page 62.

⁵ This statement applies also to mineral products.

⁶ Rye is not important in Africa, though the Union of South Africa produces a small quantity.

Table 5. Production^a of Selected Agricultural Commodities, Pre-war and 1947 to 1949

(In thousands of metric tons)

Crop	Pre-war ^b	1947	1948	1949	As percentage of pre-war		
					1947	1948	1949
Cereals:							
Barley	2,275	2,130	3,233	3,562	94	142	157
Maize	4,584	6,299	5,591	6,150	137	122	134
Millet and sorghum (grain)	9,274	8,982	..	..	97	..	..
Oats	310	230	260	300	74	84	97
Rice	1,561	1,754	2,112	2,132	112	135	137
Wheat	2,616	2,256	2,720	2,833	86	104	108
Pulses:							
Dry beans	..	660	710	..	..	..	..
Dry peas	150	320	340	360	213	227	240
Root crops:							
Cassava	..	13,000	14,100	..	..	..	..
Potatoes	543	660	738	796	122	136	147
Sweet potatoes and yams	..	9,584	8,884	9,480	..	..	..
Vegetable oils and seeds:							
Cotton-seed	389	370	506	503	95	130	129
Ground-nuts	1,685	2,071	2,182	..	123	129	..
Olive oil	69	43	57	108 ^e	62	83	157 ^e
Palm oil and kernels ^d	570	565	605	640	99	106	112
Sesame-seed	104	236	..	..	227	..	..
Citrus fruits	325	478	598	..	147	184	..
Sugar ^e	1,014	1,138	1,274	1,344	112	126	133
Beverages:							
Cocoa	484	415	492	506	86	102	105
Coffee	150	332	352	345	221	235	230
Tea	9	17	16	17	189	178	189
Wine	2,140	1,150	1,630	1,820	54	76	85
Fibres:							
Cotton (ginned)	190	194	260	251	102	137	132
Sisal	155	170	200	205	110	129	132
Wool	153	114	125	122	75	82	80
Tobacco	70	110	110	120	157	157	171
Rubber ^f	12	39	43	46	325	358	383

Source: See table 4.

^a Excluding Egypt.

^b Principally 1934-38.

^c Excluding Algeria.

^d Data for only the Belgian Congo, British East Africa

and British West Africa. Other African countries exported 114,000 metric tons of palm oil and kernels in 1949, nearly 18 per cent of total African exports.

^e Raw value.

^f Including latex. Figures represent production or net exports; pre-war data for 1937.

country maize has been the most important cereal; by quantity production of maize was three and one-half times that of the first three cereals and nearly 45 per cent of the region's total. In inter-tropical Africa also, particularly in the southern and eastern parts of the continent and also in some West African territories, maize is an important food.

The pre-war and post-war production of bread grains and coarse grains in Africa, excluding Egypt, follows (in millions of metric tons):

	1934/38	1947	1948	1949
Wheat, barley, oats	5.2	4.6	6.2	6.7
Maize	4.6	6.3	5.6	6.2

The harvest of wheat, barley and oats was poor in 1947, and the maize crop of 1948 was smaller than those of 1947 and 1949, as may be seen from the totals.

French North Africa, an area of rapidly growing population, was before the war a net exporter of cereals. Its pre-war cereal balance⁷ (in thousands of metric tons), compared with the balance in three post-war years, was as follows:

	1934/38	1947	1948	1949
Surplus or deficit (—)	560	—154	—377	764

Source: For 1934-38 and 1947: Food and Agriculture Organization of the United Nations, *Yearbook of Food and Agricultural Statistics*, vol. II, "Trade-Commerce, 1948" (Washington, D.C., 1949). For 1948 and 1949: Ministère de la France d'Outre-Mer, *Bulletin mensuel de statistique d'Outre-mer*, November-December 1950 (Paris).

Before the war the Union of South Africa was an exporter of maize, its annual surplus varying from year to year, but on the whole expanding. In 1937-39 its exports averaged over 500,000 tons,⁸ but after 1942 exports were negligible until 1948 when a considerable surplus was again achieved. In 1947, as the result of drought, it imported 140,000 tons from Argentina. In the meantime domestic requirements increased, as a result of increase in population, urbanization and higher incomes, and the development of export surpluses may be affected by this factor.

⁷ For wheat, barley, oats, maize and cereal flour.

⁸ Commonwealth Economic Committee, *Grain Crops* (London, 1950). This study also contains data on trends in various African territories.

⁹ Excluding Egypt.

¹⁰ Food and Agriculture Organization of the United

Nations, *Monthly Bulletin of Food and Agricultural Statistics*, June 1950, and Commodity Reports, *Rice*, April 1950.

The output of maize has fluctuated considerably in African territories in post-war years. A few, like Kenya, have shown an upward trend in maize production (also, in the case of Kenya, in wheat), but the commercial balance of a number of others has depended largely on weather conditions. In periods of shortages, territories which normally are largely self-sufficient have had recourse to imports.

Rice. With the curtailment of imports from customary sources during and after the war, production of rice in Africa⁹ increased from 1.6 million metric tons in 1934-38 to 1.8 million in 1947 and about 2.1 million in 1948 and 1949.¹⁰ The area devoted to the crop was in 1949 nearly 40 per cent above the pre-war average.

All of the larger pre-war producers—Madagascar (where rice has long been the principal cereal), French West Africa and to a smaller extent Sierra Leone and Liberia—made appreciable gains through 1946. Of these, only in French West Africa is production reported to have fallen back to approximately its pre-war level, but "a record rice crop is reported in 1950".¹¹ Significant increases above pre-war levels have also been achieved in the Belgian Congo, Uganda and the Portuguese territories, and smaller developments of territorial significance have been recorded elsewhere.

Practically all of the region's increase in production, amounting to a half million tons over the period, has been absorbed internally; very little exportable surplus has been attained anywhere in the region. The enlarged production has resulted in an increase in African consumption, notwithstanding a reduction in the net imports of principal consumers. Between 1947 and 1949 these net imports have been below the pre-war average of some 300,000 metric tons by amounts varying roughly between 150,000 and 240,000 tons. The principal deficit areas included the French territories, the Union of South Africa and Mauritius. A number of territories appear to be aiming at a long-term reduction in their deficit positions or at self-sufficiency.

¹¹ Food and Agriculture Organization of the United Nations, *World Outlook and State of Food and Agriculture*, 1950, page 15.

Fats and oils

Production of visible fats and oils in Africa as a whole amounted to 2,370 metric tons (in oil equivalent) in 1949, an increase of 18 per cent over the pre-war output. World production rose by only 4 per cent between these years.¹² Net African exports¹³ of oil-seeds, fats and oils in 1948 were slightly higher than the 1938 volume of 839,000 metric tons, and in 1949 net exports of nearly one million metric tons were 19 per cent above the 1938 volume.¹² Including Egypt, per capita supplies of visible fats and oils were 76 per cent of pre-war in 1947, 92 per cent in 1948 and 100 per cent in 1949.

Ninety per cent or more of African output has consisted of vegetable oils; animal and marine fats have been much less important. Production for export has been localized mainly in West Africa. The British and French territories in western Africa, which accounted for about five-sixths of the continent's net exports before the war, emerged from the war in 1946 with severely curtailed exports. On the other hand, in 1946 the export surpluses of the Belgian Congo and the Portuguese territories were considerably higher than pre-war, and French North Africa had reversed its pre-war position as a net exporter.

The pre-war and post-war trade position of

¹² Food and Agriculture Organization of the United Nations, Commodity Reports, *Fats and Oils*, 31 May 1950, and *Fats and Oils*, Bulletin No. 13, August 1949.

¹³ Excluding Egypt.

Africa and of certain groups of countries may be seen in table 6. The data for the post-war period show the continued dependence of French North Africa on net imports. In contrast, a marked recovery has been achieved in the British and French territories of western Africa, although in 1949 the export surplus of the latter group was lower than pre-war. The Belgian Congo and the Portuguese territories have been able to export on a scale much in excess of pre-war. The export surplus of Africa as a whole exceeded the pre-war average for the first time in 1949, although in 1948 the surplus was very near to pre-war size.

Since the end of the war, a very considerable effort has been made to restore ground-nut production in Senegal (French West Africa) and to initiate large-scale production in Tanganyika. In the latter, the officially sponsored project has not achieved the results expected notwithstanding a large investment.

In 1948 African ground-nut production reached 129 per cent of pre-war. The recovery of French West Africa and an expansion in a number of countries are shown in table 7. In 1949/50, however, a decrease in African output was expected as the result of adverse weather conditions in important producing countries.¹⁴

¹⁴ United States Department of Agriculture, *Foreign Crops and Markets* (Washington, D.C.), 22 May 1950, pages 506-507.

Table 6. Export or Import (—) Surplus of Visible Fats and Oils, Pre-war, 1946, 1948 and 1949

(In thousands of metric tons, oil equivalent)

Country	Pre-war average	1946	1948	1949
Total export surplus ^a	865	655	854	1,014
British West Africa	455	390	487 ^a	560 ^a
French West Africa and French Equatorial Africa	265	130	210	248
Belgian Congo	98	123	145	176
Portuguese territories	44	67	84	75
French North Africa	3	—38	—57	—43
Other countries ^b	—	—17	—15	—2

Source: Food and Agriculture Organization of the United Nations, *The State of Food and Agriculture*, 1948, page 87; Commodity Series, *Fats and Oils*, August 1949; Commodity Reports, *Fats and Oils*, 31 May 1950.

^a Gross exports, including those of British

East Africa; import data not available for separate countries. East Africa had a pre-war import surplus of 36,000 metric tons and an import surplus of 7,000 metric tons in 1946.

^b Excluding Egypt.

Partial data on the production of palm kernels and palm oil in Africa¹⁵ show that the output exceeded the pre-war level for the first time in 1948, when 605,000 metric tons (in oil equivalent) were produced as compared with 570,000 tons in 1934-38. Production in 1949 was estimated at 640,000 tons.¹⁶ The Belgian Congo, where production of palm kernels and palm oil expanded during and after the war, has been principally responsible for the increase in African output; the territory produced 210,000 metric tons in 1949, a volume 45 per cent in excess of pre-war. On the other hand, the production of British West and East Africa was lower than pre-war in 1947 and 1948. In 1949 these areas produced 430,000 metric tons as compared with 425,000 tons in 1934-38.¹⁷ The output of the Portuguese territories, which are comparatively small producers, has also expanded.

Gross African exports of palm kernels and oil in 1949 amounted to 648,400 metric tons (in oil equivalent), an increase of 20 per cent over the previous year and of 35 per cent over 1938 exports.¹⁸ The 1949 volume of exports represented 78 per cent of world gross exports of these products. In 1938 Africa had supplied 59 per cent of world exports.

Production of sesame-seed and cotton-seed has also increased. In 1934-38 Africa produced 104,000 metric tons of sesame-seed—6.6 per cent of world output—and in 1947, 236,000 tons, about 14 per cent of world output. This expansion has been largely attributable to higher production in the Anglo-Egyptian Sudan. Production of cotton-seed rose less markedly. The 1949 output of 503,000 metric tons was 29 per cent above the pre-war average; this reflected increases in the Belgian Congo, French Equatorial Africa, Mozambique and Nigeria, which were associated in every instance with higher levels of cotton production.

As shown in table 8, French North African

¹⁵ Only the Belgian Congo and British West and East Africa are included in these figures. Excluded are French West Africa, French Equatorial Africa, the Portuguese territories and some minor producers, which in 1949 exported 114,000 metric tons (oil equivalent) of palm oil and kernels, about 18 per cent of total African exports.

¹⁶ Food and Agriculture Organization of the United Nations, Commodity Series, *Fats and Oils*, Bulletin No. 13, August 1949.

production of olive oil through 1948 was below pre-war largely because of low production in Tunisia. However, in 1949 production in the latter area rose considerably, and the territory achieved its first large export surplus in the post-war period—17,500 metric tons as compared with an annual average of 38,700 before the war.

There has been a significant trend in West Africa towards expansion of industries processing oleaginous products for export, and some growth of industries manufacturing soap and other products for domestic consumption.

Sugar

As shown in table 9, production of sugar (raw weight basis) in 1949 was estimated at 1,344,000 metric tons, which was about one-third greater than the pre-war average. The increase over the period did not decisively affect the region's share of world cane sugar production, which was 5.5 per cent before the war and 6.0 per cent in 1949.

Average annual production in the post-war years has been appreciably above pre-war in Mauritius, the Union of South Africa, Uganda and the Portuguese territories. Production in Réunion has fluctuated, though the 1949 output exceeded the pre-war average by 20 per cent, and trends in the Belgian Congo, Kenya, Tanganyika and Madagascar are also difficult to gauge.

Consumption of sugar has increased even more than production. According to the International Sugar Council,¹⁹ apparent consumption in the region rose by 329,000 metric tons between 1938/39 and 1948/49—a gain of 43 per cent—as compared with a production increase of 216,000 tons or about 20 per cent. Much of this increase in consumption has taken place in the producing countries, where per capita consumption has risen above pre-war levels. This is conspicuously the case in the Union of South Africa, where increased retention and some stocking of sugar have brought about a reduction in exports.

¹⁷ *Ibid.* The production is concentrated in West Africa.

¹⁸ *Ibid.*: also Commodity Reports, *Fats and Oils*, 31 May 1950. Nigeria, the Belgian Congo and Sierra Leone export the greatest quantity of African palm kernels, while the major part of palm oil exports comes from Nigeria and the Belgian Congo.

¹⁹ Figures from International Sugar Council, *Pocket Sugar Year Book—1949* (London). The Council's data differ somewhat from those reported in less detail by the Food and Agriculture Organization.

Table 7. Production of Ground-nuts, 1934-38, 1947 and 1948

(In thousands of metric tons)

Country	1934-38	1947	1948
Total production	1,685	2,071	2,182
Anglo-Egyptian Sudan	6	20 ^a	..
Belgian Congo	128	223	..
French Cameroons	35	70	90
French Equatorial Africa	16	51	20
French Togoland	4	10	10
French West Africa	713	748	836
Gambia .....	..	72	63
Nigeria and British Cameroons .....	..	510	560
Tanganyika	4	22	17
Uganda	71	150	158
Union of South Africa	14	76	62

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural*

Statistics, October 1950.

^a Excluding Darfur and Bahr el Ghazal.

Table 8. Production and Exports of Olive Oil, French North Africa, 1934-38 and 1947 to 1949

(In thousands of metric tons)

Country and item	1934-38	1947	1948	1949
Total:				
Production	67.0	41.0	52.0	..
Exports	57.7	3.6	6.2	21.4
Algeria:				
Production	12.0	16.0	13.0	..
Exports	15.5	0.8	0.4	2.9
French Morocco:				
Production	10.0	12.0	7.0	10.0 ^a
Exports	3.5	2.5	5.8	1.0
Tunisia:				
Production	45.0	13.0	32.0	90.0 ^a
Exports	38.7	0.3	-	17.5

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural*

Statistics, July 1950.

^a Preliminary.

Table 9. Production of Sugar, 1934-38 and 1947 to 1949

(In thousands of metric tons, raw weight)

Country	1934-38	1947	1948	1949 ^a
Total sugar production ^b	1,014	1,138	1,274	1,344
Angola	32	41	55	55
Belgian Congo	16	18	17	14
Kenya	14	10	13	13
Madagascar	12	11	11	15
Mauritius	310	349	392	416
Mozambique	46	81	85	80
Réunion	90	89	78	108
Tanganyika .....	..	10	10	8
Uganda	29	58	52	50
Union of South Africa	453	464	552	585

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, July 1950; Commodity Reports,

Sugar, 22 November 1950.

^a Preliminary.

^b Excluding Egypt.

For Africa, excluding Egypt, exports rose above the pre-war average for the first time in 1949. Imports by the entire continent, which had been severely curtailed until 1948, were only 30,000 metric tons below the pre-war average of 470,000 in 1948 and 1949.

Beverages

Cacao. Africa produces about two-thirds of the world's supply of cacao, production of which has been heavily concentrated in western Africa. Indeed, nearly four-fifths of the African total has normally come from the British territories in West Africa and, before the war, nearly three-fifths of it from two territories, the Gold Coast and Togoland under British administration. Cacao is mainly a peasant crop in British West Africa, whereas plantation cultivation has predominated in the Belgian Congo and in certain other territories.

Though estimates of production as distinct from amounts offered for sale are not generally available, it may be inferred from the reported data that the region's production fell below the pre-war average of 484,000 metric tons in every year from 1939 through 1947. Factors which contributed to this reduction included marketing difficulties—especially during the early part of the war—disease, reduced war-time planting and, in 1947, unfavourable weather conditions. Production, which was 86 per cent of the pre-war average in 1947, recovered to 102 per cent in 1948 and 105 per cent in 1949. In 1949, exports, provisionally estimated at 500,000 metric tons, exceeded the pre-war volume (462,000) for the first time.

In spite of excellent crops in the Gold Coast, Nigeria and the adjacent Trust Territories in 1948 and 1949, doubts have been expressed as to whether the improvement in production will be maintained. The Commonwealth Economic Committee has stated that, "In recent years the incidence of disease has been a major factor affecting production prospects, especially in the Gold Coast, where the spread of 'swollen-shoot' has at times seemed to threaten the future both of the world's cocoa supplies and of the whole Gold Coast economy. This disease, first recognized in 1936, was estimated to be killing trees at the rate of 15 million a year by the end of 1947, when some

46 million trees were already infected. Destruction of infected trees offers the only known means of preventing the spread of the infection, and there was initially a good deal of reluctance on the part of African peasant producers to adopt this course at a time when prices for their product were high; the Gold Coast Cocoa Marketing Board has, however, appropriated £9 million to finance compensation payments on an acreage basis. Swollen-shoot in Nigeria is much less serious, being confined to a small part of the producing area."²⁰ The virus condition has also been observed elsewhere in West Africa. According to the Food and Agriculture Organization of the United Nations, "It is possible that the years 1936-39 may mark the peak of Gold Coast production . . . If swollen-shoot is not checked within the immediate future, Gold Coast production will decline and the major part of the industry may conceivably be ruined. Although such a prospect appears much more remote now than it did two or three years ago, there can be no doubt as to the seriousness of the situation".²¹ British authorities, after research on the problem, have encouraged the elimination of diseased trees and re-planting; however, the spread of the disease has not yet been checked. Production trends will be affected by the period of five to seven years required for new trees to reach maturity.

Production in certain other areas, including French Equatorial Africa, the Cameroons under French administration, Spanish Guinea and Liberia, has recently been above pre-war levels, but in comparison with the African total these additions to output are rather small. Pre-war production and post-war production are compared in table 10.

Coffee. Production of coffee in inter-tropical Africa has been characterized by a pronounced upward trend. According to data reported by the Food and Agriculture Organization of the United Nations, output has more than doubled since the pre-war period, having risen from an annual average of 150,000 metric tons in 1934-38 to 345,000 in 1949. Influenced both by this increase and by the fact that world production since the

²⁰ Commonwealth Economic Committee, *Plantation Crops* (London, 1950), pages 43-44.

²¹ Food and Agriculture Organization of the United Nations, *Commodity Reports, Cocoa*, 26 June 1950.

Table 10. Production of Cacao, 1934-38 and 1947 to 1949

(In thousands of metric tons)

Country	1934-38	1947	1948	1949 ^a
Total production ^b	484	415	492	506
Belgian Congo	1.3	1.5	1.2	1.8
French Equatorial Africa and Cameroons, French administration	25.5	46.8	37.9	49.8
French West Africa and Togoland, French administration	55.7	33.3	38.2	58.0
Gold Coast and Togoland, British administration ..	282.6	210.9	282.6	274.9
Liberia .....	..	0.2	0.5	0.8
Nigeria and Cameroons, British administration...	90.8	95.0	101.6	88.4
São Tomé and Príncipe.....	9.9	8.2	7.3	7.7
Spanish Guinea	12.3	18.3	14.1	16.0

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, November 1950.

^a Preliminary.

^b Estimated; total includes production of Angola, Madagascar and Sierra Leone.

war has been below pre-war levels, the share of Africa in global production has risen over the same period from about 6 per cent to 15 per cent of the total.²²

Table 11 provides data on African exports, showing changes which have occurred; they are probably more reliable than production series. In 1949 exports were about 85 per cent above the pre-war level and constituted 12.4 per cent of

world exports as compared with 8.4 per cent before the war. Exports had been even higher in 1948; the decline in 1949 reflected in large measure a sharply reduced crop in British East Africa. Over the period 1934 to 1949, large gains have been registered in the French, Portuguese, Belgian and United Kingdom territories, as well as a significant gain in Ethiopia.

The principal importing countries are located in northern and southern Africa. The region's

²² The Office of Foreign Agricultural Relations of the United States Department of Agriculture (*Foreign Crops and Markets*, 1 August 1949 and 6 March 1950) estimated that the rate of increase in African production was lower. According to this source, average annual production was about 156,000 metric tons in 1935-39, and the estimated total 1949 African production 242,000 metric tons, 55 per cent above the 1935-39 average. A

large part of the difference between the two sets of figures is accounted for by the production totals given for Ethiopia in post-war years, the figures reported by the Food and Agriculture Organization of the United Nations being much higher than the United States estimates. On the basis of the United States estimates the African share in world production was about 10 per cent in 1948 and 1949.

Table 11. Exports of Coffee, 1934-38 and 1947 to 1949

(In thousands of metric tons)

Country	1934-38	1947	1948	1949
Total exports	140	250	280 ^a	260 ^a
Angola	16.4	44.0	53.4	46.4
Belgian Congo and Ruanda Urundi.....	17.0	37.4	30.5	31.4
British East African territories ^b	41.4	46.2	64.3	.. ^c
Ethiopia	12.0	14.7	17.8	17.8
French West African territories ^d	11.4	55.6	66.0	74.6
Madagascar	24.0	29.3	19.9	25.6
Relative (1934-38 = 100).....	100.0	178.6	200.0	185.7
Per cent of world exports.....	8.4	14.4	14.3	12.4

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, November 1950.

^a Preliminary.

^b Kenya, Tanganyika and Uganda.

^c Figure for Tanganyika not available; exports of Kenya and Uganda, 52,900 metric tons in 1948, declined to 24,300 in 1949.

^d French Cameroons, French Equatorial Africa and French West Africa.

Table 12. Production of Tea, 1934-38 and 1947 to 1949

(In thousands of metric tons)

Country	1934-38	1947	1948	1949
Total production	9.0	17.0	16.0	17.0
Belgian Congo .....	..	0.1	0.1	..
Kenya	3.7	6.1	4.6	5.4
Mauritius	-	0.2	0.3	0.3
Mozambique	0.5	1.5	1.6	2.4
Nyasaland	4.3	6.0	6.5	5.7
Southern Rhodesia	0.1	0.3	0.3	0.3
Tanganyika	0.1	0.6	0.8	0.8
Uganda	0.1	1.8	1.6	1.5
Union of South Africa	0.4	0.3	0.1	0.1

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, November 1950.

total imports were about 60,000 metric tons in 1947, 70,000 in 1948 and 40,000 in 1949, compared with a pre-war average of 52,000.

Tea. Tea has been cultivated mainly on European estates in certain territories of eastern and southern Africa. As shown in table 12, average annual production during 1947-49 has been about 80 per cent above the pre-war level of 9,000 metric tons. This high rate of expansion has been partly attributable to an increase in production in Nyasaland and Kenya and also to a wider territorial distribution of production. Whereas Kenya and Nyasaland accounted for nearly nine-tenths of African production in 1934-38, their share fell to about two-thirds of the total in 1947-1949. Other United Kingdom territories and Mozambique have contributed to the increase in African output.

On balance the region is a deficit area, largely by reason of imports by countries located in northern and southern Africa. Apparent retention of tea in the producing areas has increased by about 2,000 metric tons since the pre-war period. Even so, it is probable that apparent consump-

tion in the area as a whole—reflecting mainly the trend in imports—in 1947 and 1948 fell below the pre-war average of about 20,000 metric tons, exceeding that level for the first time in 1949.

Wine. For Africa as a whole,²³ production of wine in post-war years has been below pre-war levels; however, some recovery has occurred, total output in 1949 amounting to 85 per cent of the pre-war average. As shown in table 13, the decline in production has been attributable to lowered production in North Africa, which before the war accounted for nearly 95 per cent of the region's total. Restoration of viticulture in French North Africa has been undertaken on a large scale, with the result that production rose from less than half of the pre-war average in 1947 to nearly four-fifths in 1949. The impairment of the industry during the war has been especially serious for the economy of Algeria, since wine accounted for nearly half the value of its exports in 1938; in 1949 the quantity of wine exported was only 54 per cent of the 1938 volume. In con-

²³ Excluding Egypt.

Table 13. Production of Wine, 1934-38 and 1947 to 1949

(In thousands of metric tons)

Country	1934-38	1947	1948	1949 ^a
Total production ^b	2,140	1,150	1,630	1,820
Algeria	1,788	830	1,265	1,447
French Morocco	54	42	36	50
Libya	4	2	2	4
Tunisia	165	47	73	88
Union of South Africa	133	230	250	230

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, November 1950.

^a Preliminary.

^b Estimated.

Table 14. Production of Citrus Fruits,^a 1934-38 and 1946 to 1948

(In thousands of metric tons)

Product	1934-38	1946	1947	1948
Oranges and tangerines.....	296	394	416	515
French North Africa.....	133	183	203	278
Union of South Africa.....	132	171	173	194
Other areas.....	31	40	40	43
Grapefruit.....	20	30	30	20
Lemons, limes and other citrus fruit.....	9	33	32	63

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural*

Statistics, March 1950.

^a Excluding Egypt.

trast to the situation in North Africa, the Union of South Africa's production and exports have expanded greatly above pre-war levels.

Citrus fruits

In 1948 the quantity of citrus fruits produced in Africa was about 80 per cent above the pre-war average and constituted about 4 per cent of the world total. This expansion reflected large developments in French North Africa and the Union of South Africa (see table 14) and quantitatively smaller developments in Southern Rhodesia, Mozambique and British East Africa. Production of limes in the Gold Coast decreased.

After 1947 both of the major producing areas greatly expanded their exports. The increase above pre-war levels of exports has been especially high in French North Africa.

Fibres

Cotton. Production of cotton in Africa, excluding Egypt, rose substantially after 1947, and in

1948 and 1949 was larger by about one-third than the pre-war average of 190,000 metric tons. Africa's share in world production also rose, from 3.2 per cent before the war to 4.1 per cent in 1949.

This expansion was attained through an increase in the area devoted to cotton cultivation (in 1949, about one-fifth above pre-war) and through higher average yields. Of the three principal producing areas—British East Africa (mainly Uganda), the Anglo-Egyptian Sudan and the Belgian Congo—only the last showed a marked upward trend as compared with pre-war (see table 15). A substantial part of the increase was attributable to a wider territorial distribution of production and especially to expansion in French Equatorial Africa and Mozambique.

A very low level of retention of cotton is shown by the fact that Africa's share in world exports—6 per cent before the war and over 10 per cent in 1948/49—has been much higher than its share

Table 15. Production of Cotton (ginned), 1934-38 and 1947 to 1949^a

(In thousands of metric tons)

Country	1934-38	1947	1948	1949 ^b
Total production	190	194	260	251
Anglo-Egyptian Sudan.....	53	47	56	55
Angola.....	2	5	4	6
Belgian Congo and Ruanda-Urundi.....	33	39	47	48
French Equatorial Africa.....	8	23	24	26
French West Africa.....	6	4	5	8
Mozambique.....	6	21	26	..
Nigeria.....	8	9	12	12
Nyasaland.....	3	3	3	2
Tanganyika.....	10	7	9	10
Uganda.....	59	29	67	56

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, May 1950.

^a Excluding Egypt.

^b Preliminary. Estimates by the International

Cotton Advisory Committee in *Cotton* (Quarterly Statistical Bulletin, Washington, D.C.), September 1950, show the region's production in 1949/50 almost the same as in 1948/49.

in world production. In 1948/49 total exports amounted to 259,000 metric tons, which was about 40 per cent above the pre-war level.

Table 16. Consumption of Cotton,^a 1938/39, 1948/49 and 1949/50

(In thousands of metric tons)

Country	1938/39	1948/49	1949/50 ^b
Total consumption	7.6	22.1	23.5
Belgian Congo	1.5	6.1	6.7
French West Africa.....	2.8	2.2	2.2
Nigeria	2.2	4.3	2.2
Union of South Africa.....	0.2	5.4	7.6
Other	0.9	4.1	4.8

Source: International Cotton Advisory Committee, *Cotton* (Quarterly Statistical Bulletin), September 1950.

^a Excluding Egypt.

^b Preliminary; partly estimated.

As shown in table 16, consumption of ginned cotton (including imports) in Africa has trebled since 1938/39, in part as a consequence of the incipient development of a modern cotton textile industry in some African countries, including the Belgian Congo and the Union of South Africa. Certain countries where the industry has developed, among them Southern Rhodesia, are not specified in the table. Even so, the region's post-war consumption has been less than 9 per cent of its production and less than one-half of one per cent of world consumption.²⁴

Wool. Production of wool has been largely localized in southern and Mediterranean Africa. The two leading producers—the Union of South Africa and French North Africa—account for about 98 per cent of the region's production.²⁵ The Union of South Africa, together with certain adjacent territories, is by far the more important of these areas, ranking fourth in production among the countries of the world. Elsewhere, particularly in Libya, a relatively small clip is important to the local economy both as an export and a consumption commodity. The wool produced in the southern part of the continent consists mainly of apparel types, whereas North African production is largely of carpet types.

²⁴ Based on data reported by the International Cotton Advisory Committee.

²⁵ The proportion of sheep raised in these two countries is less than 98 per cent of the total. In some subtropical territories, including Kenya, relatively small

Post-war production has been appreciably below pre-war levels in each of the principal areas, as shown in table 17. In 1949 the South African output was about 18 per cent below the pre-war average of 118,000 metric tons; the relative decline was even greater in French North Africa. These reductions have been a consequence of drought years in both major areas. In the Union of South Africa the number of sheep fell from 38.3 million in 1939 to 32.6 million in 1947/1948; in French North Africa, from 19.9 million to 13.3 million. There has also been a partial change-over in the Union of South Africa²⁶ from sheep raised for wool to sheep raised for food. The character of the output has furthermore changed somewhat in the southern areas, where karakul, and coarse and coloured wools have grown in importance relative to merino types.

Inasmuch as world production of wool in the post-war years has been very near to pre-war levels, Africa's share²⁷ in global production has declined—from 8.9 per cent in 1934-38 to 7.2 per cent in 1949. Reflecting the fact that the area's consumption (inclusive of imports) has been a relatively small fraction of its production, its position in world exports has exceeded its share in world production. The region accounted for 10 per cent of world exports in the pre-war period and 7.7 per cent in 1949. Its share of world consumption has been small—less than half of one per cent in the former period and less than three-fourths of one per cent in the latter year.

Table 17 provides data on production, exports and estimated consumption of wool; figures are given for exports and consumption by the Union of South Africa and by other countries as a group. These data show that post-war exports by Africa as a whole have been consistently below pre-war levels and especially so in 1949. However, South Africa's post-war experience has differed fundamentally from that of the other countries. In post-war years its exports have regularly exceeded its production, reversing the pre-war relationship. In 1947 and 1948, as accumulated stocks were

numbers of sheep are raised, for wool; elsewhere, as in French West Africa, a considerable number are raised, primarily for food.

²⁶ Commonwealth Economic Committee, *Wool Production and Trade, 1947-1948* (London, 1949), page 29.

²⁷ Excluding Egypt.

**Table 17. Production, Exports and Consumption of Wool,^a
1934-38 and 1947 to 1949**

(In thousands of metric tons)^b

Country and item	1934-38	1947	1948	1949
Production	153.0	114.0	125.0	122.0
French North Africa	32.0	20.0	22.0	22.0
Union of South Africa ^c	118.0	93.0	100.0	97.0
Other countries	3.0	3.0	3.0	3.0
Exports	122.2	111.6	112.0	101.0
Union of South Africa	108.0	109.8	110.5	99.0
Other countries	14.2	1.8	1.5	2.0
Consumption	4.0	8.0	8.0	..
Union of South Africa	2.0	6.0	6.0	..
Other countries	2.0	2.0	2.0	..

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, May 1950; *World Fiber Review*, 1949 (Washington, D.C.).

^a Production and export data exclusive of Egypt; consumption data inclusive of Egypt.

^b Production and exports on greasy basis; consumption on clean basis.

^c Including production in South-West Africa and Basutoland.

drawn on, exports were above pre-war levels. This change in the relationship of production to exports has reflected stringencies in the post-war supply situation and higher export prices. On the other hand, data for other countries—principally French North Africa—reveal a severe reduction in their post-war exports and a relative stability in their production/export balances. Detailed analysis of trade would bring out even more striking changes. Thus French Morocco, which had an export surplus before the war, was a net importer of wool in 1947, 1948 and 1949.

Sisal. Sisal alone of the hard fibres has attained major importance in Africa. It was introduced at the end of the nineteenth century and subsequently

developed as a plantation commodity, produced primarily for export in a few territories south of the Sahara. Before the war Tanganyika contributed about half of the world output of sisal, and the Portuguese territories accounted for about 10 per cent. This production constituted, by weight, about 30 per cent of world output of the three major hard fibres.²⁸

African production was stimulated during the war in response to a severe decline in supplies of fibres from Asian sources. Total output has sub-

²⁸ Abaca, sisal and henequen. Small quantities of minor hard fibres are produced in a few African countries, among them the Belgian Congo and the Union of South Africa.

Table 18. Production of Sisal, 1934-38 and 1947 to 1949

(In thousands of metric tons)

Country	1934-38	1947	1948	1949 ^a
Total production	153	170	200	205
British East Africa	120	136	159	163
Portuguese territories	26	29	34	..
Other countries ^b	7	5	7	..
Relative (1934-38 = 100)	100.0	109.7	129.0	132.3
Per cent of world production	63.3	81.0	75.5	73.2
Per cent of world production of hard fibres ^c ..	29.8	37.0	40.4	43.2

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, May 1950; Commodity Reports, *Hard Fibers*, 8 May 1950.

^a Preliminary.

^b Principally French West Africa and Madagascar; small quantities are grown in the Belgian Congo and a negligible amount in the Union of South Africa.

^c The three principal fibres only—abaca, sisal and henequen.

sequently remained well above pre-war levels, as shown in table 18. In British East Africa production has been encouraged by high prices and the demand for the commodity in hard currency countries. Since the pre-war period, cultivation has been extended in Uganda and Kenya; also, production shifts have occurred in the Portuguese territories, the output of Angola having expanded whereas that of Mozambique has declined. The position of the area in world production of hard fibres has risen; this has been partly the result of lower global production, attributable principally to slow reconstruction of Asian sources.

Tobacco

In 1949 the estimated total production of tobacco amounted to 120,000 metric tons, which was about 70 per cent above the pre-war average; exports, estimated at 60,000 metric tons, were nearly 90 per cent above pre-war. Over the same period Africa's share of world production rose from 2.6 per cent to 4 per cent, and its position in world exports increased even more—from 5.9 per cent to 9.8 per cent of the total. In 1949, when imports reached a post-war peak, apparent consumption in the region may have been more than 20,000 metric tons above the pre-war average of about 54,000.

By far the largest part of the gain in production is accounted for by Southern Rhodesia, which has displaced Algeria as the leading producer. The Southern Rhodesian crop of 49,000 metric tons in 1949 was nearly five times its pre-war average; this increase reflected both a substantial expansion of the area cultivated and appreciably higher yields. This great expansion has affected every phase of the territorial economy, both internal and external. Since 1945 tobacco has replaced gold as

its leading export, and in 1949 the value of tobacco exports (£11.7 million) exceeded that of all principal mineral exports, constituting nearly 40 per cent of total exports.

A significant part of the increase in total output has also been accounted for by the Union of South Africa, which has more than doubled its pre-war production. A steady expansion of production and exports on a smaller scale has taken place in Nyasaland and Northern Rhodesia. Some details are provided in table 19. The estimated totals are only approximate; Tanganyika, Uganda and a few other territories have increased their production above pre-war levels.

Rubber

Natural rubber was one of the earliest exports of western Africa, but it subsequently lost much of its importance in a number of territories. In 1937 the aggregate production²⁹ of 11,500 long tons constituted about one per cent of world production. During the war, production, including collection from wild sources, was encouraged as a direct response to the world shortage resulting from the loss of substantial supplies from Asian sources. Output reached a peak of 54,800 long tons in 1944. Following a decline after the end of the war, an upward trend has again been evident since 1947. In 1949 production amounted to 45,000 long tons, or 3 per cent of the world total.

A very considerable part of this increase is accounted for by the Liberian output. That country's production³⁰ has increased sharply and steadily from 2,250 long tons in 1937 to 28,300 long tons in 1949. Its share in African production

²⁹ Including latex. Data from Rubber Study Group, *Rubber Statistical Bulletin* (London).

³⁰ As measured by net exports.

Table 19. Production of Tobacco, 1934-38 and 1947 to 1949

(In thousands of metric tons)

Country	1934-38	1947	1948	1949
Estimated total production	70	110	110	120
Algeria	19.1	16.1	21.0	18.4
Northern Rhodesia	0.7	2.1	2.0	2.9
Nyasaland	8.0	12.0	11.5	9.7
Southern Rhodesia	10.5	35.3	37.9	49.0
Union of South Africa	9.1	22.5	18.8	20.9

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, November 1950.

rose from one-fifth of the total in 1937 to over three-fifths in 1949. Foreign investment has contributed principally to this expansion, though there has also been some investment of domestic funds in the industry. Post-war production has similarly exceeded pre-war levels in the Belgian Congo, Nigeria and the Camerouns under French administration.

The available data do not allow an assessment of imports and consumption for Africa as a whole. The estimated consumption of the Union of South Africa, the principal importer, increased from 6,000 long tons in 1937 to 17,000 in 1949.

FORESTRY AND FOREST PRODUCTS³¹

Production and consumption of principal wood products have long been at a low level in Africa, and the continent has characteristically had a trade deficit in these products as a result of the over-balancing requirements of its wood-deficient areas. These facts are of considerable economic significance. In addition, a rounded view requires emphasis also on the conservationist and protective aspects of African forestry. The constant menace of dessication and the widespread active erosion affecting much of the continent are intimately associated with the recession and deterioration of forest cover, for, in the opinion of one authority, in Africa "the removal of forest cover influences the climate, soil conservation and water resources far more than anywhere else in the world".³² Though varying views have been expressed regarding the extent of deforestation in North Africa in recent times, the economic significance of the deforestation which has occurred there is well known. Currently, the shrinkage and deterioration of forests in tropical Africa are a source of grave concern.

According to the most recent estimates of the Food and Agriculture Organization of the United Nations,³³ about 28 per cent of the total land area of Africa, 849 million hectares, consists of forested land. However, nearly two-thirds of that area

consists of forests incapable of yielding products other than fuel or forests of slow growth or stunted form. Of the productive area (306 million hectares), about one-half is economically accessible. Almost all African forests are of hardwood species; less than one per cent of the productive area is occupied by conifers.

Burning to clear the land and to provide potash, which is a normal practice associated with shifting agriculture,³⁴ has contributed heavily to forest regression and deterioration in tropical Africa. The harmful effects of this practice have been intensified with the increase in population and expansion of the area devoted to commercial agriculture. In some places over-grazing has also been a significant factor, and in a few countries over-cutting has occurred, especially during the war. It should be emphasized in this connexion that, for the most part, the traditional indigenous agriculture of tropical Africa is land-extensive and requires that several times the area actually under cultivation be rested in order to allow for a partial restoration of natural powers. An expansion of agriculture into new or forested areas, or reduction of the fallow period, may upset the rough natural equilibrium which this agricultural system, under certain circumstances, is capable of maintaining. Thus, the protective aspects of forestry are from one point of view closely connected with the development and adoption of systems of intensive agriculture.

The location of the remaining forests, which are still rather extensive, once again emphasizes the heterogeneity of Africa. The greatest concentration is in the equatorial rain belt, particularly in the area extending from 12 degrees north latitude to 5 degrees south, chiefly along the west coast and up the Congo. There is also a considerable area of open forests between 10 degrees and 20 degrees south latitude. On the other hand, the territories bordering the Mediterranean, and the Union of South Africa, have between them only about 1 per cent of the continent's forested land.

³¹ This account is based in large part on materials published by the Food and Agriculture Organization of the United Nations.

³² A. M. A. Aubreville, "Disappearance of the Tropical Forests of Africa", *Unasylva*, July-August 1947. Evidence is also marshalled in Jean-Paul Harroy, *Afrique, terre qui meurt* (Brussels, 1944), and H. L. Shantz, "An Estimate of the Shrinkage of Africa's Tropical Forests", *Unasylva*, March-April 1948.

³³ *Forest Resources of the World* (Washington, D.C., 1948).

³⁴ Traditional systems which do not resort to burning or which utilize the land continuously are found in parts of inter-tropical Africa. Burning is not a characteristic practice of the semi-nomadic agricultural systems prevalent in sections of North Africa, where deforestation has been attributable to other factors.

On a continental basis the average productive forest area per capita is 1.6 hectares, but the range is from 11.3 hectares in the Belgian Congo to 0.02 hectares in Tripolitania and Basutoland. Of twenty-eight countries reporting to the Food and Agriculture Organization of the United Nations, nine had averages in excess of 2.5 hectares per capita, whereas eighteen had averages lower than that of the Union of South Africa (0.72 hectares). The forest resources of the equatorial rain belt, if properly exploited and managed, are more than sufficient to meet local needs and constitute a significant world reserve, whereas many other areas are deficient in this respect.

Africa south of the Sahara,³⁵ which contains about 10 per cent of the world's accessible productive forest, contributed about 3.5 per cent of the world output of roundwood in 1948. The 1948 production was estimated at 51 million cubic metres of roundwood, as compared with 50 million in 1947 and 45 million in 1937.³⁶ In 1937, when net imports amounted to 2 million cubic metres, aggregate consumption was about 47 million and average consumption per capita about 0.4 cubic metre.³⁷ In 1947 and 1948, although production had increased, the available wood supplies per capita were slightly below the pre-war level.

Commercial exploitation of African hardwoods has been limited by various factors, including the complexity of stands, the limited known utility of most species, logging and transport difficulties and scarcity of labour. Nevertheless, in some territories since the war, European demand and to a less extent American demand have stimulated the production of hardwoods for export. The Food and Agriculture Organization estimated African exports of lumber in 1948 to have been 31 per cent above the 1937 level. The relative expansion in post-war exports (mainly sawlogs and veneer logs) has been quite large in the Gold Coast, Nigeria and the Belgian Congo. In 1949, after an uninterrupted post-war recovery, the aggregate exports of French Equatorial Africa, French West

Africa and French Cameroons—the principal pre-war exporting group—were, by weight, 107 per cent of the 1938 level of about 357,000 metric tons.

In several territories in West Africa, external investment has helped to bring about a significant development of various kinds of processing industries during the post-war period. Modern installations have been established in French Equatorial Africa, the Gold Coast, Nigeria and the Belgian Congo, with a view to processing more highly the material for export and meeting internal requirements for a diversified list of products. There has been a notable trend toward establishing modern sawmills and factories for cutting veneers and manufacturing plywood. However, in 1948, Africa, excluding Egypt, contributed less than one per cent of the world's lumber and relatively small percentages of most other principal products. The output consisted mainly of fuelwood. Certain speciality products, including cork, tanning bark and gum arabic, have been economically significant in some countries or have assumed a larger importance in world supplies.

In 1948, average annual consumption per capita in the greater part of Africa was estimated at 0.3 cubic metre of roundwood,³⁸ which was about one-half of the world average. Although consumption levels varied, the general level was too low to support a satisfactory standard of living. A very considerable part of the population has used little or no lumber. For example, in the Gold Coast, an exporting country, per capita consumption of sawn timber was estimated in 1947 at one cubic foot per year;³⁹ this was low even by comparison with a number of other tropical countries.⁴⁰ In the area south of the Sahara about 85 per cent of wood consumption was fuelwood, 7 per cent lumber and 4 per cent wood pulp. In some areas fuelwood is still a significant source of power for rail and river transport and for mines, and this use contributes to loss of forest cover.

In addition to the post-war trend toward larger

³⁵ Except the Anglo-Egyptian Sudan, which is grouped with North Africa for this discussion.

³⁶ North Africa and the Anglo-Egyptian Sudan contributed about 2.6 million cubic metres of roundwood in 1947. Figures for other years are not readily available for this area.

³⁷ Data for 1937 are from the study by the Food and Agriculture Organization of the United Nations, *Forestry*

and *Forest Products: World Situation 1937-1946* (1946).

³⁸ In North Africa and the Near East the figure was 0.1 cubic metre.

³⁹ Figures exclude fuelwood, poles and pitprops.

⁴⁰ Empire Forestry Association, *Empire Forestry Review*, vol. 26, No. 1, 1947 (London), page 47. Recent installations in the Gold Coast have aimed at increasing domestic consumption.

and more efficient processing industries, which has been noted above, other significant developments in recent years have included increased plantings of exotic conifers in eastern and southern Africa, greater emphasis by the governments on research of various kinds, a clearer enunciation of forestry policy in some territories as regards both protection and exploitation, and inter-governmental co-operation in this field.

LIVESTOCK

Livestock holdings in Africa, including Egypt, have shown varying trends since the pre-war period. The number of cattle rose from 64 million head in 1939 to 84 million in 1948, an increase of about 31 per cent, while the number of sheep declined by about 8 per cent during the same period—from 102 million head to 94 million.⁴¹ The reduction in number of sheep occurred principally in the Union of South Africa and in French North Africa. However, the number of sheep (and goats) in French West Africa increased from a pre-war total of 11.9 million to nearly 20 million in 1949, giving this territory second rank in Africa. By 1949, moreover, this territory, with 6.3 million head of cattle, ranked third in the region.⁴² The number of hogs in Africa rose from 3 million to 4 million between 1939 and 1948. Partial data indicate that the combined totals of horses, mules, donkeys and camels also were higher in post-war years than in the pre-war period; for sixteen African territories reporting, the number of these animals increased from 9.1 million head to 11.4 million during the last decade, a rise of about 25 per cent.

Production of meat in the Union of South Africa and in Southern Rhodesia has risen as compared with pre-war, but Algeria's output has declined. The Union of South Africa produced 502,000 metric tons of meat in 1948 as compared with a pre-war average of 335,000 tons.⁴³ Southern Rhodesia increased its meat production from 36,000 metric tons, pre-war, to 48,000 tons in 1948. In Algeria production fell from a pre-war

total of 49,000 metric tons to 37,000 tons in 1948.⁴⁴ Exports of meat by Madagascar, 15,100 tons in 1948 and 13,400 in 1949, were in excess of the 1938 level. Kenya's exports of bacon and ham rose from 100 tons in 1938 to 204 tons in 1948.

The Food and Agriculture Organization considers Africa "a major area of expansion of meat production over a period of time".⁴⁵ In much of the continent, this expansion—as well as expansion of mixed farming—depends on the campaign against the tsetse fly or control of animal trypanosomiasis; experiments are being carried out with antyicide, a drug recently developed by British scientists. In addition, the campaigns against rinderpest, the development of better feed and changes in the traditional attitude toward cattle of the Bantu-speaking people of eastern and southern Africa should prove helpful in raising the quantity of productive livestock above present numbers. The United Kingdom Colonial Development Corporation recently reported its intention of initiating a large cattle-raising and beef production scheme in Bechuanaland.

CONSUMPTION OF AGRICULTURAL REQUISITES

Africa has recently imported agricultural machinery on a scale much above the pre-war level, both to restore wornout equipment and for further development (see table 20). The principal importers have been the Union of South Africa and French North Africa. However, the heightened level of imports by tropical Africa is an especially significant trend. In addition to imports, a part of the African supply is locally manufactured; for example, the Union of South Africa now produces much of the simpler equipment that it requires.

African consumption of chemical fertilizers in terms of plant nutrients (N, P₂O₅ and K₂O) has been less than 2.5 per cent of world consumption. Consumption in 1947/48 totalled 191,000 metric tons, in 1948/49, 236,000; in 1949/50 it was estimated at 282,000. Average consumption

⁴¹ Food and Agriculture Organization of the United Nations, Commodity Series, *Livestock and Meat*, May 1949, page 11.

⁴² United Nations, *Summary of Information Transmitted by the Government of France under Article 73e of the Charter*, 21 July 1950.

⁴³ Demand has increased more rapidly than production. Shortages have become chronic in recent years.

⁴⁴ Food and Agriculture Organization of the United Nations, Commodity Series, *Livestock and Meat*, May 1949, page 72.

⁴⁵ *Ibid*, page 57.

Table 20. Imports^a of Tractors and Agricultural Machinery from Eight Principal Exporting Countries,^b 1937 and 1947 to 1949

Item and year	Total	French North Africa	Union of South Africa	Other countries
<i>Tractor imports (thousands):</i>				
1937	2.5	0.8	1.6	0.1
1947	9.2	1.6	5.5	2.1
1948	21.9	2.4	13.4	6.2
1949	19.8	4.7	10.8	4.3
<i>Value of agricultural machinery (millions of United States dollars):</i>				
1937	12.9	2.5	6.6	3.8
1947	45.2	11.3	18.7	15.2
1948	79.8	9.7	38.2	31.9
1949	81.3	..	..	..

Source: Food and Agriculture Organization of the United Nations, *Food and Agricultural Statistics*, August 1950.

^a Excluding Egypt, the Anglo-Egyptian Sudan, Eritrea and Ethiopia.

^b Australia, Canada, France, Germany, Sweden, Switzerland, the United Kingdom and the United States.

in 1936-38 had been 171,000 metric tons.⁴⁶ The increase has been associated with the high prices received for African products.

South of the Sahara the use of fertilizers has been principally confined to land held or supervised by Europeans. However, use of inorganic fertilizers, particularly nitrogenous and phosphate fertilizers, by indigenous farmers has increased

⁴⁶ Data from the Food and Agriculture Organization of the United Nations, *Commodity Reports, Fertilizers*, 10 August 1950; Commonwealth Economic Committee, *A Survey of the Trade in Fertilizers* (London, 1950). Figures include Egypt.

markedly, though "far too little is yet known about the response of tropical crops to inorganic fertilizers and the economics of application".⁴⁷ Planned experiments involving organic and inorganic fertilizers have been under way in many parts of Africa. More ample supplies of organic fertilizers depend largely on the development of a more rational animal husbandry and larger supplies of organic manure, particularly in the tsetse area.⁴⁸

⁴⁷ Commonwealth Economic Committee, *op. cit.*, page 52.

⁴⁸ *Ibid*, page 53.

Chapter 3

MINING AND THE MINERAL AND METAL INDUSTRIES

ATTRACTION OF EXTERNAL CAPITAL

In Africa south of the Sahara, external capital, including an especially large part of the private capital invested from abroad, has been principally attracted to the mining and mineral districts. One authority has shown that up to the end of 1936 the highest levels of cumulative investment per capita were reached in "the special mineral territories", namely, the Union of South Africa and South-West Africa (£55.8), Southern and Northern Rhodesia (£38.4), and the Belgian Congo (£13.0).¹ In territories with fewer mineral resources, the investments per capita were very much lower, dropping to £3.9 in Nigeria and £2.1 in French West Africa.¹ The Union of South Africa, which has also had the highest level of internal capital formation, attracted two-fifths of the aggregate external investment made in most of Africa south of the Sahara, and the entire group of "special mineral territories", including the Union of South Africa, accounted for two-thirds of the total. Of the total external investment of £1,222 million in this area south of the Sahara, about £260 million went directly into mining; the Union of South Africa attracted two-thirds of the total invested in mining, its gold mines alone more than half of it. Though significant changes in the nature of the investment flow have occurred since 1936, which cannot be measured without considerable research,² the Organisation for European Economic Co-operation has given as its opinion, "For many years to come, the main industrial activity in Africa will be the exploitation for export of its rich mineral deposits."³

¹ S. H. Frankel, *Capital Investment in Africa* (London, 1938), page 170. This study included the Union of South Africa, South-West Africa, the Anglo-Egyptian Sudan, and the principal oversea territories of Belgium, France, Portugal and the United Kingdom.

² Although there is need for a comprehensive study of external investments after 1936, it was not possible to undertake this study within the limits of the present review.

³ Organisation for European Economic Co-operation, *Second Report* (Paris, 1950), paragraph 546.

POSITION IN WORLD PRODUCTION

As in other under-developed areas where the development of mining has been based primarily on external capital,⁴ the greatest part of the production is destined for export, as a rule in crude form or after early processing. Production for internal consumption and industrialization is at a low level; this fact is reflected both in the products in which Africa has attained a considerable world importance and in the industrial and construction materials in which it has not done so.⁵ The products falling in the second category are partly related to the known resources of the continent, which have important deficiencies as, for example, in the extent and location of coking coal relative to iron ore and in the quantity of proved petroleum reserves. Furthermore, up to the present the economic conditions for sustaining a large production of metallic and non-metallic minerals for internal consumption have been absent. Table 21 sets forth the shares of Africa in world production of a selected list of mineral and metal products for 1937 and 1948.

LOCALIZATION OF PRODUCTION

Production of certain minerals has been heavily concentrated in the "special mineral territories" designated above.⁶ French North Africa and British West Africa also have important positions in respect of certain commodities.

In 1949 the Union of South Africa produced 86 per cent of the region's output of gold, 89 per cent of the coal, 99 per cent of the platinum-group metals, 67 per cent of the antimony (metal con-

⁴ There have been important exceptions in the Union of South Africa.

⁵ The available evidence supports this statement in respect of construction materials, though statistical data for measurements of the position of the region in world production are not readily available.

⁶ The Union of South Africa, South-West Africa, the Belgian Congo, Northern Rhodesia and Southern Rhodesia.

Table 21. Share of Africa in World Production of Selected Minerals, by Weight, 1937 and 1948^a

(In percentage of total production)

Mineral	1937	1948
Columbite (high-grade)	99.0	99.0
Diamonds (including industrial)	97.1	98.4
Cobalt, mine production	84.9	80.1
Gold ^b	46.5	58.9
Phosphate rock	35.6	35.5
Chrome ore	34.8	30.8
Manganese ore	21.1	29.4
Vanadium, ore and concentrates ^b	42.3	19.4 ^c
Copper, mine production	17.7	18.2
Tin, in concentrates	9.9	15.3
Platinum-group metals	13.7 ^d	14.5
Asbestos	12.8	13.6
Antimony, recoverable ^b	2.7	12.0
Cadmium	3.3	9.4
Graphite, natural	7.5	7.0
Mica		3.6
Silver	1.9	3.3
Iron ore	2.8	2.8
Coal, excluding lignite ^b	1.3	2.2
Tungsten ore, in concentrates	1.0	1.9
Gypsum		1.1 ^c
Barite		0.8
Magnesite, crude		0.8
Fluorspar	1.5	0.5
Nickel	0.2	0.3
Petroleum, crude	0.001	0.003

Source: Statistical Office of the United Nations; International Monetary Fund, *International Financial Statistics*, December 1950 (Washington, D.C.); United States Bureau of Mines, *Minerals Yearbook*, 1940, 1948 and 1949 (Preprint) and *Mineral Trade Notes* (Washington, D.C.); South African Reserve Bank, *Quarterly Bulletin of Statistics*, June 1950 (Pretoria); American Bureau of Metal Statistics, *Yearbook*, 1949 (New York); United Nations, *Information from Non-Self-Governing Territories*, Summary of information transmitted by the Government of the United Kingdom of Great Britain and Northern Ireland (1950); Colonia de Angola, *Boletim Mensal de Estatística*, May 1950 (Luanda).

^a Excluding Egypt.

^b Percentage based on world output exclusive of that of the Union of Soviet Socialist Republics.

^c 1947.

^d 1936.

tent), 60 per cent of the chrome ore, about 40 per cent of the asbestos, manganese and tungsten ores, and in 1948 nearly the entire supply of nickel. In addition, in 1948 it produced large proportions of the region's output of minor minerals: 87 per cent of the fluorspar, 62 per cent of the mica, 54 per cent of the gypsum and 65 per cent of the magnesite.

In 1949 the Belgian Congo accounted for 88 per cent of the region's cobalt, 70 per cent of the diamonds, 68 per cent of the silver (1948),

58 per cent of the tin, 48 per cent of the zinc ore, 32 per cent of the copper and 37 per cent of the tungsten ore. The territory is also a major world producer of uranium ores and concentrates. Northern Rhodesia produced 59 per cent of the region's copper, 48 per cent of the vanadium and 20 per cent of the zinc ore. Southern Rhodesia provided 43 per cent of the asbestos, 36 per cent of the chrome ore and 35 per cent of the magnesite. South-West Africa produced 52 per cent of the vanadium, 36 per cent of the lead ore, over 20 per cent of the zinc ore and 96 per cent of the cadmium (1948).

French North Africa accounted for nearly all of the phosphate rock, 52 per cent of the iron ore, 50 per cent of the lead ore, 30 per cent of the antimony, 45 per cent of the gypsum (1947) and 90 per cent of the barite.

In British West Africa, Nigeria produced 37 per cent of the region's output of tin and all of the high-grade columbite. The Gold Coast accounted for 94 per cent of the bauxite and 44 per cent of the manganese ore.

To a certain extent further development of African mineral resources will depend on surveys and investigations, which have been fostered under governmental auspices on a widened scale in the post-war period. This emphasis has been attributable partly to the considerable role of surveys and research in the official development plans for much of Africa and partly to the intensity of external demand for certain minerals and metals. In some instances the United States Economic Cooperation Administration has rendered financial and technical assistance for exploration or for additions to production capacity. The development of known deposits is also closely related to the extension of transport facilities.

ROLE IN EXPORT TRADE AND NATIONAL INCOME

The extent to which certain countries have depended on the production of minerals for their export trade is indicated in table 22. Both in 1937 and 1948 exports of minerals and mineral products as a percentage of total exports, by value, were more than 95 per cent for Northern Rhodesia and over 50 per cent for the Belgian Congo. However, for the group as a whole (Tunisia and French Equatorial Africa being the principal exceptions),

Table 22. Share of Mineral Exports in Total Exports of Selected Countries, by Value, 1937 and 1948

(In percentage of total domestic exports)

Country	1937	1948
Algeria	7.7	4.8
Belgian Congo	61.2 ^a	51.9
French Equatorial Africa	5.8	14.1
French Morocco	24.2	24.6
Gold Coast	35.1	31.5
Nigeria	15.1	13.0
Northern Rhodesia	97.1	96.1
Sierra Leone	59.0	44.0
Southern Rhodesia	73.7	35.5
Tanganyika	12.0	11.1
Tunisia	28.5	48.9
Union of South Africa ^b	18.2	17.1

Source: United Kingdom, *Statistical Abstract for the British Commonwealth, 1936 to 1945*, Cmd 7224 (London, October 1947); Barclays Bank, *Overseas Review*, March 1950 (London).

Algeria: *Annuaire statistique de l'Algérie, 1937* (Algiers); *Bulletin de statistique générale*, Supplement, February 1949 (Algiers). Belgian Congo: *Annuaire statistique de la Belgique et du Congo Belge, 1938* (Brussels); *Statistique du commerce extérieur de l'Union Douanière du Congo Belge et de Ruanda-Urundi, 1948* (Brussels). French Equatorial Africa: *Bulletin d'informations économiques et sociales*, March 1950 (Brazzaville). French Morocco: *Annuaire statistique général de la zone française du Maroc, 1939* (Rabat); *La Conjoncture économique marocaine, 1948* (Rabat). Gold Coast: *Trade Report for the Year 1937* (Accra); *Gold Coast Trade Supplement*, September 1949 (Accra).

Nigeria: *Trade Report, 1937 and 1948* (Lagos). Northern Rhodesia: Colonial Annual Reports, *Northern Rhodesia, 1938* (London); *Economic and Statistical Bulletin*, February 1950 (Salisbury). Sierra Leone: *Monthly Trade Statistics*, December 1949 (Freetown). Tanganyika: *Blue Book for the Year ended 31 December 1938* (Dar es Salaam); *Trade Information Report*, December 1948 (Dar es Salaam). Tunisia: *Annuaire statistique de la Tunisie, 1940 to 1946* (Tunis); *Bulletin du service tunisien des statistiques, 1948, 4th quarter* (Tunis). Union of South Africa: *Official Yearbook, 1938* (Pretoria).

^a 1936.

^b Excluding gold.

the share of mineral exports in total exports was lower in 1948 than in 1937. In general this has been attributable to a relative increase in the value of non-mineral exports rather than to a decline in the quantity and value of exports of minerals (except gold).

In the case of the Union of South Africa, the relative contribution of mining to the national income fell from 22.3 per cent in the fiscal year

ending 31 March 1939 to 11.2 per cent in the fiscal year ending 30 June 1949, although the physical output of industrial minerals increased by more than 70 per cent.⁷ This contrasted with increases in the shares of secondary industry and the service activities. Similar statistics which would show trends in other countries are not available.

PRE-WAR AND POST-WAR PRODUCTION TRENDS

Table 23 compares the region's output of selected minerals and metals in 1937 with that of post-war years and shows, in certain instances, the relative production level attained in the peak war year.

In the most recent year for which the data are recorded, production of all of the listed non-metallic minerals except fluorspar, and of the metallic minerals except gold and vanadium, exceeded pre-war levels. Similar increases are recorded for the non-ferrous metals.⁸

It will be observed that the production of a number of principal minerals and minor minerals in the post-war years has not been as high as the output of the peak war years, when external demand was intensified. These minerals include tin ore, copper ore, chromite, tungsten ore, diamonds, vanadium ore, corundum, bauxite, nickel, platinum-group metals, fluorspar and graphite.

Precious minerals

Gold. In point of value, gold has been the principal mineral produced in Africa. In 1937 total production of gold, valued at \$489 million, represented 41 per cent of the value of all merchandise exports of the continent excluding Egypt. Subsequently, though gold has retained its position as the most valuable mineral product, its relative share in the value of exports has changed significantly owing to a decline in production after 1941 and a very considerable appreciation in the value of merchandise exports. In 1948 and 1949 the gold produced represented about 15 per cent of the value of total merchandise exports.

About five-sixths of the continent's gold production has been localized in the Union of South Africa; hence, this changed value relationship

⁷ Production index for calendar year given by the Standard Bank of South Africa in "National Income and Production Indices, 1939 to 1949", *Supplement to the Standard Bank Monthly Review*, June 1950.

⁸ Production of pig-iron, which is in a different economic position from other metals because of its relationship to internal consumption rather than export, also rose. In 1949 the Union of South Africa's output was 257 per cent of the 1937 level of 275,000 tons, and Southern Rhodesia produced a minor quantity.

Table 23. Production of Selected Minerals and Metals,^a 1937 and 1947 to 1949

(In thousands of metric tons)

Mineral	1937	1947	1948	1949	1947	1948	1949	Peak war year production as percentage of 1937
					as percentage of 1937			
<i>Metallic minerals:</i>								
Antimony, metal content ^b . . .	1,088	4,048	5,670	6,735	372	521	619	313 (1943)
Bauxite	51 ^c	100	134	157	196	263	308	325 (1943)
Cadmium ^b	138	..	449	..	..	325	..	166 (1941)
Chrome ore	446	545	652	670	122	146	151	157 (1942)
Cobalt, mine production ^b	2,965	4,353	4,967	4,961	147	168	167	130 (1940)
Copper, mine production	424	312	411	446	90	97	105	107 (1942)
Gold ^d	13,972	12,814	13,313	13,568	92	95	97	122 (1941)
Iron ore	5,983	5,003	5,930	6,938	84	99	116	62 (1945)
Lead ore, metal content	52	70	104	107	135	199	206	126 (1939)
Manganese ore	1,273	1,020	1,148	1,669	80	90	131	91 (1942)
Magnesite, crude ^b . . . . .	..	13,777	16,382	..	..	..	..	..
Nickel, metal content ^b	284 ^e	529	458	..	186	161	..	205 (1941)
Platinum-group metals ^f	62,621 ^g	87,121	75,478	..	139	121	..	140 (1944)
Silver ^d	5,202	5,620	5,613	..	108	108	..	124 (1942)
Tin, in concentrates ^b	21,977	23,030	23,623	24,004	105	107	109	151 (1943)
Tungsten ore, in concentrates ^b .	369	940	609	903	255	165	245	568 (1944)
Vanadium, ores and concen- trates, metal content ^b	825	282	351	318	34	43	39	121 (1943)
Zinc ore, metal content	37	73	89	113	197	238	305	120 (1945)
<i>Non-metallic minerals:</i>								
Asbestos	78	103	134	169	133	173	216	147 (1944)
Barite ^b	2,798	27,024	18,794	..	966	672	..	252 (1943)
Coal, excluding lignite	17,065	26,508	26,877	28,594	155	157	168	153 (1945)
Corundum ^b	2,264	2,317	2,655	..	102	117	..	305 (1942)
Diamonds ^h	9,336	9,415	9,864	13,783	101	106	148	151 (1945)
Fluorspar ^b	7,537 ^e	..	4,291	..	..	57	..	172 (1939)
Graphite, natural ^b	10,055	11,293	10,284	..	112	102	..	163 (1940)
Gypsum	102	148	..	..	145	..	..	103 (1945)
Mica ^b	2,415	3,027	2,585	..	125	107	..	92 (1945)
Phosphate rock	3,794	5,343	5,812	5,780	141	153	152	101 (1939)
<i>Non-ferrous metals:</i>								
Copper metal	346	376	401	434	108	116	125	..
Lead metal	27	26	31	34	96	117	126	..
Zinc metal	14	22	23	23	150	157	162	..
Tin metal	2	4	5	5	154	187	187	..

Source: See table 21.

^a Excluding Egypt.^b Metric tons.^c 1942.^d Thousands of fine ounces.^e 1938.^f Troy ounces.^g 1936.^h Thousands of metric carats.

between gold production and merchandise exports has borne with special intensity on its economy. Whereas in 1938 its gold production represented three times the value of its merchandise exports, in the post-war years the latter has exceeded the value of currently produced gold. After 1941, rising costs of mining, in conjunction with the fixed purchase price for gold established by the United States Government, impeded production. However, the simultaneous devaluation of the United Kingdom pound and South African pound on 18 September 1949, which resulted in a rise in the sterling price of gold from 172s. 6d. per fine ounce to 248s. 3d., improved the prospects

for the gold-mining industry in the Union of South Africa. Operating costs have not increased proportionately, and the value of lower-grade ores in the existing gold fields has been enhanced. The devaluation of the currencies of other African countries (except Ethiopia and Liberia, which are small producers) has, in general, had similar effects.

Table 24 compares pre-war and post-war production of gold, and sets forth total value in terms of United States dollars at 35 dollars per fine ounce. All figures of physical production have been calculated from value data published by the International Monetary Fund.

Table 24. Production of Gold, 1937 and 1947 to 1949

(In thousands of fine ounces)

Country	1937	1947	1948	1949
Total production	13,991	12,829	13,299	13,485
Total value ^a (in millions of United States dollars)	490	449	466	472
Belgian Congo and Ruanda-Urundi	433	301	300	334
French Africa ^b	182	84	76	71
Gold Coast	559	558	672	697
Kenya	55	22	23	20 ^c
Southern Rhodesia	804	523	514	528 ^c
Tanganyika	75	47	58	69
Union of South Africa	11,735	11,200	11,585	11,705
Other areas	148	94	71	61

Source: International Monetary Fund, *International Financial Statistics*, December 1950.

^a Valued at \$35 per fine ounce. The discrepancies between total production and total

value figures are attributable to the rounding of country production figures.

^b Including Camerouns, Equatorial Africa, West Africa, Madagascar and Morocco.

^c Exports.

The Union of South Africa's prospects for maintaining gold production at a high rate have been very largely attributable to increases in the Transvaal and the Orange Free State.⁹ The development of the gold fields in the latter area, on which work has been proceeding, may require, according to expert opinion in the gold-mining industry, an aggregate investment (including the cost of public facilities) of the order of £200 million, spread over a period of years. External capital has participated in the developments to date.

Diamonds. The output of rough diamonds, both gem and industrial, has by quantity been higher than the 1937 level of about 9.3 million metric carats in all subsequent years with the exception of 1941 through 1943. During the war, when production of industrial diamonds was emphasized, output reached a peak in 1945 of 51 per cent above the 1937 level. Production fell in 1947 to approximately the 1937 level, then rose again in 1949 to 48 per cent above pre-war.

The indigenous population has a significant entrepreneurial role in the industry in parts of West Africa, where large concerns are relatively less important than elsewhere.

Expansion of African production by weight has been enhanced by recent discoveries in the western

Belgian Congo and the Union of South Africa, although production has also developed rapidly in Tanganyika and in French Equatorial Africa. In contrast to the increases in these countries and also in Angola, French West Africa and South-West Africa, production has declined in the Gold Coast and Sierra Leone. Country data are supplied in table 25.

The order of countries according to physical output does not indicate rank according to value, owing to the different proportions of gem and industrial diamonds produced. In 1948 the Belgian Congo's output, though it represented 58 per cent of the world output by weight, amounted to only 13 per cent by value. The output of the Union of South Africa and United Kingdom territories, by weight less than 30 per cent of the world output, represented about three-fifths of the value of world production.

Iron ore

With the exception of the Union of South Africa and very recently Southern Rhodesia, iron ore has been produced on a commercial scale in Africa entirely for export, more than four-fifths of the post-war output having been exported. Pre-war and post-war production data are compared in table 26.

⁹ The Government Mining Engineer has estimated that gold production in the Union of South Africa, at the 1948 milling rate of about 58 million tons, will be maintained for 25 years before decline sets in. In his opinion, further prospecting may result in an extension of this period. Successive governments have been concerned about future decline in gold production and

have stimulated the development of economic activities based on other resources. In 1948/49 the gold-mining industry accounted for about 8 per cent of the national income, but the output of many other industries is peculiarly dependent on the gold industry's purchasing power.

Table 25. Production of Diamonds, 1937 and 1947 to 1949
(In thousands of metric carats)

Country	1937	1947	1948	1949
Angola	626.4	799.2	795.5	770
Belgian Congo	4,925.2	5,474.5	5,824.6	9,650
French Equatorial Africa	5.6	107.1	119.0	123
French West Africa	57.7	62.3	78.0	95
Gold Coast ^a	1,577.7	852.5	850.0	914
Sierra Leone	913.4	605.6	465.5	494
South-West Africa	196.8	179.6	200.7	280
Tanganyika	3.2	92.2	148.2	192
Union of South Africa	1,030.4	1,242.4	1,382.3	1,265
Total, above countries ^b	9,336.4	9,415.4	9,863.8	13,783

Source: United States Bureau of Mines, *Minerals Yearbook*, 1940 and 1949 (Preprint); *Mineral Trade Notes*, March to August 1950; South African Reserve Bank, *Quarterly Bulletin of Statistics*, June 1950.

^a Exports.

^b Not including Liberia and other minor producers.

Increased exports from Sierra Leone have been officially envisaged. In addition, other well located deposits in West Africa may be worked at an early date. A private concern has undertaken the development of the Bomi Hills deposits in Liberia with a view to early export of almost one million tons of high-grade iron ore annually. These resources have been estimated at 20 million tons of massive magnetite, average 68-70 per cent iron content

and 100 million tons of milling grade, containing 35 to 50 per cent.¹⁰ The French Government has had under consideration the development for export of the iron ore reserves located in the Conakry peninsula in French West Africa.¹¹

The iron ore resources of some parts of Africa are still largely unknown, though investigations have been undertaken recently in a number of territories. In Northern Rhodesia, for example, the

¹⁰ United States Department of Commerce, International Reference Service, *Liberia—Summary of Basic Information*, June 1950.

¹¹ The production target defined in official development plans is 1,250,000 tons per year by 1957.

Table 26. Production and Iron Content of Iron Ore, 1937 and 1947 to 1949
(In thousands of metric tons)

Country and item	1937	1947	1948	1949 ^a
Total production	5,983	5,003	5,930	6,938
Algeria	2,427	1,558	1,872	2,539
French Morocco	67	156	301	357
Sierra Leone	644	854	968	1,086
Southern Rhodesia	—	—	31	52
South-West Africa	14	—	—	—
Spanish Morocco	1,425	869	904	944
Tunisia	944	404	690	712
Union of South Africa	462	1,162	1,164	1,248
Iron content	3,104	2,753	3,247	3,728
Algeria	981	810 ^a	935 ^a	1,270
French Morocco	33	70	137	161
Sierra Leone ^b	367	410 ^a	560 ^a	590
Southern Rhodesia	—	—	7	12
South-West Africa	7	—	—	—
Spanish Morocco ^b	943	552	530 ^a	580
Tunisia	478	203	380	370
Union of South Africa	295	708	698 ^a	745

Source: Production: United States Bureau of Mines, *Minerals Yearbook*, 1940 and 1949 (Preprint); Iron content: Statistical Office of the United Nations.

^a Iron content figures provisional or estimated.

^b Exports.

deposits were investigated in 1949 with a view to possible development in connexion with a project for a ferro-chrome industry and for making steel electrically, using Southern Rhodesian chrome together with hydro-electric power from the Kariba Gorge.¹² However, the quantity and quality of Northern Rhodesian ore have not yet been accurately determined. A recent estimate¹³ of the iron content of known iron ore deposits in eleven African countries showed 3,609 million metric tons—about 13.5 per cent of listed world reserves—principally in the Union of South Africa, in Southern Rhodesia and in French West Africa. The potential reserves of Africa were estimated to be a much larger proportion of the world total.

In 1949 the output of the region as a whole exceeded the pre-war level for the first time in the post-war period. However, in North Africa only Algeria (the leading African producer and exporter) had recovered to its pre-war level; the total output of the four North African countries represented 93 per cent of pre-war. In contrast, the expansion of production south of the Sahara has been large and continuous. The favourably situated deposits of high-grade ore in Sierra Leone have yielded an increasingly large output for export to the United Kingdom. The very large increase recorded by the Union of South Africa, and the production just under way in Southern Rhodesia, were related to the development of domestic industries in these countries.

¹² United Kingdom, Colonial Primary Products Committee, *Report of Metals and Minerals Panel*, Colonial No. 247 (1949), page 22.

¹³ United Nations Department of Economic Affairs, *World Iron Ore Resources and Their Utilization* (1950),

Principal non-ferrous metals

Copper. Production of copper has been based principally on the continent's very considerable reserves in central Africa. Mine production was in the vicinity of 18 per cent of the world total in both 1937 and 1948; this position has been attributable mainly to the developments in Northern Rhodesia and the Belgian Congo, which in 1949 ranked third and fifth, respectively, among world producers and accounted for 91 per cent of the African total. Copper-mining in Northern Rhodesia underwent a very rapid expansion in the nineteen thirties, when the territory surpassed the production level attained in the Belgian Congo.

As elsewhere, most of the output of the major African producers (including also the Union of South Africa) has been treated at the mine and recovered as blister copper. As a consequence, the region's position in smelter production—16.6 per cent of the world total in 1937 and 18.3 per cent in 1947—has been close to its position in mine production. There has been a significant trend toward further refining to obtain electrolytic copper, particularly in Northern Rhodesia.

The greatest part of the copper has been exported. The region's apparent consumption of about 4,000 metric tons in 1937 and 15,400 tons in 1948 amounted in each year to less than 1 per cent of the world total.¹⁴

As shown in table 27, mine production amounted to 446,200 metric tons in 1949, rep-

page 99; African total does not include Liberia, Nigeria, Northern Rhodesia, Tanganyika, Uganda and certain other countries which have deposits.

¹⁴ *Yearbook of the American Bureau of Metal Statistics—1949* (New York, 1950), page 9.

Table 27. Production of Copper Ore, 1937 and 1947 to 1949
(Metal content in thousands of metric tons)

Country	1937	1947	1948	1949
Total production	423.6	381.5	411.4	446.2
Angola	—	—	0.6	1.0
Belgian Congo	150.6	150.8	155.5	141.4
French Morocco	—	—	0.5	0.4
Northern Rhodesia ^a	249.8	195.6	217.0	263.4
South-West Africa	11.8	5.1	8.3	9.9
Union of South Africa	11.4	30.0	29.5	30.1

Source: Statistical Office of the United Nations.

^a Smelter production, 1947 to 1949.

representing an increase of 8 per cent over the previous year and of 5 per cent over 1937 output. This may be compared with an average annual output of 430,000 tons during the war years 1940-44. From 1945 to 1947 production fell to an average of 88 per cent of pre-war. The high level of 1949 was attributable to the substantial expansion which occurred in Northern Rhodesia, for production in the Belgian Congo was retarded by shortages of electric power owing to drought. The Union of South Africa, a smaller producer, has almost trebled its output since 1937.

In 1949 it was reported that a plant was being erected in Northern Rhodesia with a view to doubling its electrolytic refinery capacity, which was then about 60,000 tons per year. Plans have also been made to increase production capacity in the Belgian Congo, which exported 28,500 metric tons of electrolytic copper in 1948.

The ore reserves of Africa are very large. Those of eight leading companies in Northern Rhodesia, the Belgian Congo, the Union of South Africa and South-West Africa have recently been reported as 614 million metric tons of ore, equivalent to about 27 million metric tons of copper metal.¹⁵ In addition, possibly significant deposits are known to exist in Uganda, Kenya and Tanganyika.

Tin. Africa has an important position in world production of tin ore, largely as a consequence of developments in the Belgian Congo¹⁶ and Nigeria, which together in 1949 accounted for 96 per cent of Africa's production. The continent

produced 15.3 per cent of the world production of tin in concentrates in 1948. Most of the output has been exported, for smelter production has been modest. Africa's share in the world's smelter production of tin, based on facilities localized in the Belgian Congo, the Union of South Africa and Southern Rhodesia, was 2.9 per cent of the world total in 1948.

In 1949 African production of tin (in concentrates) amounted to slightly more than 24,000 metric tons, as compared with about 23,000 in the preceding year and 22,000 in 1937. The 1949 output, though 9 per cent above 1937 production, was considerably below the annual levels attained in the war years 1940 to 1946, when an average of 29,500 metric tons was attained; a peak of 31,800 was achieved in 1943.

As shown by the data in table 28, the Belgian Congo and Nigeria have shown opposite production trends in post-war years. Whereas production in Nigeria has declined relative to 1937, that of the Belgian Congo has expanded, with the result that the latter territory is now the leading African producer and holds fourth place among world producers. All other countries listed in the table showed declines over the period.

The decline in Nigerian production has been associated with partial depletion of the country's known reserves of tin ore; indeed, "the continuance of the industry at its present level demands the discovery of new deposits or the working of ground at a lower grade than that which can at present be profitably worked. Prospecting to this end is now being carried out by a number of com-

¹⁵ *Ibid.*, page 17.

¹⁶ Together with Ruanda-Urundi.

Table 28. Production of Tin in Concentrates, 1937 and 1947 to 1949
(In metric tons)

Country	1937	1947	1948	1949
Total production	21,977	23,030	23,622	24,004
Belgian Congo and Ruanda-Urundi	9,159	12,610	13,064	13,981
Cameroons, French administration	235	103	104	75
Nigeria	10,955	9,280	9,384	8,965
Southern Rhodesia	141	124	115	99 ^a
South-West Africa	172	148	113	131
Swaziland	110	23	20	24 ^b
Tanganyika	247 ^a	93 ^a	134 ^a	113 ^a
Uganda	387 ^a	157 ^a	224	133
Union of South Africa	546	491	464	483
Other areas	25	—	—	—

Source: Statistical Office of the United Nations.

^a Exports.
^b Estimated.

Table 29. Production of Lead Ore^a and Zinc Ore,^a 1937 and 1947 to 1949
(In thousands of metric tons)

Country	Lead ore				Zinc ore			
	1937	1947	1948	1949	1937	1947	1948	1949
Total production	52.0	70.3	103.5	107.0	37.2	73.4	88.7	113.4
Algeria	4.8	1.3	1.0	1.1	7.9	6.6	6.4	6.5
Belgian Congo	4.8	1.7	1.0	0.5	3.1	41.1	46.6	54.6
French Equatorial Africa	—	5.2	5.2	1.4	1.0	—	—	—
French Morocco	15.2	21.2	28.6	37.2	4.8	1.6	1.8	2.8
Nigeria	0.6	0.1	0.3	—	—	—	—	—
Northern Rhodesia ^b	4.0	15.9	13.2	14.2	19.1	21.4	22.5	23.2
South-West Africa	10.3 ^c	12.6 ^c	41.0 ^d	38.0 ^d	—	—	9.0	23.0
Tunisia	12.3	12.3	13.2	14.6	1.3	2.7	2.4	3.3

Source: Statistical Office of the United Nations.

^a Metal content.

^b Smelter production, 1947 to 1949.

^c Twelve months beginning 1 April of year stated.

^d Estimate.

panies.”¹⁷ In the Belgian Congo one of the principal mining companies has recently undertaken the exploitation of deeper resources, previously considered unexploitable; this development will increase considerably the reserves of the territory.¹⁸

Smelter production of tin reached its highest level in Africa in 1942, when the Belgian Congo alone produced 14,200 metric tons as compared with 2,300 in 1937. The industry in the Union of South Africa, which commenced production in 1940, reached a peak output of 1,000 metric tons in 1945. Smelter production in Southern Rhodesia, a small producer, began in 1941. After the Second World War, total African production contracted sharply, reflecting partly the revival of the industry in Belgium. However, production has remained above pre-war levels, averaging 4,148 metric tons for the period 1947 to 1949, divided as follows; Belgian Congo, 3,442 metric tons; Union of South Africa, 581 tons; Southern Rhodesia, 125 tons.

Lead and zinc. Post-war production of lead ore and zinc ore has been impressively higher than the 1937 output, as shown in table 29. In 1949 a total of 107,000 metric tons of lead ore (metal content) was produced in Africa, representing an increase of 106 per cent over the 1937 output of 52,000 tons. The most substantial expansions

of output were achieved in South-West Africa, French Morocco and Northern Rhodesia.¹⁹ The increase in the production of zinc ore has been even more striking. Africa produced 113,000 metric tons (metal content) in 1949, representing a trebling of its 1937 output of 37,000 tons. The Belgian Congo and South-West Africa accounted for most of this expansion. In the Belgian Congo, the post-war expansion has been a continuation of war-time trends. For the region as a whole, production of zinc ore remained fairly stable during the war period, whereas output of lead ore contracted severely.

Lack of reasonably complete global totals prevents a calculation of Africa's position in world production of lead ore and zinc ore.

Smelter production of lead in 1949 was 26 per cent above the 1937 level, owing to a relatively large expansion of the industry in Northern Rhodesia since 1945 (see table 30). On the other hand, Tunisia, where recovery has been under way, has not yet attained its pre-war output. In 1948 African smelter production was 2.4 per cent of the world total.

Smelter production of zinc in Northern Rhodesia increased from 14,280 metric tons in 1937 to 23,217 in 1949. In the Belgian Congo, which exports zinc as crude and roasted concentrates,

¹⁷ *Commonwealth Survey* (London, 28 April 1950), page 44.

¹⁸ *Plan décennal pour le développement économique et social du Congo belge* (Brussels, 1949), page 450.

¹⁹ A substantial amount of work related to opening up Tanganyika's Mpanda deposits of lead ore (in association with zinc and copper) has been completed. The first lead ore from the Mpanda mine was exported in August 1950.

Table 30. Smelter Production of Lead, 1937 and 1947 to 1949

(In metric tons)

Country	1937	1947	1948	1949
Total production	26,770	25,692	31,341	33,747
Northern Rhodesia	570	15,892	13,190	14,169
Tunisia	24,800	9,800	18,151	19,578
South-West Africa	1,400	..	100	..

Source: Statistical Office of the United Nations.

construction has begun on an electrolytic zinc plant, which is expected to be completed in 1953.

Other metallic minerals

Antimony. After 1940 the production of recoverable antimony in Africa expanded steadily and reached 6,700 metric tons in 1949, over six times the output of 1937. A rapid development of production in the Union of South Africa, which recently has ranked fourth among world producers, accounted in large measure for this expansion and for the continent's appreciably higher share in world production. To a certain extent the increase in output of the Union of South Africa has been attributable to a changed price relationship between antimony and gold, which has stimulated the recovery of antimony from ores previously considered waste. Quantitatively less important, though relatively large increases, have also occurred in French Morocco and Algeria.

Bauxite. Before the war production of bauxite in Africa was limited to insignificant quantities mined in Mozambique. Beginning in 1941 the Sefwi Bekwai deposits of the Gold Coast were worked; later a 50-mile railway was constructed to link the main line with this deposit. In 1949 the Gold Coast's production amounted to about

147,000 metric tons, giving this territory ninth place in the rank of world producers. Reserves of over 200 million tons, much of which is high-grade ore, have been indicated by recent surveys in this territory. In 1949 it was officially reported that the power potential of the Volta River was being investigated in relation to the possible construction of a reduction plant in the Gold Coast;²⁰ this would permit refining to be shifted from the United Kingdom to the territory.²¹ At the present time aluminium is not produced in Africa.

Trends in bauxite production, by country, are shown in table 31. In view of official plans for the development of production in French West Africa, the emergence of this territory as a producer in 1949 is significant.

Chrome ore. Production of chrome ore in Africa has been almost entirely confined to the Union of South Africa, Southern Rhodesia and Sierra Leone, though development work has begun at a newly discovered deposit in Madagascar. The first two of these producers have recently ranked among the five leading world producers.

Since 1937 production has fluctuated in close relation to world output. After the region's 1937 output of 446,000 metric tons of ores of various

²⁰ Colonial Primary Products Committee, Metals and Minerals Panel, *Report* (Colonial No. 247, London, 1949). Other major aspects of this survey dealt with irrigation and drainage of lands near the Volta catch-

ment and with transport requirements which would result from establishment of an aluminium factory.

²¹ *Commonwealth Survey* (London, 9 July 1949), page 47.

Table 31. Production of Bauxite, 1942 and 1947 to 1949

(In thousands of metric tons)

Country	1942	1947	1948	1949
Total production	51	100	134	157
Gold Coast ^a	49	97	133	147
French West Africa	—	—	—	8
Mozambique	2	3	1	2

Source: Statistical Office of the United Nations.

^a Exports.

Table 32. Production and Content of Chrome Ore, 1937 and 1947 to 1949
(In thousands of metric tons)

Country and item	1937	1947	1948	1949 ^a
<i>Total production</i>	446	545	652	670
Sierra Leone	1	17	8	22
Southern Rhodesia	276	155	231	244
Union of South Africa	169	373	413	404
<i>Chrome (Cr₂O₃) content</i>	210.8	254.0	301.8	272.9
Sierra Leone	0.3	8.0	3.8 ^a	8.6 ^b
Southern Rhodesia	135.0	76.0	113.0	119.3
Union of South Africa	75.5	170.0 ^a	185.0 ^a	145.0

Source: Production: United States Bureau of Mines, *Minerals Yearbook, 1940* and *Mineral Trade Notes*, August 1950; United Nations, *Non-Self-Governing Territories*, Summary of information transmitted by the Government of the United Kingdom of Great Britain and

Northern Ireland (1950). Chrome content: Statistical Office of the United Nations.

^a Chrome content figures provisional or estimated.

^b Exports.

grades was exceeded in 1940-43, production declined to a low of 64 per cent of pre-war in 1945, recovering strongly thereafter to 151 per cent of pre-war in 1949. External demand for African ores has recently been intensified because of United States requirements. In 1948 and 1949, respectively, the United States received directly from Africa 388,000 tons and 334,000, compared with 282,000 in 1937.²²

The detailed figures given in table 32 show that the rise in African output, relative to 1937, has been very largely attributable to gains in the Union of South Africa. Southern Rhodesia, the leading African producer before the war, has not attained its 1937 output. In both countries transportation difficulties have hindered post-war expansion; these difficulties have affected Southern Rhodesia more acutely.

Cobalt. The great increase in the metallurgical demand for cobalt over the past decade and a

half has resulted in an expansion of African production. In 1948 and 1949 mine production amounted to nearly 5,000 metric tons, which was about 68 per cent above the 1937 level of nearly 3,000 tons. Four-fifths or more of the world's production has normally come from Africa; in 1949 the Belgian Congo alone accounted for nearly three-fourths of the world total.

The detailed figures supplied in table 33 show that the Belgian Congo has nearly trebled its output since 1937, whereas the output of both Northern Rhodesia and French Morocco has declined by more than one-half. The Union Minière du Haut Katanga, the sole producer in the Belgian Congo, has developed extensive facilities for producing crude cobalt, including cobalt-concentrating and ore-treatment plants and electric and rotary furnaces. Crude cobalt in ingot form has been shipped to refining plants in the United States and in Belgium for processing to metal, oxide, salts and driers. The company's developed reserves of cobalt, which occurs in association with copper, have been reported as adequate for forty

²² Calculated from United States commercial statistics.

Table 33. Mine Production of Cobalt,^a 1937 and 1947 to 1949
(In metric tons)

Country	1937	1947	1948	1949
Total production	2,965	4,353	4,967	4,961
Belgian Congo	1,500	3,563	4,322	4,350
French Morocco	581	370	278	209
Northern Rhodesia	884	420	367	402

Source: United States Bureau of Mines, *Minerals Yearbook, 1940* and 1949 (Preprint).
^a Metal content.

to fifty years.²³ Further developments are anticipated in Northern Rhodesia inasmuch as the United States Economic Cooperation Administration has authorized \$550,000 to finance purchase of equipment in order to ensure increased cobalt production when the territory's additional electrolytic refining capacity comes into operation.

Manganese ore. Output of manganese ore of all grades remained below the 1937 volume of nearly 1.3 million metric tons throughout the entire period 1938 to 1948. The increased share of the region in world output in 1948 (29 per cent) as compared with 1937 (21 per cent), reflected a larger relative decline in world production.

As shown in the figures given in table 34, low production in the Union of South Africa persisted through 1948; this more than offset gains in the Gold Coast and French Morocco. This low production in the Union of South Africa through 1948 was closely related to the limited capacity of its railway rolling-stock available for the carriage of ore. As measures were taken to remove this limitation, output and exports expanded.

In 1949 African output rose sharply, by a half million tons over that of the preceding year, to

²³ United States Department of the Interior, *Minerals Yearbook—1948*, page 405.

²⁴ Calculated on the basis of United States commercial statistics.

reach 131 per cent of pre-war. This increase occurred partly in response to an intensified demand in the United States for ores of chemical and other grades from Africa, following the partial loss of its supplies from customary sources. African countries exported 28 per cent of their combined output directly to the United States in 1948 and 40 per cent of the total in 1949.²⁴

Platinum-group metals. The platinum-group metals—platinum, palladium, iridium, osmium, osmiridium, and ruthenium—have been produced in the Union of South Africa, the Belgian Congo, Ethiopia and Sierra Leone. These countries accounted for 14.5 per cent of world production in 1948, slightly higher than their relative share in 1936. In 1948 their aggregate production of 75,000 troy ounces was 21 per cent above the 1936 level. This rise was entirely attributable to the expanded production of the Union of South Africa, which more than offset substantial declines elsewhere. The Union of South Africa accounted for 99 per cent of total African output in 1948 as compared with 61 per cent in 1936.

Vanadium. Production of vanadium in ores and concentrates has been confined to two territories: South-West Africa and Northern Rhodesia.²⁵ In

²⁵ Almost all of world production has been confined to the United States, Peru, and the two African territories.

Table 34. Production and Content of Manganese Ore,^a 1937 and 1947 to 1949

(In thousands of metric tons)

Country	1937	1947	1948	1949
<i>Total production</i>	1,272	1,020	1,147	1,669
Angola	1	1	—	19
Belgian Congo	27	18	13	16 ^b
French Morocco	76	114	214	234
Gold Coast ^b	536	599	640	741
Northern Rhodesia	2	—	4	4
Union of South Africa	631	288	276	655
<i>Manganese content</i> ^c	591.7	479.7	541.2	763.7
Angola	0.3	0.3	—	9.0
Belgian Congo	15.5	5.0 ^d	6.5 ^d	6.1
French Morocco	28.5	42.4	85.2	98.1
Gold Coast	278.0	311.0 ^b	333.0 ^b	385.0 ^b
Northern Rhodesia	0.6	—	0.5	0.5
Union of South Africa	268.8	121.0 ^d	116.0 ^d	265.0

Source: Production: United States Bureau of Mines, *Minerals Yearbook, 1940* and *Mineral Trade Notes*, July and August 1950; Colonia de Angola, *Boletim Mensal de Estatística*, May 1950 (Luanda). Manganese content: Statistical Office of the United Nations.

^a Excluding Mozambique, Spanish Morocco and Tunisia.

^b Exports.

^c Manganese content figures for 1949 estimated.

^d Provisional or estimated.

1937, these territories produced 825 metric tons (metal content), a level exceeded subsequently only in 1938, 1939, 1942 and 1943. In 1947, 1948 and 1949, their combined outputs were for the respective years 282 tons, 351 tons and 318 tons. This sharp reduction, as compared with pre-war, has been accompanied by a decline in the region's share in world production, from 42 per cent of the total in 1937 to less than 20 per cent in 1947.

Tungsten. Africa has had a very minor position in the world's production of tungsten. Production, which was encouraged during the war, reached 2,112 metric tons of concentrates (60 per cent WO_3), in 1944 as compared with 369 tons in 1937. In 1947 the total output was 940 tons; in 1948, 609 tons; in 1949, 903 tons.

The continent's expanded output, as compared with pre-war, is explained by increases in the Union of South Africa and Uganda, together with the development of production in the Belgian Congo. The combined production of these countries was 868 tons in 1949 as against 42 tons in 1937. On the other hand, the output of Southern Rhodesia, leading pre-war producer, dropped from 257 tons in 1937 to an average of 43 tons in 1947-49. Other producers have been South-West Africa, Nigeria, Tanganyika and French Morocco.

Uranium. Data are not available on post-war trends in the production of uranium ores and concentrates in Africa, nor on its position in world production. Until the Second World War uranium ore was produced in the Belgian Congo almost exclusively for its radium content.²⁶ Since 1940-1941 production of uranium as a principal product has been stimulated in connexion with the development of atomic energy. Official statistics of annual exports are not available after 1945, when they amounted to 9,967 metric tons as compared with 1,089 in 1940.²⁷ In 1944 an agreement was concluded by Belgium, the United States and the United Kingdom for the sharing of the Belgian Congo output.

²⁶ In 1938 the sole producing company in the territory and a Canadian firm agreed to supply, respectively, 60 and 40 per cent of the radium offered on the world market. The cartel agreement, which was to run for five years, has expired.

In 1950 the Government of the Union of South Africa announced that it was considered possible to recover, economically, uranium from gold ore in the Union of South Africa, and that the Government had concluded an agreement covering sales to the United States and the United Kingdom.²⁸

Non-metallic minerals

Asbestos. African production of asbestos has contributed significantly to world supplies. The output consists of chrysolite (Southern Rhodesia, Swaziland and the Union of South Africa), amosite (Union of South Africa) and crocidolite (South Africa); chrysolite is the most important commercial type. In 1949, Africa produced 169,000 metric tons of all types as compared with 78,000 in 1937. Production in 1947 was 103,000 and in 1948, 134,000 metric tons. The relative increase in post-war years has been somewhat in excess of the percentage expansion in world output.

Over the period Southern Rhodesia, which ranks considerably below Canada and the Union of Soviet Socialist Republics as a producer of chrysolite, has retained its leading position in Africa. However, the steady increase in the production of the Union of South Africa has brought its total output of all types nearly to the level of Southern Rhodesia, as the following figures (in thousands of metric tons) show:

	1937	1947	1948	1949
French Morocco	—	0.8	0.4	0.4
Kenya	—	0.6	0.5	0.7
Southern Rhodesia	51.7	49.1	62.6	72.6
Swaziland	—	25.4	29.4	30.8
Union of South Africa ..	25.9	27.3	41.5	64.3

Source: Statistical Office of the United Nations. Swaziland, which came into production in 1939, has rapidly expanded its output of chrysolite.

Phosphate rock. Mined production of phosphate rock has been very largely concentrated in French North Africa, which has normally accounted for more than one-third of the world output. Production in these territories is shown in the following figures (in thousands of metric tons):

²⁷ Colonial Office of the Belgian Government, *Statistique du commerce extérieur du Congo Belge et du Ruanda-Urundi, 1940-42, and 1943-44-45* (Brussels).

²⁸ Union of South Africa, Government Information Office, *South Africa Reports*, 21 December 1950.

	1937	1947	1948	1949
Algeria	631	707	722	645
French Morocco ...	1,378	2,881	3,226	3,693
Tunisia	1,771	1,755	1,864	1,442

Source: Statistical Office of the United Nations.

Output dropped sharply during 1940 to 1945, to an average of 55 per cent of the output in 1937, which was 3.8 million metric tons. After the close of the war European demand stimulated intensified production for export, to a total of 5.3 million tons in 1947 and about 5.8 million tons in 1948 and 1949. In 1949 French North African exports represented nearly two-thirds of the world total. Most of this increase—over half as much again as in 1937—has been attributable to a rise in the output of French Morocco. Furthermore, the installation of riddling and separating plants in Tunisia and Algeria, undertaken recently with a

²⁹ Commonwealth Economic Committee, *A Survey of the Trade in Fertilizers* (London, 1950).

³⁰ *Ibid.*, page 52.

view to improving the quality of their phosphate rock, may increase supplies for export.

Production of superphosphate has been undertaken in Africa on a much more limited scale.²⁹ Total production in French North Africa amounted to 184,000 tons in 1948 as compared with 139,000 tons in 1938. The Union of South Africa expanded its output over the same period from 139,000 to 320,000 tons, which, however, was insufficient to meet domestic requirements. Its industry has been based principally on imported materials; its Transvaal deposits yielded about 45,000 tons of rock in 1947/48.

Large-scale development of Uganda's deposits, which contain an abnormally high iron content, has been under consideration. The current yield of these deposits is about 12,000 tons of ground phosphate per year.³⁰ If capable of more extensive development, the exploitation of these deposits would increase supplies available to agriculture in East Africa.

Chapter 4

FUEL AND POWER, IRON AND STEEL AND SECONDARY INDUSTRIES

FUEL AND POWER

Since 1937 the production of fuel and power in Africa, excluding Egypt, has undergone a very high rate of increase. The total output of coal increased without interruption during the war. Production was 57 per cent above pre-war in 1948 and reached a record level of 68 per cent above pre-war in 1949. Production of electric power nearly doubled during the period.

In spite of these gains, however, Africa still occupies a low position as a producer and consumer of fuel and power. Its production of coal in 1948 and 1949 was slightly over 2 per cent of the output of the world (excluding the Union of Soviet Socialist Republics), and its share in the production of electric energy was less than 2 per cent. Its production of oil and gas has been negligible. In addition, Africa has been dependent on external sources for about one-sixth of its energy supply, including on balance part of its coal and practically all of its crude and refined oil.

In the post-war period, the per capita consumption of energy in the continent has been less than one-half that of Latin America. The level of consumption, though varying among the countries, has been extremely low if the Union of South Africa is excepted. The latter, in recent years, has

produced about nine-tenths of the continent's coal though, as a net exporter, it has consumed somewhat less. It has also accounted for about three-fourths of the electricity produced. There have nevertheless been gains in North Africa and parts of inter-tropical Africa.

Coal

Table 35 compares pre-war and post-war production of coal. The major part of the rise in production, from 17.1 million metric tons in 1937 to 28.6 million in 1949, has been attributable to an increase of nearly 10 million tons in South African output. Since the close of the war the Union of South Africa has exported an annual average of about 2 million tons of cargo coal, compared with 0.9 million in 1936-38, much of it to countries in the area. Southern Rhodesia's production expanded at a higher rate, but in absolute terms its increase amounted to about 900,000 tons. This increase has helped to meet the enlarged requirements of the Rhodesias and the Belgian Congo. French North Africa and the Belgian Congo, which like Nigeria registered production gains, have met most of their requirements through imports. The Belgian Congo and Ruanda-Urundi, which imported 125,000 tons annually in 1936-38, received an average of

Table 35. Production of Coal (excluding Lignite), 1937 and 1947 to 1949
(In thousands of metric tons)

Country	1937	1947	1948	1949
Total production	17,065	26,508	26,877	28,594
Algeria	14	206	226	258
Belgian Congo	36	102	117	152
French Morocco	107	269	290	341
Mozambique	19	16	9	13
Nigeria	369	589	618	559
Southern Rhodesia	1,029	1,508	1,696	1,919
Union of South Africa	15,491	23,818	23,921	25,352

Source: Statistical Office of the United Nations.

213,000 tons in 1947-49. On the other hand, imports by French North Africa in 1948 and 1949 were about 22 per cent under the 1938 level of 925,000 tons; this reduction in imported supplies was more than compensated by the rise in local production.

The proved reserves of coal in Africa have been estimated at less than 2 per cent of the world total and the probable reserves at about 4 per cent.¹ Though such comprehensive tabulations show deficiencies in the resources of most of inter-tropical Africa other than the Rhodesias and Nigeria, much work of exploration and investigation of known deposits remains to be done.² Much of the coal which has been analysed has been of low quality.

¹ United States Department of State, *Energy Resources of the World* (Washington, D.C., June 1949), table 14, and United Nations, *World Iron Ore Resources and Their Utilization* (1950), table A, page 66.

² United Kingdom, Colonial Primary Products Committee, *Report of Metals and Minerals Panel* (Colonial

Electric power

The detailed data provided in table 36 show the high rates of increase in the production of electric energy between the pre-war period and 1947 to 1949 in various countries. In absolute terms, the largest increase was achieved in the Union of South Africa. French North Africa, which ranks second as a producer, has experienced a substantial expansion of output since the close of the war, related to modernization and expansion of its thermal and hydro-electric capacity. The trend in other significant producing countries, including Southern Rhodesia and the Belgian Congo,³ has similarly been upward.

When allowances are made for incompleteness of the data, it is probable that for the entire area

No. 247) (London, 1949), pages 12-15. This report reviews the mineral resources in the Non-Self-Governing Territories of the United Kingdom.

³ The decline in 1949 in the Belgian Congo was attributable to drought, which curtailed the output of hydro-electricity.

Table 36. Production of Electric Energy in Selected Countries, Pre-war and 1947 to 1949

(In millions of kilowatt-hours)

Country	Production in base year	Post-war production			Relative (base year = 100)			
		1947	1948	1949	1947	1948	1949	
Anglo-Egyptian Sudan			15.4	16.7				
Belgian Congo ^a	1939	272.3	466.6	497.3	453.1	171	183	166
Eritrea	1937	11.7	21.1	19.9	19.9	180	170	170
Liberia	1937	1.0	7.9	9.5	9.9	790	950	990
Spanish Morocco	1937	11.9	31.9	32.8	33.9	268	276	285
Union of South Africa ^b	1937	5,336.0	8,788.0	9,481.0	10,000.0	165	178	187
British territories:								
Kenya ^c	1938	13.7	37.4	47.6	60.6	272	347	442
Mauritius	1946	12.4	12.4	15.4	17.6	100	124	142
Sierra Leone ^d	1937	0.8	4.5	5.1	5.4	562	638	675
Southern Rhodesia ^{d e}	1938	79.5	320.0	330.0		403	415	
Tanganyika ^c	1938	8.4	25.1	29.5	39.0	299	351	464
Uganda ^c	1938	0.3	4.7	6.1		1,567	2,033	
French territories:								
Algeria ^d	1937	252.7	414.6	461.4	511.2	164	183	202
French West Africa	1937	8.4		20.2	24.0		240	286
Madagascar	1937	13.3	24.7	24.9	25.1	186	187	189
Morocco ^d	1937	131.0	316.5	377.2	434.3	242	288	332
Tunisia ^d	1937	59.4	109.4	127.0	133.9	184	214	225
Portuguese territories:								
Angola	1937	7.1	24.1	22.5	19.8	339	317	279
Mozambique ^{d f}	1937	11.3	17.2	18.4	18.4	152	163	163

Source: Statistical Office of the United Nations.

^a Figures represent output of the two largest producing concerns, which in 1947 accounted for about 85 per cent of total production in the Belgian Congo.

^b Twelve months ending in year stated.

^c Public sales.

^d Public utilities only.

^e Year ending 30 June.

^f Consumption.

north of the Union of South Africa consumption of electric power in 1948 was under 30 kilowatt-hours per capita. The data presented in table 36 yield averages below 25 kilowatt-hours per capita in the Anglo-Egyptian Sudan, Angola, Eritrea, French West Africa, Kenya, Liberia, Madagascar, Mozambique, Sierra Leone, Tanganyika and Uganda.⁴ Higher averages were reached in the Belgian Congo, French North Africa, Mauritius and Spanish Morocco (all under 100 kilowatt-hours) and in Southern Rhodesia (nearly 200 kilowatt-hours). This distribution may be evaluated in terms of a world average of about 350 kilowatt-hours in 1948. In the Union of South Africa the average was about 800 kilowatt-hours per capita, which was somewhat lower than the average in the more highly industrialized countries of the world and considerably lower than those in the United States and Canada. The distribution of electric power within the continent reflects *inter alia* the very low level of industrial development in tropical Africa.

In contrast to Africa's position in respect of coal reserves, the continent has been estimated to contain about 40 per cent of the world's water power resources. These resources are very unevenly distributed, two-thirds of the total being in the Belgian Congo and French Equatorial Africa, while some countries have only very small resources. Development plans initiated in the post-war period include a project, agreed to by the United Kingdom and Egypt, for the development of hydro-electricity at Owen Falls, Uganda, on the Victoria Nile. Other projects have recently been

⁴In most of these cases the average was under 10 kilowatt-hours per capita.

initiated or considered in a number of territories in every part of Africa; these portend a more extensive development of the continent's water power resources in the future.

Oil

The post-war position of Africa in respect of petroleum consumption and supply is shown in table 37. The figures include Egypt, which has accounted for very nearly all of the continent's production of petroleum. The data show that African consumption, though small in relation to the world's—2.4 per cent in 1949—expanded steadily throughout the period. In view of Africa's low production, its dependence on imports has also increased.

When Egyptian output is excluded, the production of petroleum has been negligible. There have been but two producing countries, Algeria and Morocco, whose cumulative production up to 1949 totalled only about 100,000 metric tons.⁵ Morocco, the more significant of the two, has developed limited refining facilities. Its output of crude petroleum, which amounted to about 2,500 metric tons in 1937, totalled 17,500 tons in 1949 and reached an annual rate of 37,800 metric tons in January-September 1950.

As of 1 January 1949, the estimated reserves of the two producing countries in Africa were 2 million barrels, representing a negligible fraction of the world total. Indeed, "Africa has a smaller proportion of sedimentary area of interest for petroleum than any other continent".⁶ Areas meriting exploration, among them French North

⁵American Geographical Society, *World Geography of Petroleum* (Princeton University Press, 1950), page 23.
⁶*Ibid.*, page 301.

Table 37. Petroleum Consumption and Supply,^a 1947 to 1949
(In thousands of barrels per day)

Item	1947	1948	1949
Domestic consumption	180.3	212.5	236.8
Domestic supply	26.5	36.8	44.5
Crude oil	25.5	36.0	43.5
Natural gasoline	1.0	0.8	1.0
Deficit	153.8	175.7	192.3
<i>As percentage of world total:</i>			
Domestic consumption	2.1	2.3	2.4
Domestic supply	0.3	0.4	0.5

Source: *World Oil*, 15 July 1950 (Gulf Publishing Company, Houston, Texas).
^aIncluding Egypt.

Africa, Spanish Morocco, Ethiopia, British Somaliland, Mozambique, French Equatorial Africa, Madagascar, Nigeria and Uganda, have recently been the scene of active or preliminary exploratory work. In the interior of Africa, only Uganda has up to the present time been considered to be of any promise as a possible source.⁷

In the Union of South Africa a very limited development of torbanite shales as a source of oil has taken place. In 1947 output of oil from this source totalled only 29,700 metric tons, though a considerable increase had been achieved over the 5,300 tons produced in 1938. The Government has, since 1947, encouraged plans to synthesize liquid petroleum products from coal. Though a company has been formed for this purpose, a plant has not yet been constructed. The estimated total investment which would be required to reach large-scale production is of the order of £15 million to £20 million.⁸

IRON AND STEEL INDUSTRY

The Union of South Africa has accounted for very nearly the entire production of iron and steel in Africa (excluding Egypt). It has also been the largest consumer, using about three-fourths of the steel consumed in the continent, excluding Egypt.⁹

The iron and steel industry in the Union of South Africa expanded after 1934, following the commencement of operations by the government-sponsored South Africa Iron and Steel Industrial Corporation. In 1937 output of pig-iron was 276,000 metric tons and of steel ingots and castings, about 288,000 metric tons. During and since the war there have been appreciable additions to plant capacity, with the result that in 1949 output of pig-iron reached 708,000 metric tons and of steel ingots and castings, 636,000 metric tons. This production of primary steel, together with the minor output of Southern Rhodesia, was equal to about three-fifths of the Latin American total.

⁷ *Loc. cit.*

⁸ Union of South Africa Government Information Office, *South Africa Reports* (New York), 6 April 1950, page 4. Also, *Oil and Gas Journal* (Petroleum Publishing Company, Tulsa, Oklahoma), 2 November 1950, page 46.

⁹ United Nations Economic Commission for Europe, *European Steel Trends* (Geneva, 1949), page 10.

¹⁰ According to a statement by the chairman of the corporation, a shortage of skilled artisans has impeded

With a view to meeting more fully domestic requirements, the South Africa Iron and Steel Industrial Corporation scheduled for early completion the construction of a new plant at Vanderbijl Park about thirty-five miles south of Johannesburg. The programme was expected to add new facilities, with ingot capacity of 320,000 to 350,000 tons, representing an output capacity of about 240,000 tons of flat rolled products. The ultimate ingot capacity of the corporation's plants might reach about one million tons.¹⁰

In 1948 a small open-hearth furnace came into production in Southern Rhodesia. That country, like the Union of South Africa, is well endowed with resources essential to the production of iron and steel. As indicated by the figures given above on the territory's production of iron ore through 1949, the industry is still in its infancy, its growth depending largely on market factors. Annual production has recently been reported at 36,000 tons of pig-iron, of which 15,000 have been converted into steel. Additional machinery in process of installation was expected to raise output to 33,000 tons of steel ingots.¹¹

On the whole, except in the Union of South Africa and Southern Rhodesia, the resources of Africa as known at the present time do not appear to favour technically a widespread development of an iron and steel industry, even on a limited scale. Outside the two countries mentioned, occurrences of coking coal have been reported in only a few places, but the inventory of African coal resources is by no means complete.

The continent has depended heavily on imports to meet its requirements of steel. Apparent consumption in 1948 was estimated at 1.9 million metric tons, as compared with an average of 1.3 million during 1935-39.¹² Even after allowing for expansion of production in the Union of South Africa, Africa, excluding Egypt, imported about 200,000 metric tons more of steel in 1948 than in 1935-39. Though the import balance of the Union

plant extensions and operation of the available plant at full capacity, but in the year ending 30 September 1951 it was hoped to increase output to an annual rate of about 1,100,000 ingot tons. Union of South Africa Government Information Service, *South Africa Reports* (New York), 14 December 1950.

¹¹ *Commonwealth Survey* (London), 7 July 1950, page 20.

¹² United Nations Economic Commission for Europe, *op. cit.*, page 10. Egypt is excluded from the data.

of South Africa may be affected in the future by the projected expansion of its industry, the implementation of development plans elsewhere may be expected to require in much of the area a continuance of imports at higher than pre-war levels.

SECONDARY INDUSTRIES

The continent has experienced an expansion of its secondary industries since the pre-war period. In respect of scale, scope and impact on economic structure, by far the most considerable development has taken place in the Union of South Africa. The moderate extensions of development in French North Africa and elsewhere have also been significant. However, many of the statistical indices usually employed in the measurement of these phenomena are not available for inter-tropical Africa, and this deficiency of refined statistical information limits the extent to which a comprehensive assessment can be made of changes in the region as a whole. In most territories the developments, though qualitatively important, have been limited and have not brought about any material change in the structure of their economies. This is borne out by the data presented above on the production and consumption of fuel and power in most of inter-tropical Africa, and by the very heavy preponderance of the population dependent on agriculture. In West Africa and in most of the continental territories of East Africa, in Madagascar and the Portuguese territories, the consumption of electric power for all uses is probably under 10 kilowatt-hours per capita and nowhere in western or eastern continental Africa over 25 or 30 kilowatt-hours; the use of modern industrial fuels is similarly little developed. In the "special mineral territories" of central and southern Africa, which have reached higher levels of consumption, it is probable that mining and closely related export industries are the principal consumers of

¹³ In 1950 it was officially stated regarding the British East African territories that, "Scarcity of power is a limiting factor to industrial development . . . for there are no developed coal or oil resources in the region. The Owen Falls hydro-electric scheme, near Jinja in Uganda, is designed to remedy this shortage of power . . . Most of the existing industries are concerned with the processing of agricultural products such as pyrethrum, tea and coffee, and the ginning of cotton". Central Office of Information (London), *The British Colonial Territories in 1950*, page 30. There has, however, been a limited development, officially encouraged, of a diversified list of industrial plants in this region during and since the war. Thus, in Kenya there are in operation plants built

industrial energy. For Africa as a whole, the Food and Agriculture Organization of the United Nations has estimated that 74 per cent of the population was dependent on agriculture in 1948 as compared with 76 per cent in 1937. It is clear that no extensive industrialization of inter-tropical Africa has taken place, and that Africa has continued to be heavily dependent on imports for its supply of fabricated trade goods, as related to both final consumption and production.

However, there have been significant developments of secondary industries in a few territories in inter-tropical Africa, among them Southern Rhodesia and the Belgian Congo, as well as industrial growth in other territories.¹³ In earlier sections mention has been made of the incipient development of a modern textile industry in some territories, which has been reflected in an enlarged—though still small—consumption of raw cotton, and a growth of industries processing to a higher stage the mineral, agricultural and forestry products of the region. There has been a limited expansion of food industries related mainly to local consumption, including slaughtering. These and earlier references are by no means exhaustive. On the whole, the descriptive evidence which has been available supports the conclusion that the new capital invested in consumer industries since 1937 has been much less substantial than that channelled into industries at earlier stages of production.

Cement has undergone a rather widespread increase, as table 38 shows. In addition to the territories covered in this table, Northern Rhodesia and Uganda have government-sponsored cement projects.

Because of statistical limitations of the materials available for a review of industrial development on a region-wide basis, developments in a

during the war for the manufacture of chemicals, bricks, pottery and edible oils, and more recently work has been undertaken in connexion with a metal container factory, a safety match factory, a garment factory and an oxy-acetylene gas works. In Tanganyika recent projects have included a meat processing plant; in Uganda, a large African-owned cotton ginnery. The West African territories administered by France and the United Kingdom have experienced similar local developments of recognized qualitative importance, as have also other territories in inter-tropical Africa. It has not been possible, within the limits of this review, to make use of all of the descriptive and quantitative materials available on this subject.

Table 38. Cement Production in Selected Countries, 1937 and 1947 to 1949
(In thousands of metric tons)

Country	1937	1947	1948	1949	Relative (1937 = 100)		
					1947	1948	1949
Algeria	64.9	127.3	130.4	128.0	196	201	197
Belgian Congo	25.5	115.4	126.9	144.3	453	498	566
Ethiopia	—	—	8.0	—	—	—	—
French Morocco	156.0	219.0	262.2	266.1	140	168	171
French West Africa	—	10.1	10.9	43.9	—	—	—
Mozambique	15.0	35.9	37.2	45.8	239	248	305
Southern Rhodesia ^a	52.9	71.2	69.0	—	135	130	—
Tunisia	56.4	115.9	161.7	168.0	205	287	298
Union of South Africa...	839.5	1,251.7	1,307.9	1,363.6	149	156	162

Source: Statistical Office of the United Nations.
^a Years ending 30 June.

few countries are highlighted in the sections which follow.

Union of South Africa

Before the Second World War the Union of South Africa had already attained a significant level of industrial development. In 1938/39 the fixed capital of all factories and manufacturing industries totalled £113 million, and 352,000 persons were employed, of whom 208,000 were non-Europeans. The gross value of output was then £200 million and the net value of output £98 million.¹⁴

Circumstances related to the war stimulated a rapid expansion of industry, notably the iron and steel and engineering industries, and textile, footwear and food-processing industries. In 1946 the physical output of secondary industries was 36 per cent above the 1939 level.¹⁵ By 1945/46 the gross value of output reached £418 million, net value £206 million, and the total number of employees about 520,000. The fixed capital amounted to £187 million. Most of the industrial expansion between 1938 and 1946 was effected by domestic capital.

The expansion and diversification of secondary industry which has taken place since 1946 has been assisted by investment of external capital. In 1948 the physical output of secondary industries

reached 169 per cent of the 1939 level, and in 1949, 187 per cent. The gross value of output in 1948/49 exceeded £600 million. Employment in manufacturing in 1949 was 78 per cent above the 1938 level; employment of Europeans increased by 45 per cent over the period, and that of non-Europeans doubled. In the non-durable goods industries the index of employment (1938=100) reached 181 in 1949, and in the durable goods industries, 175.

The share of manufacturing in the national income rose from 19 per cent in 1937/38 to 23.5 per cent in 1948/49.

Southern Rhodesia

Table 39 shows pre-war and post-war data on secondary industries in Southern Rhodesia. The rate of expansion, as measured by physical volume, employment, gross value and net value of output, has been high; however, the magnitudes involved are relatively small when compared with the data for the Union of South Africa.

The index of physical volume (1938=100) rose to 253 in 1946, 293 in 1947 and 346 in 1948.¹⁶ Over the decade 1939 to 1948 employment in manufacturing nearly trebled, reaching 44,600 in 1948. The introduction of government-sponsored iron and steel and cotton-spinning industries and also of factories supplying certain

¹⁴ Union of South Africa, Department of Commerce and Industries, *Commerce and Industry*, April 1949, page 403. Comprehensive statistics are not available for the years after 1945/46.

¹⁵ Based on indices of physical production published by the Standard Bank of South Africa.

¹⁶ Statistical Office of the United Nations.

Table 39. Production and Employment in Secondary Industries in Southern Rhodesia, 1939 and 1946 to 1948

Year	Value of output ^a		Employment ^b
	Gross	Net	
1939	4.8	2.3	15.2
1946	16.9	7.3	36.6
1947	20.3	8.9	38.5
1948	24.8	10.5	44.6
<i>Relative (1939 = 100):</i>			
1946	347	319	241
1947	417	392	253
1948	508	462	293

Source: Central African Statistical Office, *Economic and Statistical Bulletin of Southern Rhodesia*, 21 September 1950 and 7 February 1950 (Salisbury).

^a In millions of Rhodesian pounds.

^b Monthly average, in thousands.

agricultural requisites and building materials has been significant in the post-war period. In 1949 the domestic exports of Southern Rhodesia included apparel, cigarettes, foot-wear, machinery, and blankets and rugs, valued slightly over £2 million. In addition, domestic exports of groundnut oil, flour and meal, refined sugar and preserved meats were valued at nearly £900,000. These items together represented 4.3 per cent of domestic exports.

Belgian Congo

The statistical data available on industrial expansion in the Belgian Congo are limited in many respects. In 1947 the number of industrial establishments reached 4,277 as compared with 2,314

in 1937. African labour employed in industries other than mines reached about 16,000 in 1947. In comparison with mining (137,000 Africans employed in 1948), employment in secondary industries was small; even allowing for some employment of Europeans it was probably considerably below the 38,500 persons similarly occupied in Southern Rhodesia in the same year. Data showing physical output in certain industries are given in table 40.

Among the consumer goods industries which have undergone a considerable expansion since the pre-war period are the cotton textile and soap industries; the former maintained its growth in the post-war period whereas soap manufacture fell off. There has been a high rate of expansion in the food industries (except sugar), both for internal consumption and for export. The output of construction materials, as shown by the data for cement and lime, has also increased markedly. In addition, the number of establishments producing bricks, tiles and pottery rose from 169 in 1939 to 503 in 1947. The chemical and metallurgical industries experienced a rapid growth, and there has been an expansion in other lines, including construction of river boats and barges.

French Morocco

The available statistical information does not allow a full comparison of the pre-war with the post-war position of secondary industries in the economy of French Morocco, particularly in re-

Table 40. Production of Selected Industrial Products in the Belgian Congo, 1939 and 1947 to 1949

(In metric tons)

Product	1939	1947	1948	1949
Beer ^a	28,600	200,916	211,901	299,338
Cement	35,126	115,441	126,942	144,325
Cooperage products ^b	243	347	511	1,305
Fats and oils (vegetable)	95,919	144,746	164,251	162,651
Foot-wear ^c	—	293	393	454
Leather	—	438	374	226
Lime	450	36,947	42,914	39,916
Soap	448	22,776	16,551	12,342
Sugar	14,700	15,613	15,730	12,730
Textiles ^d	11,500	21,000	23,100	28,000

Source: Belgian Government, *Plan décennal pour le développement économique et social du Congo belge* (Brussels, 1949); *Bulletin mensuel de la Banque du Congo belge* (Brussels), July-August 1950; Institut national de la statistique et des études économiques, *Etudes et Conjon-*

ture: Economie mondiale (Paris), March-April 1950.

^a Hectolitres.

^b Thousands of barrels.

^c Thousands of pairs.

^d Thousands of metres.

spect of physical output. The industrial census of March 1939 reported the maximum production capacity of various industries,¹⁷ but the industrial categories are different from those for which post-war data have been presented. Indices of physical production exist for mining but not for secondary industries.

Though the post-war economy of the country has been influenced by a number of abnormal factors, data on the economically active population afford a partial indication of structural change. Between 1936 and 1947, when the population grew rapidly, the number of economically active persons increased from 1.7 million to 2.3 million, or by nearly one-third.¹⁸ The number of persons employed in secondary industries¹⁹ rose from 141,400 in 1936 to 210,800 in 1947, an increase of 49 per cent. The percentage of persons employed in secondary industries to the gainfully employed population rose from 8.2 to 11.9 per cent concurrently with a slight rise in the percentage employed in mining and a decrease in the percentage in agriculture and fishing (from 74 to 67 per cent). In terms of absolute numbers, the work force in textiles and apparel rose from 67,000 to 90,000; in food processing, from 14,000 to 24,000; in metallurgical industries, from 15,000

to 24,000; and in various other industries, from 46,000 to 73,000.

Expansion of secondary industries in the post-war period has been assisted by an unprecedented flow of external capital, especially French capital, to Morocco.²⁰ Among the industries which have expanded are fish canning, output of which rose from about 500,000 cases in 1938 to 1,750,000 cases in 1949; vegetable oils and fats, the production capacity of which increased from 5,000 to 110,000 tons per year; fruit juices and derivatives; cement; superphosphates and paper. The metal, chemical and textile industries have experienced a significant qualitative development. New enterprises have been established since the end of the war for the production of cast steel, bronze, wire, cables, cotton goods and jute sacks.

Regarding French North Africa in its entirety, the Organisation for European Economic Co-operation reported in 1950: "Industrial production is about half as great again as in 1938. Production of electricity has more than doubled. Production of coal, which was formerly negligible, now covers about 40 per cent of the needs of these territories, thus making possible a rapid development of industrial production".²¹

¹⁷ Government of Morocco, *Annuaire de statistique générale*, 1938, table 131.

¹⁸ *Annuaire statistique du Maroc 1947-1948*.

¹⁹ Construction not included.

²⁰ "L'Essor des industries Marocaines de 1938 à 1950", *Bulletin économique et social du Maroc*, first quarter, 1950.

²¹ Organisation for European Economic Co-operation, *Second Report* (Paris, 1950), page 45.

Chapter 5

TRANSPORTATION

In the sections which follow, salient aspects of the developing transport situation in Africa¹ are considered, with the exception of inland waterways, on which there is little information on a continental basis regarding volume of traffic and capital investment. Inland waterways are important in respect of the Congo in Central Africa, the Niger, Gambia, Senegal and Volta systems in western Africa, the Nile and the great lakes of east central Africa, but not elsewhere on the continent. The need for improvement of inland waterways has been recognized by the governments concerned as essential to well developed transport systems.

It is necessary to emphasize that, particularly in a large area south of the Sahara, the least advanced technique of transport—human portage—still plays a considerable role in short-distance movements of small quantities of goods, and in some areas such as Basutoland and certain desert countries pack animals are important. The balance between the more and the less advanced carriers varies widely among the different countries.

Emphasis must also be given to the very substantial development of transport which is in prospect. The figures cited by the Organisation for European Economic Co-operation² are pertinent. Extension of transport facilities in European overseas territories in Africa south of the Sahara, which would be fairly evenly divided among railways, roads, water transport and airways, would involve "very large sums totalling almost one and a half thousand million dollars, spread over periods ranging from four to eight years or even longer".³ In addition, the projected investment in French

North Africa in railway modernization alone is in excess of \$500 million.³

RAILWAY TRANSPORTATION

Railway construction in Africa has been closely related to, and in many cases determined by, development of mineral and agricultural exports. Also, in some areas rate structures have been designed to favour development of export traffic. External finance has been required for most of the railway development, and further extensions will continue to depend largely on such assistance. According to one source,⁴ £384 million of foreign capital, amounting to nearly one-third of the aggregate external investment in most of Africa south of the Sahara before 1934, went into development of railroads, and by far the largest portion of this capital was engaged under public auspices.

The largest expansion of construction occurred between 1900 and 1932. In 1880 there were in operation slightly less than 1,000 kilometres of railway lines; by 1900 about 8,600 kilometres; by 1910 about 30,900 kilometres; between 1910 and 1932 this length more than doubled.⁵ The economic depression of the nineteen thirties checked further construction. Though the available data do not permit an accurate comparison of the pre-war and the post-war situations, the aggregate length of railways in operation is reported to have contracted somewhat during the Second World War.⁵ After the end of the war, however, railway construction was again undertaken on a modest scale as a direct response to the heightened level of economic activity in many parts of Africa and emerging development needs. In North Africa,

¹ Excluding Egypt.

² *Second Report* (Paris, 1950).

³ *Ibid.*

⁴ S. H. Frankel, *Capital Investment in Africa* (London, 1938).

⁵ According to data in *Universal Directory of Railway*

Officials and Railway Yearbook (London). Figures include Egypt, which as of recent date accounted for about 8 per cent of the African total. The series presented in this source give the length of railways in operation as about 69,000 kilometres in 1932, 72,000 in 1937 and 67,000 in 1947. Detailed study of these figures has not been made to ascertain the statistical homogeneity.

furthermore, the necessary repair of damaged railways, stations and bridges has been carried out.

In much of inter-tropical Africa railway lines were constructed without regard to subsequent need for linking them to assure a co-ordinated flow of traffic; as one result, the different gauges constitute a problem within some territories and between different rail systems. During the post-war period co-ordinated planning has been undertaken among the several governments of central and southern Africa with a view to eventual remedy of these deficiencies.

Currently, Africa (excluding Egypt) has about 63,000 kilometres of main and branch lines, which is almost one-half the total length of the Latin American network. The lines are heavily concentrated in the area covered by the Union of South Africa's system and that of French North

Africa. The former has 21,454 kilometres, or almost 34 per cent of total African length; French North Africa has 8,071 kilometres, or almost 13 per cent of the total; thus the two regions account for nearly half of all railway lines in Africa, excluding Egypt. The third largest network is in the Belgian Congo, with 4,749 kilometres, 7.5 per cent of the total.

The density of the network in relation to area and population is shown in table 41. The omission of certain countries is explained by the absence of railways. In one such country, Liberia, external capital has been made available to construct a railway connecting the Bomi Hills iron ore deposits with Monrovia, an airline distance of 63 kilometres.

Since the end of the war, railway freight traffic in the region has risen considerably above pre-

Table 41. Length of Railways in Relation to Total Area^a and Population, 1949

Area	Length of main and branch lines (kilometres)	Area per kilometre of railway line (square kilometres)	Population per kilometre of railway line
Anglo-Egyptian Sudan	3,240	773	2,444
Belgian Congo	4,749	493	2,264
Eritrea	383	324	2,789
Ethiopia and French Somaliland	784	1,184	19,190
French territories: ^b			
Algeria	4,311	511	1,969
Cameroons	504	875	5,595
French Equatorial Africa	510	4,922	8,100
French West Africa	3,769	1,241	4,244
Madagascar	853	694	5,035
Morocco	1,711	245	4,807
Réunion	126	20	1,921
Togoland	440	120	2,145
Tunisia	2,049	76	1,577
Libya ^c	354	3,413	3,153
Portuguese territories:			
Angola	1,991	626	2,258
Mozambique	2,082	370	2,938
Spanish Morocco	31	634	36,129
Union of South Africa ^d	21,454	95	558
United Kingdom territories:			
Gold Coast	789	259	4,708
Kenya, Uganda and Tanganyika	4,942	357	2,815
Mauritius	186	11	2,387
Nigeria	3,063	286	7,752
Northern and Southern Rhodesia ^e	3,920	473	1,052
Nyasaland	509	241	4,179
Sierra Leone	499	145	4,008

Source: *Universal Directory of Railway Officials and Railway Yearbook, 1949-1950*. Area and population figures are for 1947.

^a Excluding Egypt.

^b Excluding French Somaliland, figures for

which are included with those for Ethiopia.

^c Excluding the Fezzan, where there are no railways.

^d Together with South-West Africa.

^e Together with Bechuanaland.

Table 42. Railway Freight Traffic Compared With World Traffic, 1937 and 1946 to 1949

(In thousand millions of net ton-kilometres)

Year	World	Per cent of 1937	Africa ^a	Per cent of 1937
1937	1,220	100	18.0	100
1946	1,583	130	24.4	136
1947	1,754	144	25.2	140
1948	1,825	150	27.8	154
1949	1,730	142	30.2	168

Source: United Nations, *Monthly Bulletin of Statistics*, November 1950.

^a Excluding Egypt.

war levels. Railway freight carried rose from 18,000 million ton-kilometres in 1937 to 30,200 million in 1949. Africa's increase of about 68 per cent in this period (see table 42) surpassed the relative increase in every other major area of the world; even so, the region's traffic constituted less than 2 per cent of the world's railway freight traffic.

In several countries there have been recent extensions of railway lines. In Tanganyika a line about 210 kilometres in length has been completed to the mineral district of Mpanda, and 132 kilometres of a new line associated with the ground-nut project was completed by the middle of 1950. In the Union of South Africa the Whites-Odendaalsrus line has been opened in connexion with the development of the Orange Free State gold-mining area, and some extensions have been made in coal-mining areas. However, more ambitious plans for new lines of lower priority have been held in abeyance owing to financial considerations.⁶ In Mozambique, the Tete railway was opened from Dona Ana, where it joins with the (British) Central African Railway, to Moatize. Also, a 64-kilometre railway linking Lumbo with the port of Nacala was completed in 1949, as well as an inland extension of the railway which crosses the Namuli highlands, passing through agricultural districts. Surveys have been undertaken in southern Africa with a view to new construction which appears to be required for the expanding trade of the Rhodesias.⁷ Possible new extensions of considerable importance have received official attention in the Belgian Congo, and construction of a 480-kilometre line from

Kamina to Kabalo has been decided upon. A similar extension is planned in northern Nigeria. Throughout east central and southern Africa the requirements of a truly international railway system have been officially considered at several conferences. Elsewhere the realignment, and in some cases the doubling, of the permanent way have been authorized; an important realignment project has been completed by (British) East African Railways. In the French territories of western Africa, modernization and rehabilitation, rather than extension of lines, have been the principal concern.

On the whole, however, the principal effort made during the post-war years has been designed to re-equip existing lines with locomotives and rolling-stock. Through 1948 renewals lagged in a number of areas; receipts of locomotives and freight cars have subsequently been accelerated, with advantageous effects on the flow of traffic.

As shown by the detailed figures for territorial systems given in table 43, the volume of freight traffic in all French territories, except Réunion, in 1948 was substantially above pre-war levels, the increases ranging from 23 to 124 per cent. The systems of the Union of South Africa, United Kingdom territories, the Belgian Congo and the Anglo-Egyptian Sudan have consistently carried larger than pre-war volumes of freight traffic.

These heightened levels of traffic have subjected the railways to strain; consequently there has been recurrent congestion at a number of centres south of the Sahara, making necessary measures to increase the short-run and long-run capacity of the systems.

⁶ W. Heckroodt, "South African Railways" in *Overseas Railways—1950* (publication of the *Railway Gazette*, London), page 29 *et seq.*

⁷ The Rhodesian railways were nationalized in 1947.

Table 43. Freight Traffic of Certain Railway Systems,
Pre-war and Post-war

Country	Base year	Volume (millions of net ton- kilometres)	1947 1948 1949		
			as percentage of base year		
Anglo-Egyptian Sudan	1938	526	117	112	135
Belgian Congo	1937	4,311 ^a	127	140	..
Eritrea	1943	16	80	89	82
French territories:					
Algeria ^b	1937	868	128	139	138
Cameroons	1938	39	116	135	154
French Equatorial Africa	1938	35	173	207	207
French Somaliland	1938	53	200	224	247
French West Africa	1938	282	85	122	141
Madagascar	1938	57	104	143	131
Morocco ^c	1944	830	119	130	141
Réunion	1938	9	90	73	94
Togoland ^d	1938	7	187	192	221
Tunisia ^d	1938	770	102	113	108
Portuguese territories:					
Angola	1943	250	156	191	..
Mozambique	1938	160	188	165	..
Spanish Morocco	1937	2.3	165	..	..
Union of South Africa ^e	1937	10,286	145	155	172
United Kingdom territories:					
Gold Coast ^f	1938-39	831 ^f	..	193	205
Kenya, Uganda and Tanganyika ^g	1939	530 ^g	..	162	..
Nigeria ^h	1938	1,201 ^h	116	110	..
Northern and Southern Rhodesia ⁱ	1937	2,410	104	119	134
Sierra Leone ^j	1938	68 ^j	144	141	..

Source: Statistical Office of the United Nations.

^a In thousands of tons, from *Plan décennal pour le développement économique et social du Congo belge*, vol. I (Brussels, 1949).

^b Including service traffic.

^c Prior to January 1950 including Compagnie Tanger-Fez in Spanish Protectorate; from 1944 to 1949, excluding fast freight; including some service traffic.

^d Slow freight only, including some service traffic.

^e Including South-West Africa and Vryburg-Bulawayo lines; excluding livestock.

^f In thousands of tons; from Colonial Annual Reports, *Gold Coast, 1938-39* and *Gold Coast, 1948; Overseas Railways, 1949*. All figures for year ending 31 March.

^g In ton-miles; from *Overseas Railways, 1949*.

^h Colonial Annual Reports, *Nigeria, 1947* and 1948; in thousands of tons.

ⁱ Excluding Vryburg-Bulawayo line; service traffic included and livestock excluded; beginning April 1947, excluding Beira and Shabani lines.

^j In thousands of tons, from Colonial Annual Reports, *Sierra Leone, 1947* and 1948.

ROAD TRANSPORTATION

It has long been recognized by the administrations in inter-tropical Africa that the development of road transportation, as an element in a satisfactory transport system, would contribute particularly to an expansion of internal exchange and to the relief of human portage. However, the early construction of roads was attended by special difficulties owing to the scarcity of labour, low levels of traffic and natural conditions. Lord Hailey noted that, "as commerce and intercourse expanded . . . the need to provide more durable roads for motor traffic has involved the formation of technical departments, and a greatly increased

scale of expenditures".⁸ Furthermore, there has been a tendency to substitute capital for labour in the construction and repair of roads, though techniques in most areas are still not extensively mechanized.

Before the Second World War the level of development of arterial, secondary and local roads varied considerably from one part of Africa to another, so that over-all generalizations cannot readily be made. In the nineteen thirties efforts were made to overcome lags in the French territories in West Africa, and much construction

⁸ Lord Hailey, *An African Survey* (second edition, London, 1945), page 1549.

was also undertaken under Italian auspices in parts of East Africa. Elsewhere expansion occurred. For example, in the Belgian Congo the public network expanded from 31,000 to 67,000 kilometres between 1931 and 1939; in the Union of South Africa under the National Roads Act new roads were constructed and existing roads improved; in Southern Rhodesia expenditures on road construction and maintenance were greatly increased after 1935. The problem of co-ordination of motor with rail transportation was serious in some territories; the heavy post-war traffic carried by the railroads has, however, subsequently alleviated this problem, although there have been some recent increases in private road motor services also.

During the war, the roads deteriorated or suffered war damage in parts of North Africa and Ethiopia. Some territories—for example, Southern Rhodesia—reduced expenditures on construction and maintenance. On the other hand, significant new construction was undertaken in other areas important to military supply, including the Belgian Congo and, in West Africa, several of the Non-Self-Governing Territories and Liberia.

Since the close of the war external finance has been available to French North Africa and Ethiopia for rehabilitation of roads. In Libya, which has received financial aid from the United Kingdom and France, the network had deteriorated in parts, but some of the vital arteries have been well maintained and some new work has been undertaken by the French administration in the Fezzan. In tropical Africa many road construction schemes have been included as part of the development plans of the different territories, and at varying rates new construction has been undertaken. A major scheme on which work has been progressing involves the improvement and extension of the principal inter-territorial road linking the United Kingdom territories in East Africa. A comprehensive review of the inadequacies of the road network south of the Sahara was made by the Conference on African Transport of the Organisation for European Economic Cooperation in Paris in February 1950. Subsequently, the United States Economic Cooperation

Administration allotted about three and a half million dollars as marginal assistance to accelerate the work being undertaken in the Belgian, British and French territories in West Africa, and smaller sums for certain territories south of that region.⁹ Another international conference, held in French Equatorial Africa in November 1950, formulated recommendations for improvement of roads, waterways and railways in the Belgian Congo and in the British and French territories in West Africa.

The available information does not permit an accurate and comprehensive assessment of the pre-war and the post-war situations. Some idea of the density of roads in relation to population and area may be obtained from table 44. In some respects the figures are not comparable from territory to territory, for the data in some cases include and in others exclude tertiary roads of poor quality; accordingly, it has been considered advisable not to attempt a detailed break-down to show the extent of durable "all-weather" roads.

To a limited extent, the level of development of the use of motor vehicles in Africa is reflected in an index showing the number of persons per vehicle in certain countries. However, this index, based on both passenger and commercial vehicles, does not afford an accurate basis for determining the extent of goods traffic, or of long-haul in relation to short-haul and local traffic. As an approximate basis for evaluating the figures provided in table 45, it is pointed out that in 1948 the number of persons per vehicle in the United States of America was 4; in Canada, 7; in France, 24; in Spain, 220; in Egypt, 368; in Turkey, 1,300; in India, 1,720; in China, 8,745.¹⁰

The indices (disregarding for the moment changes over time) show relatively high concentrations of motor vehicles relative to population in the Union of South Africa, in Southern Rhodesia, and also in French North Africa and Mauritius.¹¹ Except for Southern Rhodesia, Kenya has had the highest concentration (less than 300 persons per vehicle) in inter-tropical Africa, and there were less than 500 persons per vehicle in Gambia, the

⁹ United States Economic Cooperation Administration, *Ninth Report to the Congress* (for the quarter ended 30 June 1950) (Washington, D.C., 1950).

¹⁰ From a compilation in *Bulletin économique et social*

de la Tunisie (Tunis), March 1950, page 53.

¹¹ Figures to show the pre-war and post-war situation in Libya, where a considerable development of roads took place before the war, are not available.

Table 44. Length of Roads

Country	Total length (kilometres)	Population per kilo- metre of road	Area per kilometre of road (square kilometres)
Anglo-Egyptian Sudan	22,531	351	121
Belgian territories:			
Belgian Congo	100,000	108	23
Ruanda-Urundi	7,874	465	7
French territories:			
Algeria	88,140	96	25
French Equatorial Africa	40,000	103	63
French Somaliland	57	789	381
French West Africa	101,000	158	46
Madagascar	5,008	858	118
Morocco	10,002	200	10
Tunisia	9,762	237	14
Liberia	1,159	1,380	96
Portuguese territories:			
Angola	35,084	128	36
Mozambique	29,000	211	27
Union of South Africa	170,591	68	7
United Kingdom territories:			
Basutoland	1,260	441	24
Bechuanaland	4,540	66	157
British Somaliland	2,826	248	62
Gambia	970	258	11
Gold Coast	13,058	284	156
Kenya	12,073	348	48
Mauritius	1,144	388	2
Nigeria	42,232	562	21
Northern Rhodesia	15,955	107	47
Nyasaland	5,140	414	24
Sierra Leone	2,659	752	27
Southern Rhodesia	15,600	120	25
Swaziland	1,810	105	10
Tanganyika	39,280	144	24
Uganda	13,885	293	18
Zanzibar and Pemba	483	542	5

Source: Principally official statistics of the individual countries; 1947 population figures used.

Gold Coast and Zanzibar. On the other hand, the lowest concentrations were found in Madagascar, Sierra Leone, Liberia, Nigeria, French West Africa, French Equatorial Africa and the Anglo-Egyptian Sudan. This distribution of vehicles relative to population reflects not only the levels of motor traffic in the various countries, but also the location of the European population in Africa and the comparatively high incomes of this section of the population.

Compared with pre-war, the number of vehicles relative to population in the post-war year shown in table 45 declined in a number of countries, especially so in Algeria, Morocco and Tunisia. On the other hand, the index improved appreciably in the Union of South Africa, the Belgian Congo, Southern Rhodesia, Kenya and Mauritius.

The more detailed figures which have been available for this study show that, as compared with pre-war, the number of commercial vehicles has increased considerably in French North Africa, even though the indices based on the total number of vehicles declined. The number of commercial vehicles also rose significantly in the Union of South Africa, the Belgian Congo, Southern Rhodesia, Mozambique and Mauritius. These increases suggest an expanded use of motor vehicles in the goods traffic of these areas.

Since the close of the war there has been a tendency to retire over-aged vehicles. New registrations, which in most cases recently have been above pre-war levels, have varied in accordance with the amount of foreign exchange available for buying vehicles and the degree of stringency

Table 45. Motor Vehicles and Number of Persons per Vehicle^a in Certain Countries, Pre-war and Post-war

Country	Pre-war year	Number of vehicles (thousands)	Number of persons per vehicle	Post-war year	Number of vehicles (thousands)	Number of persons per vehicle
Algeria	1937	123.6	60	1947	50.2	169
Anglo-Egyptian Sudan	..	..	..	1947	6.4	1,237
Angola	1937	3.5	751	1947	5.3	848
Belgian Congo	1937	6.9	1,472	1947	13.5	797
French Equatorial Africa	1938	2.8	1,228	1945	3.2	1,291
French Morocco	1937	59.1	110	1948	40.8	202
French West Africa	1938	16.7	894	1945	9.9	1,616
Gambia	..	..	..	1947	0.6	417
Gold Coast	..	..	..	1947	8.6	432
Kenya	1938	11.3	295	1947	18.4	228
Liberia	..	..	..	1948	0.7	2,285
Madagascar	1939	0.8	4,869	1946	0.9	4,772
Mauritius	1939	2.9	142	1948	3.6	123
Mozambique	1937	5.6	840	1947	8.2	746
Nigeria	..	..	..	1947	12.9	1,841
Sierra Leone	..	..	..	1947	0.8	2,500
Southern Rhodesia	1937	19.5	69	1947	32.5	57
Tunisia	1937	26.5	101	1949	21.6	150
Uganda	1938	4.9	755	1947	5.4	752
Union of South Africa	1937	324.1	30	1947	446.8	26
Zanzibar and Pemba	..	..	..	1948	0.6	437

Source: Generally official statistics of the individual countries; for Liberia, United States Department of Commerce, International Reference Service, *Liberia—Summary of Basic Information* (Washington, D.C.), June 1950.

^a Including passenger cars, buses and commercial vehicles; 1937 population figures used for pre-war; 1947 population figures for post-war.

of import controls. Facilities for assembly of automobiles have expanded since the war in the Union of South Africa.

MARITIME TRANSPORTATION

Since 1945, marine shipping space has been increasingly available to Africa. The index based on total net registered tonnage of vessels entered and cleared in external trade at African ports (base 1937=100) was 86 in 1946, rising in each succeeding year to reach 100 in 1949.¹²

Table 46 provides data on combined freight loaded and unloaded in external trade at ports of certain African countries. The upward trend shown for Tunisia is of special interest in view of the heavy damage to ports and transport facilities incurred during the war; this reflects the rapid reconstruction of port facilities which has taken place. The post-war trend in Africa as a whole has been upward, and in most countries for which data are available the volume of freight handled has exceeded pre-war levels.

The service of this augmented traffic since the end of the war has imposed a heavy and persistent strain on the principal ports south of the Sahara and has resulted in costly delays in movement of goods and ships. As a result of these and other transportation difficulties, serious congestion developed at a number of ports and production centres, with limiting effects on the expansion of commerce and the utilization of production capacity in some areas. With a view to overcoming these difficulties and also to meeting the requirements of anticipated development, energetic measures have been taken to expand port capacities and facilities and to overtake war-time arrears of renewal of equipment.

In the Belgian Congo a serious congestion developed at Matadi and at Leopoldville. In 1948 the Government found it necessary to fix priorities on shipments via Matadi, to increase the capacity of Congo River transport and to route a part of

¹² United Nations, *Monthly Bulletin of Statistics*, March 1950. Figures include Egypt.

Table 46. International Sea-Borne Shipping: Combined Freight Loaded and Unloaded in External Trade of Certain Countries, Pre-war and Post-war

(In thousands of metric tons)

Country	Base year	Volume	1947	1948	1949
			As percentage of base year		
Algeria	1937	11,085	58	75	81
Angola	1939	461	168	208	247
Belgian Congo	1938	495	139	157	159
French Camerouns	1938	247	111	141	317
French Equatorial Africa	1937	572	57	81	95
French Morocco	1938	3,462	156	189	221
French Somaliland	1938	195	..	209	236
French West Africa	1938	3,505	64	76	90
Kenya and Tanganyika	1938	1,585	158	191	220
Madagascar	1938	416	132	162	..
Mozambique	1939	1,593	263	247	..
Nigeria	1937	1,931	93	114	128
Réunion	1938	179	84	141	116
Tunisia	1937	4,665	73	89	93
Union of South Africa	1937	7,928	101	120	120

Source: United Nations, *Monthly Bulletin of Statistics*, November 1950, and official data.

the import traffic via Lobito (Angola) and Dar es Salaam (Tanganyika). By 1949 the measures taken, including improvement of port installations at Leopoldville, had eased the situation.¹³

Mombasa and Dar es Salaam, the principal ports of British East Africa, also experienced serious congestion. In January 1949, it was decided to extend the port facilities at Dar es Salaam, the extensions to include an expansion of the lighter quay frontage, a large increase in the lighter fleet and addition of cranes, so that the port's capacity (originally 10,000 tons per month) would reach 27,000 tons of ocean-going freight per month. In addition, plans have been made to construct two deep-water berths, the first to be completed in 1951.¹⁴ Work has also commenced on a new port located at Mtwara, near Mikindani, Tanganyika, which would serve the newly developed ground-nut area.¹⁵

The difficulties experienced at Beira (Mozambique), which serves the Rhodesias and Nyasaland to a large extent and the Belgian Congo less

significantly, have been especially severe. In 1948 international arrangements were made to establish controls over import traffic. Though part of a large loan made to Mozambique by the Portuguese Government in 1947 was allocated to improvement of this port and other transportation facilities, the congestion persisted. In 1949 the Portuguese Government took over the British concessions of the Beira Port Company and Beira Railway. Subsequently, on 17 June 1950, the Government of Portugal, the United Kingdom and Southern Rhodesia concluded a twenty-year convention according to which the Portuguese Government undertook to improve the port and the railway and the British administrations assured sufficient traffic to utilize the expanded port facilities to full capacity. Alleviation of conditions at the port of Beira and related railway facilities was among the principal items considered by the Central African Transport Conference at Lisbon in 1949 and by the South and Central African Transport Conference at Johannesburg in 1950.¹⁶

ance project, providing for a survey of railway facilities between Southern Rhodesia and Mozambique. Rail links between Northern Rhodesia and Tanganyika are also included in the survey.

Other topics considered at the conference in 1950 included alternative routes from the Rhodesias to the coast; a link from the port of Dar es Salaam (Tanganyika) to the Belgian Congo; railway improvements in East and Central Africa; and uniform road regulations. Belgium, France, Portugal, Southern Rhodesia and the Union of South Africa participated in the conference.

¹³ Belgian Ministry of Economic Affairs, *L'Economie belge en 1948* (Brussels, 1949) and *L'Economie belge en 1949* (Brussels, 1950).

¹⁴ United Kingdom Colonial Office, *The British Territories in East and Central Africa, 1945-1950*, Cmd 7987 (London, 1950), page 52.

¹⁵ *Ibid.*

¹⁶ In addition, means of relieving the pressure on the port of Beira will be studied as part of a United States Economic Cooperation Administration technical assist-

In the Union of South Africa, the strain on the principal ports eased considerably after the middle of 1949, largely as a consequence of the operation of import controls.

Elsewhere, in East Africa, significant improvements have been made at Djibouti, the terminus of the French-Ethiopian railway line. In West Africa also, measures have been undertaken to improve the principal ports. For example, extensive work has been under way at Takoradi, the deep-water port of the Gold Coast, which is an important outlet for the expanding timber trade. The equipping of Freetown in Sierra Leone with its first deep-water quay is scheduled for completion in 1951. Attention has been given to the needs of Dakar, Conakry and Abidjan in French West Africa and to the secondary ports of French Equatorial Africa. Projects providing for the modernization of lighthouses are in hand in Liberia and elsewhere in West Africa.

At the free port of Monrovia, Liberia, the large modern facilities constructed under Lend-Lease arrangements with the United States were opened in July 1948. In 1950 this port was handling an average of 12,000 tons per month, and work was in progress on installations to service large exports of iron ore, in vessels of 20,000-ton capacity, which were expected to develop as a result of the opening up of the Bomi Hills deposit.¹⁷

In French North Africa substantial construction and improvement of ports have been carried out since the end of the war, and further developments are under way. Tunisia's war-devastated ports of Sfax, Sousse and Tunis were completely cleared of wreckage by the end of 1948; similar work has subsequently been done at Bizerte. Work on new or reconstructed port installations and on the basins, partly completed, will permit the accommodation of larger vessels at Sfax and Goulette and a better co-ordinated flow of traffic in the Tunis-Goulette area.¹⁸ The completion of the reconstruction work at the major Algerian ports was

scheduled for 1951.¹⁹ In Morocco, where the port of Casablanca has absorbed the major part of the post-war increase in traffic, the decision has been taken to double the capacity of this port as the financial means are made available.²⁰

The major Libyan ports—Tripoli and Bengasi—though not fully reconstructed by 1950, were adequate to meet current traffic needs.

Other significant post-war changes have included new direct shipping services between North America and parts of Africa south of the Sahara, reflecting the increased participation of the United States and Canada in African trade. There has also been an increase in foreign-going ships registered in the Union of South Africa, but the tonnage involved is small,²¹ and the whole of Africa is still heavily dependent on oversea firms for maritime shipping services.

AIR TRANSPORTATION

The penetration of Africa by civilian aviation began shortly after the close of the First World War. Before the outbreak of the Second World War, the continent was connected by air with the other continents, and long-distance routes traversed it as far as the Union of South Africa. The development of regional air traffic in Africa had also begun; however, the air network was not elaborate and, in general, service was infrequent.

Table 47 shows the very considerable development of passenger and freight traffic which has taken place since the pre-war period.²² In most cases for which data are available, this expansion of traffic has continued at a high rate since 1947. The relative increase in freight traffic has in some cases exceeded the rate of growth in passenger travel, but as a rule the movement of goods has tended to be confined to commodities of high value, comprising a small part of the African tonnage. The aeroplane has assumed its largest significance in the movement of persons and of mail.

¹⁷ "Investment in Concrete", *The West African Review* (Liverpool), November 1950.

¹⁸ French Embassy, Information Service, *News from France* (New York), 10 June 1948, and *Bulletin économique et social de la Tunisie*, March 1950.

¹⁹ French Republic, Commissariat général du plan de modernisation et d'équipement, *Etat des opérations du plan: outre-mer* (December 1949).

²⁰ Central Bureau of Statistics, *La Conjoncture économique marocaine* (Rabat, 1949).

²¹ At the end of May 1948 there were 30 units having an aggregate gross tonnage of 117,000. In 1949 two South African firms were admitted, for the first time, into the South Africa-Europe Shipping Conference.

²² Post-war data are not available for Libya. Pre-war data are included to show the marked development which had taken place there under Italian auspices.

Table 47. Air Traffic in Selected Countries, Pre-war and Post-war

Country	Passengers		1948		1949		Freight		1948		1949	
	1938 (thousands)	1947	as percentage of 1947		as percentage of 1947		1938 (metric tons)	1947	as percentage of 1947		as percentage of 1947	
Algeria	18.3	162.8	116	160	355.0	8,258	231	234				
Angola	0.7 ^a	8.3	241	..	0.9 ^a	150	428	..				
Belgian Congo	2.9	19.0	93	..	97.0	542	193	..				
French Camerouns	0.2	5.1	86	135	1.0	49	86	210				
French Morocco	9.2	60.2	184	224	54.0	2,653	226	266				
French West Africa	..	55.4	133	153	..	3,551	129	151				
Gold Coast	..	..	..	..	..	109	151	221				
Kenya and Uganda	3.2	13.3	247	..	..	..	..	..
Libya	13.3 ^b	..	..	..	390 ^b	..	..	..	
Mozambique	5.1 ^c	20.4	91	..	47 ^c	331	118	..				
Nigeria	..	..	..	..	46 ^d	77	163	303				
Sierra Leone	..	..	..	..	..	19	37	95				
Southern Rhodesia	..	21,228.0 ^e	141	151	..	240 ^f	230	348				
Tunisia	10.3	41.1	148	170	22	1,048	332	232				
Union of South Africa	11,304.0 ^e	115,008 ^e	147	146	924 ^f	2,172 ^f	184	251				

Source: Statistical Office of the United Nations and official sources; for Libya, 1937 data from Herbert Müller-Jena, *Die Kolonialpolitik des Faschistischen Italien* (Essen, 1939).

^a 1941.

^b 1937.

^c 1940.

^d 1941.

^e In thousands of passenger-kilometres.

^f In thousands of ton-kilometres.

The post-war development owes much to the impetus received during the war. While the principal routes through and to Africa via the Mediterranean Sea were disrupted early in the war,²³ military requirements stimulated a vast expansion in the scope of air operations on the continent, an opening of new routes and a growth in facilities and experience.

The post-war development of civil aviation has been featured by an appreciable increase in the number of international trunk lines penetrating Africa and the frequency of service on them. Major world air lines have connected important centres in all parts of the continent, extending as far as Johannesburg and Tananarive, Madagascar, making connexions with one another and with other continents. The post-war development of trans-Saharan routes has likewise been significant.

The growth of medium-length regional air networks in Africa has been even more striking. This development has been encouraged by the various sovereign states of Africa and by a number of territorial governments. Since the end of the war

²³ D. Whittlesey and others, "Aviation in Africa", *Air Affairs*, vol. 1, No. 4 (Washington, D.C., 1947).

Central African Airways, East African Airways and West African Airways have been established under British auspices. As an example of development of regional connexions, Southern African Airways now connects with Central African Airways, and the latter operates planes to the region covered by East African Airways and the Portuguese air line Divisão do Estado dos Transportes Aeros (DETA). Ethiopia, the Anglo-Egyptian Sudan and Liberia have chartered air transport companies to service their respective areas and also, in the case of Ethiopian Airlines, several international routes. Internal traffic has been encouraged in the Belgian Congo, which in 1948 had 175 public and 7 private aerodromes. The curtailment of services in a few cases owing to financial difficulties has not interrupted the general trend towards expansion.

Projects in practically every part of Africa are under way, or are planned, with a view to further development of the air network, and to construction of aerodromes and improvement of ground services and meteorological and technical aids to flying. A number of significant projects have been completed.

Chapter 6

LABOUR

SUPPLY OF LABOUR

Considerable difficulty is encountered in attempting to estimate the size of the labour supply in Africa as a whole. Not only are estimates of population in some cases inexact, but in many parts of Africa south of the Sahara the term "wage-earning" in statistical returns does not necessarily refer to persons whose main activities are in wage-earning employment but includes as well many engaged in subsistence agriculture. In North Africa also, subsistence agriculture plays a substantial, though in general a less important, part in the economy than in Africa south of the Sahara. For this as well as for other reasons, it is convenient to distinguish between North Africa and the rest of Africa in a continent-wide review relating to aspects of the labour supply; the brief review presented here is confined mainly to certain aspects of labour in Africa south of the Sahara. Both regions, however, call for more extensive study in this respect than has been possible within the scope of this general review.

In tropical and southern Africa, a potential supply of labour exists in the large section of the population which is still engaged mainly in subsistence agriculture. This source at present supplies a considerable flow of migrant labourers, as well as increasing numbers whose status is changing to that of permanent wage earners. The availability of this reserve of more or less untrained labour, especially for temporary employment, has a strong influence on the supply of labour in general in Africa.

Africans first confronted with modern economic development were not easily induced to exchange their subsistence activities for wage employment. Both in public and in private undertakings, pressures ranging from forced levies to taxation have in the past been employed to provide a supply of labour, though both the extent and the nature of the methods adopted varied considerably with

local conditions. Administrative policies encouraging economic development, and the growing influence of money economy in African society, have increased both the need and the desire of Africans to acquire cash income, and, hence, the number willing to work for wages.

Although data are not available to furnish an adequate estimate of the total labour force in tropical and southern Africa, available evidence is sufficient to show that the number of wage earners in the population has increased more rapidly than the population as a whole since the immediate pre-war years, as table 48 indicates. The increases

Table 48. Number of Africans in Wage-Earning Employment in Certain Countries, Pre-war and Post-war

Country	Estimated number of African wage earners		Per cent increase over pre-war
	1936	1948	
Belgian Congo	491,500 ^a	820,012	67.0
French West Africa	178,908 ^b	232,000 ^c	30.0
Kenya	213,743	394,918 ^d	85.4
Nigeria	227,451	272,400	20.0
Northern Rhodesia	76,672 ^e	127,500	65.6
Southern Rhodesia	254,297	376,868 ^f	48.8
Tanganyika	243,429 ^a	395,500	62.5

Source: United Nations, *Information from Non-Self-Governing Territories*, Summary of information transmitted by the Government of Belgium, 28 July 1950; Summary of information transmitted by the Government of France, 21 July 1950; Summary of information transmitted by the Government of the United Kingdom of Great Britain and Northern Ireland, 20 July 1950. Lord Hailey, *An African Survey* (London, 1945). United Kingdom, Colonial Annual Reports, *Nigeria 1948* (London); Colonial Office, *Report to the General Assembly of the United Nations on the Administration of Tanganyika for the Year 1949* (London, 1950). *Plan décennal pour le développement économique et social du Congo belge*, vol. I (Brussels, 1949).

Kenya: East Africa High Commission, East African Statistical Department, *East African Economic and Statistical Bulletin*, March 1950. Southern Rhodesia: Department of Statistics, *Statistical Yearbook*, 1946 (Salisbury). Tanganyika: *Blue Book for the Year Ended 31st December 1937*.

^a 1937.

^b 1935.

^c 1947.

^d 1949.

^e 1938.

^f 1946.

appear to have been least in Nigeria and French West Africa, where peasant farming, particularly in the production of palm oil and cocoa, is common, and mining is on a relatively small scale. The increases appear to have been greatest in Kenya, but were also significant in the Belgian Congo, Northern Rhodesia and Tanganyika; the movement was general and corresponded to developments in mining, agriculture and secondary industry.

Skilled and unskilled labour

A high degree of differentiation of skills would not be expected in an under-developed area like Africa, but the proportion of unskilled to skilled workers is probably high even in comparison with other under-developed areas. Among the reasons for this are the influence of the simple tribal economies and the existence of an extensive migrant labour system which militates against the acquisition and development of special skills requiring long training and steady application. Furthermore, in the areas of considerable European settlement in eastern and southern Africa, particularly in the Union of South Africa where the greatest increase in African wage-earning labour has taken place, Africans are by custom and institutional practice limited in the main to semi-skilled and unskilled occupations. In most other parts of Africa the range of occupations open to Africans is not restricted by such institutional practices, but opportunities vary according to the nature and extent of economic development and educational facilities and policies.

Although statistics of occupational distribution are not complete, an idea of the relative importance of different types may be obtained from recent official enumerations in some of the territories. The largest number of African wage earners is undoubtedly employed in agriculture, and most of these are unskilled workers. In Tanganyika Territory, for example, in 1949, 37.6 per cent of all adult male African employees were estimated to be engaged in agriculture. Of a total of 384,148 employees in all industries, including government services, 263,569, or 68.6 per cent, were classified as labourers. In addition, 9.1 per cent of the total, or nearly 35,000, were designated as domestic servants, and the remainder as drivers, masons, bricklayers, carpenters, mechanics, store men and

clerks. In the Gold Coast, according to the 1948 census, of a total male population over fifteen years of age of 1,308,000, approximately 178,000 were classified as unskilled workers and 127,000 as artisans, craftsmen and skilled workers; the latter group includes self-employed workers. If the proportions shown on the basis of a more detailed questionnaire covering 196,000 males over fifteen years of age, approximately half of whom were wage earners, are applied to the numbers working on their own account among the 127,000 classified in the complete census as artisans, craftsmen and skilled workers, it appears that approximately 64,000 or about 26 per cent of the total number of wage earners in the Gold Coast possess some degree of industrial skill.

In other parts of West Africa which are less developed than the Gold Coast, the supply of skilled labour is probably relatively less, but there is free entry for Africans into skilled occupations in industry and administration. A similar classification of wage earners by occupations is not available for the Belgian Congo, but skilled occupations in industry and agriculture are fully open to the indigenous population, though entry into the professions is limited by lack of higher educational opportunities. In the territories administered by France, current practices are designed to facilitate entry of Africans into skilled occupations.

MIGRANT LABOUR

A considerable part of the African labour supply consists of migrant workers seeking employment, in some cases in areas far distant from their country of origin. In certain regions—for example, in the Gold Coast, and in the plantation areas of eastern Africa—there is a seasonal migration which follows a pattern common to many other parts of the world at harvest time. The most important migrant labour in Africa, however, is of a non-seasonal type, in mining, industrial and commercial areas. The migrants are almost exclusively males in their most productive years, most of whom return after a period to their tribal homes, though many leave again after a short stay. There is therefore an almost continuous movement back and forth. As in the case of the African workers in the South African gold mines, many are recruited by large organizations for a

period of several months on service contracts; others leave on their own initiative. In Southern Rhodesia in 1946, for example, of a total of more than 200,000 male Africans from territories outside Southern Rhodesia in employment in Southern Rhodesia, nearly 185,000 were unrecruited migrant workers.

The main directions of the flow of migrant labour are known, but not the size of the flow during a given period nor the length of time which migrants spend away from their home areas. Data are not available to distinguish statistically between seasonal agricultural movements and movements to industrial and mining areas. It is possible to estimate the approximate magnitude of migrations across political frontiers, but migratory labour which originates in the territories in which it is employed is also of considerable numerical importance.

The Union of South Africa and Southern Rhodesia employ on a large scale migrant labour from beyond their own borders; a considerably smaller field of employment for alien migrant workers is offered by the Northern Rhodesia copper mines. A relatively small number of workers in mining and industrial employment in the Gold Coast are migrants from neighbouring French and United Kingdom territories. The chief sources of supply of migrant labour to the three main markets in southern and central Africa are Mozambique, Nyasaland, Northern Rhodesia, Ruanda-Urundi and the British protectorates of Basutoland, Swaziland and Bechuanaland. An approximate idea of the size of this flow may be obtained from some scattered statistics.

In 1946 in Southern Rhodesia there were over 200,000 African employees from outside the country, of a total of 363,000 gainfully employed. Of this 200,000, 80,000 were employed in agriculture, 120,000 in non-agricultural work. The latter figure is an upper limit for non-seasonal migrant workers, but it may be too high since some are probably in more or less permanent employment in Southern Rhodesia.

In Northern Rhodesia in 1948 there were approximately 14,000 alien African workers, mainly from Angola, Nyasaland and the Belgian Congo. This figure includes seasonal employees in agriculture and some who may be regarded as

permanent residents, though the latter number is probably not high. Mining in Northern Rhodesia employs nearly one-third of the total African labour force, while agriculture employs less than one-sixth. If migrants are distributed among industries in the same proportion as the total labour force, it may be supposed that 11,000 to 12,000 migrant workers are employed in non-agricultural occupations.

In August 1947, in the Union of South Africa, 165,000 Africans from outside the country were employed in the gold mines. These may be presumed to be almost entirely migrants. The number of alien migrant workers in non-mining employment in the Union of South Africa is probably about as high. Thus, in central and southern Africa there are probably about 400,000 migrant African workers who have crossed political boundaries to seek employment in mining and other non-agricultural occupations.

Little is known of the average period of employment. It was stated before the Witwatersrand Mine Native Wages Commission in 1943 that the average length of employment in the gold mines of the Union of South Africa was 352 shifts, or about 14 months, and the average stay at home about 12 months. Virtually nothing is known about the average length of other employment, but high turnover undoubtedly increases the volume of movement. Elsewhere in Africa, the main movements of migrant workers over political boundaries are for employment in agriculture; a small but not unimportant proportion, particularly in the Gold Coast, find employment in mining and other industries. In eastern and central Africa, the main employment of migrant agricultural labour from other territories is in Uganda, Tanganyika and Southern Rhodesia. In West Africa the most important movements are probably those to the cocoa-producing areas, particularly of the Gold Coast. Fernando Po and the islands of São Tomé and Príncipe are also largely dependent on immigrant labour.

From an official estimate that over 81,000 migrant workers entered Uganda from Ruanda-Urundi and more than 100,000 returned to Ruanda-Urundi in 1948, it may be inferred that about 90,000 migrant workers from Ruanda-Urundi were employed in Uganda. These estimates

cover travellers on certain main routes and do not take into account an additional unknown number who travel by secondary routes. In the Gold Coast in 1946-47, there were over 130,000 migrant workers from French and United Kingdom territories. If account is taken of about 80,000 alien Africans who were working in agriculture in Southern Rhodesia in 1946, and of smaller movements, such as that from East African territories to Zanzibar and Pemba in the clove-picking season, the movement of migrant workers across political frontiers to agricultural work is not likely to be smaller than that to non-agricultural work, though more diffused.

There are also similar movements of considerable magnitude within political boundaries. In the Union of South Africa, for example, approximately one-half of African labour employed in the gold mines comes from the Native Reserves in the country; in the Gold Coast, migration from the northern districts to other parts of the Gold Coast is probably as important as that from outside. There is a considerable movement of migrant labour within the Belgian Congo, though very little into the territory from outside. Thus, taking into consideration migrations within and across political frontiers and also the relatively low proportion of wage earners in the total population of Africa, it is clear that in the region as a whole, a significant proportion of the total labour supply is provided by migrant labour.

POTENTIAL LABOUR SUPPLY

The fact that a large part of the total population of Africa is engaged in subsistence agriculture and that the proportion of wage earners to the total population is relatively low makes it difficult to determine the size of the potential labour supply. An approximate idea of the proportion of wage earners to total population in 1948 may be obtained for a number of countries for which official estimates are shown in table 49. The percentages indicate approximate magnitudes only, since they are derived from scattered censuses of varying reliability, and in some cases do not distinguish the self-employed from wage earners. In comparisons between individual countries, it must be remembered that migrant workers from other areas may be included among the wage earners in

some cases, and that political frontiers in Africa are often artificial in character in relation to the employment opportunities for labour. The high percentage of wage earners to total population in the case of Southern Rhodesia is explained by the fact that rather more than one-half of the total African labour force is recruited from outside that country. If only workers from Southern Rhodesia are included, the proportion to the total population is under 10 per cent. The variation in percentages in the table correspond broadly with what is known about the comparative degree of economic development of the countries.

A large part of the working population in the countries listed in table 49 is employed in non-wage-earning employment, either as subsistence farmers or as small-scale producers of cash crops. According to the 1948 census in the Gold Coast, rather more than 60 per cent of the total population was engaged in agriculture other than the cultivation of cocoa, though it was not revealed how many more engaged in subsistence agriculture. In order to obtain an estimate of the number engaged almost exclusively in subsistence agriculture, it would be necessary to subtract from the total population, not only the number employed but also those—not included in table 49—who are producing for market on their own account. Most of those in this category who are not accounted

Table 49. Number of Wage Earners Relative to Total Population in Certain Countries, 1948

Country	Estimated number of African wage earners	Estimated population at latest census date (thousands)	Wage earners as percentage of total
Belgian Congo	820,012	10,753	7.6
French West Africa	232,000 ^a	15,996	1.5
Gold Coast	305,800	3,406	9.0
Kenya	394,918 ^b	5,218	7.6
Nigeria	272,400	23,000	1.2
Northern Rhodesia	127,500	1,700	7.5
Southern Rhodesia	376,868 ^c	1,868	20.2
Tanganyika	395,500	5,650	7.0
Uganda	158,631 ^b	4,063	3.9

Source: Gold Coast: *Population Census*, 1948. Uganda: East Africa High Commission, East African Statistical Department, *East African Economic and Statistical Bulletin*, March 1950. For other sources see table 48.

^a 1947.

^b 1949.

^c 1946.

for are small farmers of whom it is impossible to determine the number with accuracy for the reason that a clear distinction does not necessarily exist between cash croppers and subsistence agriculturists. Estimates cannot therefore be made on the basis of present data as to the proportion of subsistence agriculturists who represent a potential supply of wage earners.

In the regions which supply large numbers of migrant workers, there may be relatively few men of working age who are not wage earners for some period of their lives. In Nyasaland, for example, where it is estimated that about 140,000 workers are absent from the country at a time, there is often a severe shortage of labour locally and limitations have been placed upon recruitment. Similarly, within the Belgian Congo, it has long been recognized that haphazard recruitment of migrant labour has had serious effects upon production in tribal villages, and measures have been adopted to limit recruitment and to develop a permanent labour force in the mining districts. However, in relatively undeveloped areas which have not been considerable suppliers of migrant labour, there doubtless still exist large numbers of workers who have rarely been wage earners.

From the evidence as to the size of the migrant labour force in relation to the total male population of working age, and because of the fact that the proportion of wage earners to total population has increased markedly in different countries since the nineteen thirties, the untapped potential of the labour supply in present conditions may not be very great over the region as a whole. This broad generalization calls for many qualifications in local application. For example, the cattle-keeping Masai in East Africa have been less drawn into wage-earning employment than farming tribes. The point to be made, however, is that the migrant labour system, especially in non-seasonal employment, with its high turnover, requires a reserve of labour several times greater than the numbers employed at any given time. Where the drain of these reserves has been particularly heavy as, for example, in Nyasaland, the Belgian Congo and the Native Reserves of the Union of South Africa, the disruptive effects on agriculture and society of the prolonged absence of a large part of the adult male population have long been recog-

nized as a serious problem. In general, therefore, a considerable increase in the demand for labour in Africa is not likely to be met by an increased supply of labour without profound changes in much of African rural society and a more efficient use of the labour supply.

WAGES

For Africa as a whole, and for individual countries, there is a paucity of comparable data regarding wages, though in some industries, such as the gold-mining industry of the Union of South Africa, and mining in Southern Rhodesia and Northern Rhodesia, detailed statistics are regularly published. Certain information for recent years concerning typical wage rates for broad classifications of workers has been published by many African governments, but this information is frequently presented in the form of maximum and minimum rates, and generally gives no indication of the distribution of wage earners within these limits. Further studies of individual countries are required to present a comprehensive account of wage levels and recent wage changes in Africa. Available material, however, makes it possible to obtain some indications of present wage levels for unskilled workers and for some classes of skilled workers and to shed some light on recent movements in wages, though data for pre-war years are not always in comparable forms.

In discussing wages in Africa it is important to distinguish between North Africa and Africa south of the Sahara. The problem of migrant labour, characteristic of most of tropical and southern Africa, scarcely exists in North Africa. In tropical Africa and also in the Union of South Africa, cash wage payments are frequently supplemented by payments in kind; migrant workers are frequently housed and fed by the employer, particularly in agriculture and mining. Wage comparisons in terms of cash wages, therefore, among different groups of workers in Africa, among different parts of Africa and between Africa and other parts of the world, are made difficult by the fact that the published figures of wage rates refer in general to the cash wage and frequently do not specify whether wages are paid in kind nor the value of this part of the income.

In the French North African territories of Algeria, Tunisia and Morocco, the wage structures

have been directly influenced by their close association with metropolitan France. Since 1939, for example, certain regulations relating to family allowances, pensions and other social security measures applicable in France have been extended to Algeria with local adaptations. On the whole, wage levels are somewhat higher in Algeria and Tunisia than in Morocco. Table 50 shows indices of wages for several classes of workers in these three territories for certain years between 1940 and 1946. During this period, wage rates rose in all three countries along with general prices; in Tunisia and Algeria the increases were greatest in mining, and in all three countries there appears to have been a fairly clear tendency towards greater equality of wage rates as between skilled and unskilled workers. Fully comparable data are not available for subsequent years, but it is clear

that wage rates have increased since 1946. In Tunisia, for instance, the minimum daily wage rate of agricultural workers increased from 100 francs in 1947 to 160 francs in 1949 and 210 francs in December 1950, while hourly rates of unskilled workers in industry and trade increased from 24.1 francs in 1947 to 43.3 in 1949. However, the evidence available suggests that the increases in wage rates have tended to lag behind the rise in the cost of living. In Tunisia, for example, the minimum daily wage rate of agricultural workers increased from 10 francs in 1938 to 160 francs in 1949 and 210 francs in December 1950, whereas the cost of living index in Tunis increased from 100 in 1938 to 2,124 in 1949, and to 2,258 in November 1950.

The wage rates in Africa south of the Sahara are in general lower than those in French North

Table 50. Indices of Minimum Wage Rates in French North Africa, War Years and 1946

Occupation	Period and index					
	<i>Algeria</i> (1938 = 100)					
	1940	1942	1944	1944	1944	1946
Construction:						
Unskilled labourer	100	173	400	400	400	680
Semi-skilled labourer	100	158	410	410	410	700
Dockers	110	139	300	300	300	560
Mining:						
Labourer	118	177	650	650	650	1,100
Skilled worker	125	175	540	540	540	930
	<i>Morocco</i> (January 1939 = 100)					
	Jan. 1942	July 1943	July 1944	July 1944	July 1944	Beginning of 1946
Europeans:						
Labourer	150	200	310	310	310	510
Clerk	175	225	330	330	330	430
Moroccans:						
Unskilled labourer	205	265	650	650	650	840
Skilled labourer	190	230	530	530	530	680
Clerk	160	200	360	360	360	470
	<i>Tunisia</i> (1939 = 100)					
	1 Jan. 1942	1 July 1942	1 Sep. 1943	1 Jan. 1944	1 Oct. 1945	1 Nov. 1946
Construction:						
Mason	120	136	200	260	417	542
Labourer	136	152	210	300	440	572
Transport:						
Truck driver	117	130	200	222	310	403
Commerce:						
Accountant	117	132	201	252	423	550
Salesman	119	133	200	265	346	450
Mining (phosphate mines):						
Foreman	116	131	200	272	683	888
Underground worker	122	137	200	300	592	770

Source: Institut national de la statistique et des études économiques, Union française, *Etudes et Conjoncture* (Paris), October 1946; February 1947; January 1948.

Africa, and the wage structures have characteristics peculiar to the area. As has been pointed out, the supply of labour throughout tropical and southern Africa is influenced by the dual nature of the economy and the fact that a considerable part of the unskilled labour force is migrant. Nevertheless, there are some important regional differences. In the areas of permanent European settlement, particularly in the Union of South Africa and Southern Rhodesia, the wage structures are largely determined by the fact that practically all skilled occupations are filled by Europeans and that non-Europeans, especially Africans, are unskilled and semi-skilled workers. In the Union of South Africa, for example, owing to extremely limited opportunities for non-Europeans to enter skilled occupations, the supply of unskilled labour is relatively large, and the gap between rates of pay for skilled and for unskilled labour is exceptionally high. However, wage rates for unskilled and semi-skilled labour are considerably higher in the Union of South Africa than in most other parts of Africa south of the Sahara. In 1948, for example, the average wages of unskilled indigenous labour on the railways and harbours and in secondary industry generally were about four to five times as high as wage rates for similar work in most parts of tropical Africa. Elsewhere in Africa, wages of unskilled labour are extremely low. Table 51 sets out for a number of countries in Africa officially reported wage rates of unskilled workers at recent dates. For purposes of comparison these rates have been converted into United States currency at pre-devaluation rates of exchange.

With few exceptions, the reported wage rates show a marked similarity throughout the whole of tropical Africa. The rates quoted in table 51 are cash wages that do not take into account the rations and shelter that are provided by employers in many instances. In the case of the highly organized industries, such as gold-mining in the Union of South Africa, additional benefits are also provided in the form of such services as hospitalization and medical examination. For the proportion of unskilled workers in Africa who are employed in agriculture, there are various systems of payment in kind in addition to the cash wage.

¹ East African High Commission, *East African Economic and Statistical Bulletin*, September 1949.

In general, wage rates of unskilled workers are higher in the more developed areas where there is some industrial demand for labour, but in these areas living costs also are generally higher.

It will be seen from table 51 that there is frequently a wide spread between the minimum and the maximum rates quoted for unskilled labour. This is accounted for partly by variations in rates in different areas in the same territory and also partly by the broad classifications adopted. In French West Africa, for example, in 1948 the minimum wages of unskilled workers ranged from 42 francs per day in Niger Province to 108 francs in Dakar. To establish a more definite view of the general level of unskilled workers' wages in Africa, it would be important to know the distribution of workers within the limits of the minimum and maximum rates quoted. Such information is not available for most territories, but the British East African Statistical Office publishes fairly detailed data regarding the distribution of non-agricultural workers in Kenya, and of all African wage earners in Uganda¹ according to average wages earned. In Kenya, in 1947, of about 160,000 adult male African employees in all industries except agriculture, more than 88,000 were in the group earning 30 shillings or under per month; 30,000 or more were in the group earning between 31 and 40 shillings per month, and an additional 17,000 earned between 41 and 50 shillings per month. Thus, almost 136,000, or about 84 per cent of all male African employees, earned 50 shillings or under per month. The majority of workers therefore received wage rates closer to the minimum rates quoted than to the maximum. Similarly in Uganda in 1948, of a total of about 140,000 workers, approximately 94,000 described as unskilled workers earned an average monthly basic cash wage of 16 shillings, and approximately 10,000 additional workers, described as semi-skilled labourers, earned an average monthly cash wage of 29 shillings. Assuming that this situation is fairly typical of other parts of Africa in a similar state of development, it may be tentatively concluded that the average cash wages of unskilled workers are nearer to the minimum rates quoted in table 51 than to the maximum. A recent study in the city of Leopoldville in the Belgian Congo indicated that in 1946 about 55 per cent of the indigenous workers

Table 51. Wage Rates of Unskilled Workers in Certain Countries

<i>Country and year</i>	<i>Wage rate</i>	<i>Equivalent in United States dollars</i>	<i>Remarks</i>
<i>Daily wage rate</i>			
Algeria:			
1950 ^a	480 francs	1.37	Minimum in chemical industry
Belgian Congo:			
1947	14 francs	0.32	Minimum in Leopoldville
1949	16.60 francs	0.38	Minimum in Leopoldville
French Camerouns:			
1948	45 CFA fr	0.39	Minimum in Douala
French Togoland:			
1948	30-53 CFA fr	0.26-0.46	Minimum
1948	60 CFA fr	0.52	Compagnie générale du Togo, average
French West Africa:			
1948 ^b	80 CFA fr	0.70	Minimum in Dakar
1948	108 CFA fr	0.94	Minimum in Dakar
1948	64 CFA fr	0.56	Minimum in Sudan
1948	42 CFA fr	0.37	Minimum in Niger
Gambia:			
1948	2s.3d.	0.45	
Gold Coast:			
1948	1s.6d.-3s.3d.	0.30-0.65	
1949	2s.9d.-3s.3d.	0.55-0.65	
Madagascar:			
1948	39.22 CFA fr	0.34	Manual labour in rural areas
Nigeria:			
1948	9d.-2s.11d.	0.15-0.60	
1949	9d.-3s.6d.	0.15-0.70	
Sierra Leone:			
1949	1s.8d.-2s.2d.	0.33-0.43	
Tunisia:			
1950 ^c	346.4 francs	0.99	Minimum in industry and trade in large cities
1950 ^d	210-234 francs	0.60-0.67	Minimum, agricultural
Zanzibar:			
1948	2s.-2.80s.	0.40-0.56	
<i>Weekly wage rate</i>			
Union of South Africa:			
1947-48	27s.11d.	5.60	South African Railways and Harbours
1948 ^e	36s.	7.20	Commercial distributive trade in Johannesburg
1948 ^e	37s.6d.	7.50	Footwear industry in the industrial areas
1948 ^e	33s.	6.60	Biscuit-making in the industrial areas
1948 ^e	30s.	6.00	Cleaning, dyeing and laundering in the Cape Peninsula
1948 ^e	35s.	7.00	Sweet-making in Johannesburg
1948 ^e	37s.6d.	7.50	Furniture-making in the industrial areas
1948 ^e	27s.6d.	5.50	Motor engineering industry in Kimberley
1948 ^e	26s.	5.20	Building industry in Kimberley
<i>Monthly wage rate</i>			
Kenya:			
1948	28s.	5.60	Average, non-agricultural
1948	15s.-21s.	3.00-4.20	Average, agricultural

Table 51. Wage Rates of Unskilled Workers in Certain Countries (*Continued*)

Country and year	Wage rate	Equivalent in United States dollars	Remarks
Nyasaland:			
1948	17s.4d.-19s.6d.	3.46-3.90	Public works department
1948	19s.-24s.	3.80-4.80	Railways
Southern Rhodesia:			
1948	37s.2d.	7.44	Average, all mines
1948	27s.4d.	5.48	Average, mica mines
1948	65s.1d.	13.02	Average, coal mines
Tanganyika:			
1948	15s.-45s.	3.00-9.00	Agricultural
1948	20s.-30s.	4.00-6.00	Mining
1949	15s.-45s.	3.00-9.00	Agricultural
1949	20s.-30s.	4.00-6.00	Mining
Uganda:			
1948	14s.-22s.	2.80-4.40	Average, agricultural
1949	17s.-25s.	3.40-5.00	Average, agricultural

Source: United Nations, *Information from Non-Self-Governing Territories*, Summary of information transmitted by the Government of France, 21 July 1950; Summary of information transmitted by the Government of the United Kingdom of Great Britain and Northern Ireland, 20 July 1950; Rapport annuel du Gouvernement français à l'Assemblée Générale des Nations Unies sur l'administration du Cameroun (1948); Rapport annuel du Gouvernement français à l'Assemblée Générale des Nations Unies sur l'administration du Togo (1948); United Kingdom, Colonial Annual Reports, *The Gambia* (London, 1948); *Nyasaland* (London, 1948).

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Southern Rhodesia: Central African Statistical Office, *Economic and Statistical Bulletin for Southern Rhodesia*, November 1949. Tanganyika: United Nations Trusteeship Council, Examination of Annual Reports, *Request for Additional Information, Tanganyika*, 13 December 1950. Tunisia: *Bulletin économique et social de la Tunisie* (Tunis), February 1950; *Journal Officiel Tunisien*, 24 February 1950 and 5 December 1950. Union of South Africa: *Official Yearbook of the Union of South Africa, 1948* (Pretoria).

^a November. Converted from hourly rates on the basis of an 8-hour day.

^b January.

^c January. Converted from hourly rates on the basis of an 8-hour day.

^d December.

^e Standard minimum rates of wages, determined or agreed on in terms of the Wage and Industrial Conciliation Acts.

earned no more than the minimum wage of 11 francs per day, including an allowance of 2 francs for board.²

Table 52 gives the reported wage rates of certain classes of skilled workers in several countries in tropical Africa. In Africa as a whole, the proportion of skilled workers to the total is small, but in certain areas it is significant, and there are important differences in the wage structure. In Kenya, Northern Rhodesia, Southern Rhodesia and the Union of South Africa the wage structure is influenced by the large number of workers of European origin. In the Union of South Africa, where the European population forms a more significant proportion than elsewhere and where economic development is much greater, skilled

occupations are almost entirely filled by Europeans at wage rates usually several times as high as those for unskilled and semi-skilled occupations in which non-Europeans are mainly employed. According to the industrial census of 1945-46, for example, the average per capita earnings of Africans during the census year in all secondary industry was £SA 95 and of Europeans £SA 394. In mining, the difference between wages of Europeans (mainly skilled) and non-Europeans (mainly unskilled) are greater than in secondary industry. In gold-mining in the Union of South Africa, the average wages of European employees are approximately ten times those of non-European. In Northern Rhodesia the difference is even greater, the average wages of European workers being approximately twenty times those of Africans. The greater disparity in mining is accounted

² Emmanuel Capelle, *La Cité de Léopoldville*, (Leopoldville, 1947).

Table 52. Wage Rates of Skilled Workers in Certain Countries, 1948 or 1949

Country and year	Wage rate	Equivalent in United States dollars	Industry or occupation
<i>Daily wage rate</i>			
Gold Coast:			
1948	3s.3d.-5s.	0.65-1.00	
1949	3s.3d.-5s.	0.65-1.00	
Madagascar:			
1948	150 CFA fr	1.29	
Nigeria:			
1948	3s.4d.-4s.6d.	0.66-0.90	
1949	4s.6d.-9s.6d.	0.90-1.90	
Sierra Leone:			
1949	3s.4d.-11s.2d.	0.66-2.23	
Zanzibar:			
1948	2.20s.-9.70s.	0.24-1.94	Artisans
<i>Monthly wage rate</i>			
French West Africa:			
1948	2,735-7,280 CFA fr	23.52-62.61	First to fifth class industrial
Tanganyika:			
1948 and 1949	45s.-150s.	9.00-30.00	Agriculture
1948 and 1949	30s.-80s.	6.00-16.00	Mining
1948 and 1949	60s.-150s.	12.00-30.00	Timber production
Uganda:			
1948	18s.-71s.	3.60-14.20	Industrial
1949	19s.-86s.	3.80-17.20	Industrial
1948	15s.-76s.	3.00-15.20	Building and construction
1949	26s.-109s.	5.20-21.80	Building and construction

Source: United Nations, *Information from Non-Self-Governing Territories*: Summary of information transmitted by the Government of France, 21 July 1950; Summary of information transmitted by the Government of the United Kingdom of Great Britain and

Northern Ireland, 24 July 1950. Tanganyika: United Nations Trusteeship Council, Examination of Annual Reports, *Request for Additional Information*, 13 December 1950.

for in part by the fact that practically all African mine workers in the Union of South Africa and Northern Rhodesia receive rations and housing in addition to the cash wage, whereas in secondary industry many Africans, particularly in the Union of South Africa, are permanently urbanized workers.

In the countries where permanent European settlement is not significant and skilled occupations are open to the indigenous population, the spread between skilled and unskilled rates of pay is smaller. In the Gold Coast and in Nigeria, for example, rates for skilled workers appear to be between two and three times those for unskilled workers. Thus, in Nigeria unskilled workers in the government coal mines earned minimum monthly rates in 1948 of £1 16s.10d., while skilled workers earned minimum rates of £4 4s.6d.; in non-government paper and printing establishments

unskilled workers earned minimum rates of £1 12s.6d. per month, and skilled workers £4 10s.

In the Gold Coast, minimum rates for miners in 1947-48 varied from 2s.6d. per day for greasers, to 7s.9d. for winding-engine drivers. The wages of clerical workers are generally higher than those of skilled artisans; in Nigeria, for example, the government minimum rate for clerical workers in 1948 was £6 per month. In British East Africa the range between skilled and unskilled rates appeared to be somewhat greater. In the absence of such special circumstances as exist in the Union of South Africa, Southern Rhodesia, and other areas where there is a permanent European labour force, the gap between skilled and unskilled rates of pay appears to be smaller in areas of greatest development, owing to the fact that a supply of skilled labour is eventually forthcoming where a sustained demand for it exists. Moreover, in these

areas of relatively greater economic development not only is the gap between skilled and unskilled rates of pay narrower, but the general levels of wages are higher than in less developed areas. This suggests that what African labour most lacks is the opportunity to enter an environment in which training and employment in skilled occupations are regularly open.

Though in general wage levels are low in Africa, money wage rates have increased in recent years along with prices in general. It is, however, not possible to determine whether wage increases have kept pace with increases in the cost of living, since very little data on costs of living are available and the indices are usually applicable only in certain towns. They do not take account of wide regional differences in standards, and some apply only to special groups, such as European workers. This lack of adequate cost of living indices leaves

a serious gap in the study of African wages, for it makes difficult any study of movements of real wages, and also limits the value of comparisons of wage rates between Africa and other parts of the world and among different parts of Africa. In general it seems probable that wage increases have tended to follow any rise in the cost of living and in only a few instances have exceeded it. On the other hand, where rations and shelter are provided by the employer, the increased costs of these items are borne by the employer and, in some cases at any rate, the quality of accommodation and feeding may have improved compared with pre-war. Also, the sustained demand for labour in most parts of Africa in recent years may have led to more regular employment, and in this way have increased total earnings as compared with pre-war, thus making possible higher standards.

Chapter 7

FOREIGN TRADE

In 1949 the share of Africa, excluding Egypt, in world trade was by value about 8 per cent of imports and 5.9 per cent of exports. This, though a modest proportion of world total, is higher than in 1937 when the comparable percentages were 5.9 per cent of imports and 5 per cent of exports. In fact, Africa's share in world imports and exports has increased slightly since the end of the Second World War.

For 1937, 1938 and 1946 to 1949 the total value of the merchandise trade of Africa, excluding Egypt, expressed in millions of United States dollars, was as follows:

	<i>Imports (c.i.f.)</i>	<i>Exports (f.o.b.)</i>	<i>Balance</i>
1937	1,650	1,183	—467
1938	1,477	958	—519
1946	2,485	1,764	—721
1947	3,795	2,400	—1,395
1948	4,710	3,064	—1,646
1949	4,719	3,225	—1,494

Source: Statistical Office of the United Nations.

It will be seen that since 1946 both imports and exports have been increasing but between 1948

and 1949 exports increased more than imports. According to indices for the region as a whole, prepared by the United Nations Statistical Office, the quantum of exports (1948=100) increased by about 23 per cent in 1949 over 1937, as shown below:

	<i>World</i>	<i>Africa</i>
1937	101.3	90.4
1938	97.4	93.3
1946	80.3	85.8
1947	96.3	86.8
1948	100.0	100.0
1949	108.7	111.1

Source: Statistical Office of the United Nations. African data exclude Egypt.

This represents a higher per capita quantum of exports in 1949 than in 1937 since it is probable that population increased by less than 23 per cent over the same period. No figures of the quantum of imports are available for the region as a whole.

There is considerable variation in the movement of quantum indices for individual countries, as is evident in table 53, which sets out the figures for countries publishing quantum indices of trade.

Table 53. Quantum Indices of Trade, North Africa and Inter-tropical Africa, 1947 to 1949

<i>Country</i>	<i>Base year or years</i>	<i>Imports</i>			<i>Exports</i>		
		<i>1947</i>	<i>1948</i>	<i>1949</i>	<i>1947</i>	<i>1948</i>	<i>1949</i>
North Africa:							
Algeria	1938	..	118.5	127.4	..	71.0	69.7
French Morocco	1938	169.0	201.0	..	197.0	260.0	..
Tunisia	1938	115.0	130.0	..	36.0	45.0	..
Inter-tropical Africa:							
Anglo-Egyptian Sudan	1938	99.0	112.0	121.0	93.5	92.9	110.8
Angola	1938	141.7	182.2	200.4	117.4	143.1	135.8
Belgian Congo	1936-38	..	..	..	123.0	130.0	..
Eritrea	1945	87.0	67.1	72.9	90.2	103.1	97.4
Ethiopia	1945 ^a	197.9 ^a	207.5 ^a	250.4 ^a	131.8 ^a	120.3 ^a	139.5 ^a
French Equatorial Africa	1946	..	..	..	92.0	133.0	113.0
Kenya	1935-38	144.0	190.0	..	119.0	110.0	..
Nyasaland	1939	150.0	165.0	205.0	158.0	203.0	196.0
Southern Rhodesia	1939	140.0	172.0	215.0	118.0	142.0	146.0
Tanganyika	1935-38	156.0	204.0	..	102.0	118.0	..
Uganda	1935-38	97.0	108.0	..	104.0	101.0	..

Source: Statistical Office of the United Nations.

^a Fiscal year ending 10 December of year stated.

Although in 1947 some countries shown in table 53 had a quantum of imports below the pre-war level, all had an increased quantum of imports in 1948 as compared with pre-war, the increases ranging from 8 per cent in the case of Uganda to 104 per cent in the case of Tanganyika. The available figures for 1949 indicate a continued rising trend in volume.

As regards exports, all the inter-tropical African territories in table 53 showed a higher quantum in 1948 than for the pre-war period with the exception of the Anglo-Egyptian Sudan. In North Africa, French Morocco was the only one to have achieved the pre-war level. Quantum indices of exports for Algeria, Morocco and Tunisia in 1948 were respectively 71, 260 and 45 as compared with 1938. In tropical Africa, Nyasaland had achieved the largest expansion of exports compared with 1938. Such quantum indices of exports as are available for 1949 do not indicate any clear pattern of increase or decrease in the volume of exports, as compared with 1948. Between 1948 and 1949 the Anglo-Egyptian Sudan and Southern Rhodesia, for instance, experienced an expansion of exports, whereas in Algeria, Angola and Nyasaland the trend was reversed.

With reference to the totals for imports and exports given at the beginning of this chapter, it will be noticed that in each year listed there was a considerable import surplus. In this respect the pattern of trade of the region as a whole has not changed much in post-war years compared with the immediate pre-war period. This can be readily seen when total imports of African merchandise over the period are expressed as a percentage of exports, as follows:

1937	139.5
1938	154.2
1946	140.9
1947	158.1
1948	153.7
1949	146.3

The Union of South Africa,¹ with its comparatively highly developed economy, accounts for a considerable proportion of the total external trade of the region—approximately 25 per cent in 1949

¹ Together with South-West Africa. Gold exports in 1949 refer to non-monetary gold as recorded in the official estimates of the balance of payments. South African Reserve Bank, *Quarterly Bulletin of Statistics*, June 1950.

even excluding gold exports. If gold is included in these merchandise exports, the Union of South Africa¹ accounted in 1949 for about 28.5 per cent of the foreign trade of the whole region. Hence, it is desirable to consider the Union of South Africa separately. Table 54 shows the merchandise trade of the Union of South Africa, and of Africa excluding the Union of South Africa, for selected pre-war and post-war years.

It will be seen that the general pattern is not greatly changed even when the Union of South Africa with its special conditions is excluded. In 1949 the upward trend of imports was reversed in that country mainly as a result of the stringent import control measures adopted at the end of 1948 and further extended in July 1949. The currency devaluations in September 1949, which of course affected all the sterling countries, had not exerted their full effects before 1950 and hence any considerable tendency for imports to decline as a result of devaluation would not be evident in the trade figures for 1949. Thus, for most of Africa, the rising trend of imports of the post-war years continued in 1949, though at a much reduced rate. Exports of both the Union of South Africa and the rest of Africa showed small increases in 1949 over the previous year; the import surplus of the Union of South Africa declined in 1949 as against 1948 while that for the rest of Africa increased considerably in the same period.

A still clearer picture of broad trends in the foreign trade of Africa is obtained by considering North Africa separately, or by comparing its trade with that of inter-tropical Africa (see table 54). In both areas imports, in terms of value, increased between 1937 and 1949 in about the same ratio, 3.1 times in the case of inter-tropical Africa and 3.2 times in the case of North Africa. Exports from inter-tropical Africa were 2.8 times higher in 1949 than in 1937; exports of North Africa increased by 2.6 times in the same period.

North Africa suffered direct damage during the Second World War, whereas inter-tropical Africa, with minor exceptions, did not. Tunisia, which suffered most, has been slowest to recover its export trade. Merely in terms of dollar values exports of Tunisia in 1948 were less than 1.5 times, and in 1949 only about twice, the 1937

Table 54. Merchandise Trade of Africa: Total and by Regions,^a 1937, 1938 and 1946 to 1949

(In millions of United States dollars)

	1937	1938	1946	1947	1948	1949
Total, Africa:						
Imports	1,650	1,477	2,485	3,795	4,710	4,719
Exports	1,183	958	1,764	2,400	3,064	3,225
Balance	-467	-519	-721	-1,395	-1,646	-1,494
Africa, excluding Union of South Africa and South-West Africa:						
Imports	1,078	955	1,509	2,427	3,095	3,355
Exports	959	788	1,336	1,953	2,467	2,632
Balance	-119	-167	-173	-474	-628	-723
North Africa:^b						
Imports	376	353	595	975	1,261	1,188
Exports	299	281	428	692	773	773
Balance	-77	-72	-167	-283	-488	-415
Inter-tropical Africa:^c						
Imports	702	602	914	1,452	1,834	2,167
Exports	660	507	908	1,261	1,694	1,859
Balance	-42	-95	-6	-191	-140	-308
Union of South Africa:^d						
Imports	570	522	976	1,365 ^e	1,608 ^e	1,358
Exports	226	174	424	447 ^e	595	607
Balance	-344	-348	-552	-918	-1,013	-751

Source: Statistical Office of the United Nations.

^a Egypt excluded.

^b Including Algeria, Canary Islands, French Morocco, Libya, Spanish Morocco, Tangier and Tunisia.

^c Africa except Egypt, North Africa, South-West Africa and Union of South Africa.

^d Including South-West Africa.

^e South-West African trade estimated.

level. However, the volume of exports was very much below the pre-war level. The quantum index of exports of Tunisia was 45 in 1948 compared with 100 in 1938. The figures for Algeria are only slightly higher. Although in terms of dollar values exports in 1949 were about 1.75 times what they had been in 1937, the volume of exports was considerably below the pre-war level, 71 in 1948 and 69.7 in 1949 as compared with 100 in 1938. On the other hand, French Morocco experienced a considerable expansion in exports in post-war over immediate pre-war years: in terms of value from \$46 million in 1937 to \$176 million in 1948 and \$185 million in 1949. This represents a considerably larger volume of exports than in pre-war years. The quantum index in 1948 was 260 compared with 1938. Nevertheless, in both pre-war and post-war years French Morocco has had substantial import surpluses. Algeria, which before the war had an export surplus, has had a considerable import surplus in each of the post-war years. Tunisia has

had an import surplus both in pre-war and post-war years.

In French North Africa as a whole, imports in 1937 were about 109 per cent of the value of exports, while in 1948 imports were 175.5 per cent and in 1949 164.3 per cent of the value of exports.

In inter-tropical Africa as a whole there were import surpluses in all years. There is, however, some divergence in this respect between individual territories in the area. French West Africa and Southern Rhodesia consistently had import surpluses in 1937 and post-war years, and in both cases the ratio of imports to exports was higher in the post-war years. Indeed, in 1949 Southern Rhodesia's imports were higher than in any previous years and more than twice the value of exports. The Belgian Congo and Northern Rhodesia, on the other hand, had export surpluses in all years. In some other countries the pattern of trade has changed since the war, or has shown

considerable fluctuation in the relation between imports and exports. Thus, Kenya-Uganda, which showed a small export surplus in 1937 and 1938, has had a progressively increasing import surplus in post-war years. Tanganyika shows a similar change, whereas in 1937 there was a small export surplus, though in 1938 an import surplus. Nigeria had an import surplus in 1948 due to a fall in exports and a modest increase in imports over the previous year. In all other years Nigeria had a small export surplus. The Gold Coast had export surpluses in all post-war years with the exception of 1949 when there was a small import surplus; in 1937 and 1938 there had been import surpluses. French West Africa and Ethiopia had import surpluses both in pre-war and post-war years. In Ethiopia, however, post-war import surpluses were smaller even in absolute terms than the 1937 and 1938 estimates, whereas in the case of French West Africa post-war import surpluses have been larger than in pre-war years. The merchandise trade of French Equatorial Africa in 1937 and 1938 balanced, but in 1946 there was a considerable export surplus followed by import surpluses in each of the following three years.

The increased import surpluses in post-war years were greater in the French African territories in general than in the case of the British territories, and were accounted for both by a fall in the volume of exports and by an inflow of capital. In 1948 and 1949, for example, the combined import surplus of the French African territories was approximately \$500 million and \$515 million respectively, while in the case of the British territories the combined surpluses in the same years were \$54 million and \$150 million. The greater part of the import surplus in French territories is accounted for by Algeria, Tunisia and Morocco, although there was a considerable increase in the surplus of the French West African territories in 1949 over 1948. The import surpluses of United Kingdom territories were almost entirely accounted for by East and Central Africa. It may be remarked in this connexion that accumulated sterling balances of both British West Africa and British East Africa have increased in recent years. On 31 December 1946 sterling balances of British West Africa stood at £115 million, and of British East Africa at £100 million. By 31 December 1949 these balances had

increased to £155 million in the case of British West Africa and £110 million in the case of British East Africa. This increase in balances is partly explained by the policy of the Produce Marketing Boards of building up funds from the difference between selling prices on world markets and the guaranteed prices paid to producers for export crops.

COMPOSITION OF EXPORTS AND IMPORTS

African exports consist almost entirely of primary products of mining and agriculture. In general, the range of exports is narrow and in the case of many territories a very high proportion of total exports is accounted for by one or two products. Extreme cases are presented by Gambia, Liberia and Mauritius. The diagram on page 88 summarizes these facts graphically by showing for each territory the percentage of its total exports accounted for by each of its two or three leading export products for the year 1949.

It will be seen that Mauritius is practically dependent in export trade on a single crop. Although 1949 figures for Gambia and Liberia are not available, in 1948 ground-nuts in Gambia and rubber in Liberia accounted for 97 per cent and 90 per cent, respectively, of total exports. Of the mining countries, Northern Rhodesia depended on copper in 1949 for no less than 85 per cent of its exports. No less than 17 of the countries, if Gambia and Liberia are included, derived more than 70 per cent of their export income from three products. At the opposite end of the scale, French Morocco and Tunisia are the only territories shown in the chart that derive less than 50 per cent of their export income from three main products.

Since the immediate pre-war years there have been some changes in the composition of the exports of a number of African territories, some of which are of a temporary nature reflecting changes in degree of concentration upon crops that are to some extent alternatives, and fluctuations in the harvest and in prices. An illustration of this is provided by Kenya, Nyasaland, Tanganyika and Uganda. In Tanganyika sisal exports increased in relative importance between 1937 and 1949, from 42 per cent to 58 per cent of the total; in Kenya sisal exports increased from 17

Percentage of Total Exports of Certain Countries Accounted for by Three Principal Products, 1949

(In percentage of total exports, by value)

Per cent

Mauritius ^a	99	SUGAR 96			RUM 3
British Somaliland	99	SKINS 64	SHEEP AND GOATS 33		GUM 2
São Tomé and Príncipe	98	COCOA 70		PALM OIL AND NUTS 18	COPRA 10
Réunion	97	SUGAR 77		RUM 11	VEGETABLE OILS 9
Nyasaland	97	TOBACCO 67		TEA 25	COTTON 5
Northern Rhodesia	95	COPPER 85			ZINC 6 LEAD 4
Uganda	91	COTTON 74		COFFEE 12	COTTON-SEED 5
Gold Coast	91	COCOA 68		GOLD 14,	MANGANESE 9
Anglo-Egyptian Sudan	86	COTTON 72		COTTON-SEED 8	GUM 6
Nigeria	78	PALM OIL AND KERNELS 34	COCOA 23	GROUND-NUTS 21	
Tanganyika	77	SISAL 58		COTTON 11	COFFEE 8
French Camerouns	77	COCOA 47		BANANAS 15	PALM OIL AND KERNELS 15
Ethiopia	75	COFFEE 27	HIDES AND SKINS 24	CEREALS AND PULSES 24	
French West Africa	72	GROUND-NUTS AND OIL 42		COFFEE 15	COCOA 15
French Equatorial Africa	72	COTTON 36		WOOD 24	GOLD 12
Southern Rhodesia	70	TOBACCO 39		GOLD 18	ASBESTOS 13
Zanzibar	69	CLOVE OIL AND CLOVE STEMS 33	COCONUT OIL 21	COPRA 15	
Algeria	63	WINE 48		FRUITS 8	CEREALS 7
Union of South Africa ^b	62	GOLD 44		WOOL 14	DIAMONDS 4
Mozambique	58	COTTON 27	COPRA 18	SISAL 13	
Belgian Congo ^c	55	COPPER 25	PALM OIL, KERNELS AND NUTS 17	COTTON 13	
Angola	54	COFFEE 31	DIAMONDS 14	MAIZE 9	
Kenya	51	SISAL 26	COFFEE 14	HIDES AND SKINS 11	
Madagascar	51	COFFEE 23	MEAT 18	HIDES 10	
French Togoland	50	COCOA 23	COFFEE 15	PALM OIL AND KERNELS 12	
French Morocco	42	CEREALS 15	CANNED FISH 15	PHOSPHATES 12	
Tunisia	36	PHOSPHATES 15	OLIVE OIL 11	CEREALS 10	

Source: Compiled from official trade reports of the individual countries.

^a Total export figures include re-exports.

^b Figure for non-monetary gold as recorded in

the official estimates of the balance of payments.

^c Including Ruandi-Urundi.

per cent to 26 per cent of the total. In 1937 Kenya's three leading exports were: coffee, 19 per cent of the total, sisal, 17 per cent and tea, 12 per cent; in 1949 the order was: sisal, 26 per cent, coffee, 14 per cent and hides and skins, 11 per cent. Tanganyika's three leading exports in 1937 were: sisal, 42 per cent, cotton, 12 per cent and gold, 11 per cent. In 1949 sisal came first, with 58 per cent, cotton second, with 11 per cent, and coffee third with 8 per cent. For Uganda in 1937 the three leading exports were: cotton, 75 per cent, coffee, 7 per cent and cotton-seed, 7 per cent. In 1949 the percentages were: cotton, 74 per cent, coffee, 12 per cent and cotton-seed, 5 per cent. Nyasaland's three leading exports in 1937 were: tobacco, 48 per cent, tea, 37 per cent, and cotton, 12 per cent; in 1949, tobacco, 67 per cent, tea, 25 per cent, and cotton, 5 per cent.

A further illustration of changes in the composition of exports is provided by French North Africa, traditionally a wheat exporter, which as a result of several droughts became for a number of years an importer. In 1938, for instance, some 675,000 metric tons of wheat were exported, whereas in 1947/48 some 40,000 metric tons were imported. In 1949, however, French North Africa reverted to its pre-war position of exporter.² The Union of South Africa experienced a similar change through the decline of maize as an important export item after 1939, the percentage of maize exports to total exports by value being 4.5 per cent in 1934-38 against 0.5 per cent in 1942 and 0.02 per cent in 1946. After 1942 maize exports of the Union of South Africa became almost negligible. Formerly a large exporter of maize, the Union became an importer in 1947. Since 1948, however, a surplus has again been achieved and approximately 80,000 metric tons of maize were exported in 1949.³

With the exception of Tunisia and French

Equatorial Africa the mineral-producing territories showed a smaller proportion of mineral exports to total exports by value in 1948 and 1949 than in 1937. This change is in general due to an increase in non-mineral exports since in quantities as well as in values the production and export of practically all African minerals have increased over pre-war figures. However, the decline in the relative importance of minerals in total exports is small except in the case of the gold-producing countries. The official dollar price of gold has remained fixed since before the war at \$35 per fine ounce, while export values of other products have greatly increased over pre-war as a result of price rises accompanied in many cases by increases in the volume of exports. In 1949 gold still occupied first place in the exports of the Union of South Africa, but it declined from 68 per cent of the total in 1937 to 44 per cent in 1949.⁴ In the case of Southern Rhodesia⁵ gold exports declined from 53 per cent of the total in 1937 to 18 per cent in 1949; for the Belgian Congo⁶ from 19 per cent to 5 per cent. In the Gold Coast⁷ the decline was from 25 per cent in 1937 to 14 per cent in 1949.

The volume of production and exports of a number of African minerals has greatly increased since the war and although many of these changes concern minerals which are a small proportion of total mineral output some are significant in the economy of individual territories. Thus, for example, iron ore exports of Sierra Leone were 24 per cent of the total in 1949 though less than 10 per cent in 1938.

Post-war increases in the export of asbestos, chrome, antimony, zinc, lead, bauxite, tungsten, coal, phosphates, cobalt and some other minerals have helped to offset the effect of the fixed gold price on the exports of the chief gold producers. The main facts in this respect are summarized in table 55.

² Organisation for European Economic Co-operation, *Interim Report on the European Recovery Programme, Report of the Overseas Territories Committee*, section XV, vol. III (Paris, 1948); Ministère de la France d'Outre-mer, *Bulletin mensuel de statistique d'Outre-mer* (Paris) September-October 1950.

³ Commonwealth Economic Committee, *Grain Crops* (London, 1950); Union of South Africa, *Monthly Bulletin of Trade Statistics* (Pretoria), December 1949.

⁴ United Kingdom, *Statistical Abstract for the British Commonwealth, 1936 to 1945*, Cmd 7224 (London, 1947); International Monetary Fund, *Balance of Pay-*

ments Yearbook, 1948 (Washington, D.C., 1950); Union of South Africa, *Standard Bank Monthly Review*, September 1950; South African Reserve Bank, *Quarterly Bulletin of Statistics* (June 1950).

⁵ *Annual Statement of the Trade of Southern Rhodesia*, 1949 (Salisbury, 1950); United Kingdom, *Statistical Abstract for the British Commonwealth*, Cmd 7224.

⁶ 1936-38 average for 1937. Banque du Congo belge, *Bulletin mensuel d'information générale et Revue des marchés* (Brussels), January 1949 and March 1950.

⁷ United Kingdom, *Statistical Abstract; Gold Coast Gazette*, Trade Supplement (Accra), October 1950.

Table 55. Mineral Exports of Major Gold-Producing Countries, 1937 and 1949
(In millions of United States dollars)

Country	1937			1949		
	Mineral exports ^a	Gold exports	Total	Mineral exports ^a	Gold exports	Total
Union of South Africa ^b	30 ^c	393 ^d	423 ^c	78 ^c	413 ^d	491 ^c
Belgian Congo and Ruanda-Urundi....	31 ^e	13 ^e	44 ^e	116	12	128
Gold Coast	8	19	27	22	24	46
Southern Rhodesia	11	28	39	21	20	41

Source: Union of South Africa: *Official Yearbook of the Union of South Africa, 1939* (Pretoria) and *Monthly Abstract of Trade Statistics* (Pretoria), December 1949; South African Reserve Bank, *Quarterly Bulletin of Statistics*, June 1950. International Monetary Fund, *Balance of Payments Yearbook, 1948* and preliminary 1949. Belgian Congo and Ruanda-Urundi: Banque du Congo belge, *Bulletin mensuel d'information générale*, January 1949 and March 1950. Gold Coast: *Gold Coast Gazette*, Trade Supplement, October 1950;

Colonial Annual Reports, *Gold Coast, 1938-39* (London, 1939). Southern Rhodesia: *Annual Statement of the Trade of Southern Rhodesia, 1937, 1949.*

^a Excluding gold.

^b 1949 figures exclude exports to Northern Rhodesia and South-West Africa.

^c Excluding polished diamonds.

^d Non-monetary gold as recorded in the official estimates of the balance of payments.

^e 1936-38 figures.

In general there has been no marked tendency since pre-war days toward greater diversity in exports from Africa. However, since prices for practically all African products have been maintained at a high level and in effect were in most cases higher in 1949 than in 1947 or 1948, there has been no danger to export income on the side of demand. Almost the only exception to this is pyrethrum, production of which was greatly increased in Kenya during the war. There was a considerable fall in its price in 1947 and 1948 owing to the competition of synthetic insecticides. Since then its price has again risen in the United States, and production is again expanding.

The decline in the relative importance of gold sales of the main gold-producing countries has been mentioned. In the case of the four main producers the effect of the fixed price of gold has been largely compensated by the increase in both prices and output of other export products. The decline in the relative importance of gold in total exports is probably of greatest significance in the case of the Union of South Africa, which as a result of the joint effect of the fixed gold price and the enhanced prices of other primary products has an increased proportion of its capital resources invested in the production of other export products, both primary and secondary.

The progress in industrialization made by the Union of South Africa is now to some extent reflected in its export trade. An increasing quan-

tity and variety of processed and manufactured goods are exported from the Union of South Africa, mainly to other African countries. Although changes in classification of exports make a complete comparison with pre-war years impossible, a few examples are sufficient to indicate the extent of this development. In 1949, iron and steel and a variety of metal manufactures including agricultural machinery and other machines and parts of South African manufacture, were exported to the value of approximately £4 million, or about 3 per cent of total exports. In 1937, exports of a comparable range of commodities amounted to less than 1 per cent of the total. Exports of a wide range of foot-wear, articles of clothing, leather and rubber manufactures, including motor tires, have also considerably increased. The greatest increase, however, is in the case of jewellery and other fancy goods (not including polished diamonds). In 1949, exports in this category amounted to over £9 million, or about 7 per cent of all South African products (excluding gold) exported in that year, whereas in 1937 such exports were negligible. War-time and post-war shortages of these goods greatly aided the growth of exports from the Union of South Africa. In the future, competition in African markets is likely to increase, particularly as the economic recovery of Japan and Germany proceeds.

The composition of imports into Africa reflects very clearly its generally under-developed state.

In order to determine whether there has been any significant change in the pattern of imports between pre-war and post-war years, imports have been divided into three main categories: textiles, food and capital goods. The quantities in each category, though comparable from year to year, are representative of their group rather than complete. Food and textile categories are relatively easy to define. As regards capital goods, it is difficult to distinguish between metal products that are capital goods and others that are not, since the data available often put the two categories together. Vehicles and parts, for instance, have been omitted because there was no common basis on which to determine the proportion intended for consumption purposes. As the figures do not include all the items that would normally fall into each category, they are not true indicators of the importance of the entire category as a percentage of total imports. They do, however, indicate any gain or loss for each category, since on the whole the figures are comparable, referring for each year to the same group of articles.

To determine the main patterns, the data have

been arranged in the form of frequency series in table 56.

At first glance no major change seems to have taken place between the pre-war and post-war periods. On the whole food imports have been relatively low in pre-war and post-war years and no significant change of pattern, therefore, seems to have taken place.

The situation regarding textiles is somewhat confusing and does not point to any clear-cut conclusions. Textiles have been the main item of imports and the table, in fact, understates the position for the reason already mentioned, that the figures do not include the entire category. One interesting fact which seems to emerge in post-war years is an increasing concentration of countries with textile imports within a narrower range than in pre-war and thus the appearance of a somewhat homogeneous pattern.

While foods and textiles have declined slightly in relative importance, capital goods imports have increased. This conclusion agrees, as expected, with the fact that economic reconstruction and development plans are being undertaken in the

Table 56. Percentage Importance of Categories of Imports and Number of Territories within Percentage Groups^a

Category and percentage	Number of territories			
	Pre-war ^b	1947	1948	1949
<i>Food:</i>				
9 per cent and less	10	7	8	9
10 - 19	2	8	6	6
20 - 29	4	1	1	1
30 - 39	0	1	1	0
Total	16	17	16	16
<i>Textiles:</i>				
9 per cent and less	3	0	0	2
10 - 19	7	5	9	8
20 - 29	5	9	6	6
30 - 39	2	2	2	0
40 - 44	0	1	0	0
Total	17	17	17	16
<i>Capital goods:</i>				
9 per cent and less	5	4	4	2
10 - 19	8	5	5	4
20 - 29	2	4	4	6
30 - 39	0	0	2	1
40 - 44	0	0	0	1
Total	15	13	15	14

^a Including the following territories where data are available: Algeria, Anglo-Egyptian Sudan, Belgian Congo, French Cameroons, French Equatorial Africa, French Morocco, French Togoland, French West Africa, Gold Coast, Kenya-Uganda, Madagascar, Nigeria, Northern

Rhodesia, Nyasaland, Réunion, Sierra Leone, Southern Rhodesia and Tunisia.

^b 1937 figures for British territories; 1938 figures for French territories; 1939 figures for Belgian Congo.

Table 57. Trade with the United States, Pre-war and Post-war
(In thousands of United States dollars)

Country	1937			1947			1948			1949		
	Imports	Exports	Balance	Imports	Exports	Balance	Imports	Exports	Balance	Imports	Exports	Balance
Algeria	2,546	3,016	470	58,640	1,755	-56,885	33,255	4,020	-29,235	27,580	3,761	-23,819
French Cameroons	1,154	316	-838	6,631	339	-6,292	5,488	499	-4,989	7,685	885	-6,800
French Equatorial Africa	1,215	-	-1,215	5,766	222	-5,544	8,277	27	-8,250	12,131	59	-12,072
French Morocco	4,800	1,116	-3,684	55,694	2,486	-53,208	48,422	6,069	-42,353	44,534	4,474	-40,060
French Somaliland	198 ^a	-	-198 ^a	326	-	-326	946	-	-946	402	-	-402
French Togoland	267	255	-12	1,084	229	-855	645	754	109	881	-	-881
French West Africa	3,799	2,434	-1,365	36,275	978	-35,297	22,080	3,652	-18,428	24,752	5,609	-19,143
Madagascar	883	1,175	292	7,739	6,241	-1,498	7,224	1,580	-5,644	5,910	1,663	-4,247
Réunion	260	130	-130	2,251	295	-1,956	886	113	-773	722	79	-643
Tunisia	2,141	1,148	-993	5,308	235	-5,073	21,740	935	-20,805	9,527	1,538	-7,989
Belgian Congo and Ruanda-Urundi	2,839 ^b	1,471 ^b	-1,368 ^b	55,937	29,565	-26,372	59,005	22,224	-36,781	63,708	21,895	-41,813
Gold Coast	6,740	17,937	11,197	11,974	28,252	16,278	8,725	38,438	29,713	9,230	45,290	36,060
Kenya and Uganda	4,840	1,523	-3,317	18,808	2,911	-15,897	12,070	5,082	-6,988	17,611	7,428	-10,183
Nigeria	4,689	11,589	6,900	23,178	24,086	908	19,046	17,744	-1,302	8,766	26,875	18,109
Northern Rhodesia	2,351	620	-1,731	5,340	4	-5,336	7,923	8,374	451	8,007	18,028	10,021
Nyasaland	208	-	-208	4,620	16	-4,604	2,079	48	-2,031	2,001	187	-1,814
Sierra Leone	376	311	-65	2,561	742	-1,819	842	439	-403	667	894	227
Tanganyika	1,256	1,147	-109	14,519	948	-13,571	11,933	4,618	-7,315	7,888	9,436	1,548
Angola	830	191	-639	8,753	4,293	-4,460	9,969	3,363	-6,606	10,092	8,646	-1,446
Mozambique	1,608 ^a	212 ^a	-1,396 ^a	12,072	1,047	-11,025	17,052	2,507	-14,545	10,625	3,831	-6,794
Southern Rhodesia	4,058	3,263	-795	22,945	5,041	-17,904	16,039	5,892	-10,147	14,085	6,291	-7,794
Union of South Africa	99,064	6,560	-92,504	..	..	..	494,594	33,006	-461,588	307,438	36,513	-270,925

Source: Banque du Congo belge, *Bulletin mensuel d'information générale et Revue des marchés*, January and September 1949, February and March 1950. Statistique générale de la France, *Annuaire statistique*, 1939 (Paris, 1941). Ministère de la France d'Outre-mer, *Bulletin mensuel de statistique d'Outre-mer*, November-December 1949 and September-October 1950. *Statistical Abstract for the British Commonwealth*, 1936 to 1945. *Boletim do Instituto Nacional de Estatística, X-Império Colonial*, April and September 1949; July 1950.

Also, Angola: *Colonia de Angola, Anuario Estatístico de Angola*, 1937 (Luanda, 1938). Gold Coast: *Trade Report*, 1948 (Accra, 1950); *Gold Coast Gazette*, Trade Supplement (Accra), Octo-

ber 1950. Kenya and Uganda: *Annual Trade Report of Kenya and Uganda* (Nairobi, 1938 and 1948); East African Customs and Excise Department, *Annual Trade Report of Kenya, Uganda and Tanganyika*, 1949 (Nairobi, 1950). Mozambique: *United Kingdom Overseas Economic Surveys, Portuguese East Africa* (London, 1949). Nigeria: *Trade Report for the year 1947* (Lagos, 1948); *Nigeria Trade Summary*, October-December 1949 (Lagos, 1950). Northern Rhodesia: *Statement of Trade of Northern Rhodesia*, 1948 and 1949 (Lusaka, 1950).

Nyasaland: Nyasaland Protectorate Customs Department, *Annual Report on the Trade of the Protectorate*, 1947, 1948 and 1949 (Zomba).

Sierra Leone: *Trade Report for the year 1949* (Freetown, 1950). Southern Rhodesia: *Annual Statement of the Trade of Southern Rhodesia*, 1940 (Salisbury, 1941), and 1949 (Salisbury, 1950).

Tanganyika: *Trade Report*, 1947 and 1948 (Dar es Salaam); East African Customs and Excise Department, *Annual Trade Report of Kenya, Uganda and Tanganyika*, 1949 (Nairobi, 1950). Union of South Africa: *Official Yearbook of the Union of South Africa*, 1939 (Pretoria, 1939); *Monthly Abstract of Trade Statistics* (Pretoria) June 1948, December 1948 and December 1949.

^a 1938 figure.

^b 1936-38 average.

African territories. It must again be remarked that the figures underestimate the importance of capital goods imports since they exclude vehicles and parts, which are, no doubt, to a great extent used in development projects.

DIRECTION OF TRADE

Available data are not sufficiently complete to estimate changes in direction of trade for the region as a whole. Partial data, however, indicate changes as compared with pre-war years, some of which are no doubt temporary but others of more permanent significance. First, in the post-war years as compared with the immediate pre-war years, the United States has participated to a greater extent both as a buyer of African products and as an importer into Africa. Secondly, the metropolitan Powers have on the whole taken a larger share in the trade of their dependent African territories. Thirdly, there has been an appreciable increase in intra-African trade.

In 1949 for the region as a whole the United States received about 6 per cent of its exports and provided about 12 per cent of its imports, compared with about 5 per cent and 9 per cent respectively, in 1937. The greatly increased share of the United States in African imports in post-war years is partly explained by the severe shortages of European industrial goods, which were not overcome until 1948 and 1949. This is indicated by the fact that since 1947 the share of the United States in African imports has fallen considerably. Thus, in 1948, 17 per cent of African imports came from the United States, and in 1949, 12 per cent. This decline in the importance of United States imports is also partly due to the effects of import restrictions imposed by the Union of South Africa in 1948 and 1949, resulting in a fall in imports into that country from the United States of America of some 38 per cent. In 1948 the Union of South Africa accounted for about 60 per cent of all imports from the United States into Africa. For the first five months of 1950 its imports from the United States of America were only £SA 38.5 million, compared with £SA 61.9 million during the same period of 1949.

The high level of economic activity in the United States coupled with the demand for certain strategic materials has maintained at a high level

its demand for many African products. Thus, there has been an increase in the relative importance of the United States as a market for the products of many African territories. Tanganyika, for example, in 1937, sold about 5 per cent of its total exports to the United States, but in 1949 increased this percentage to about 15 per cent, largely on account of the high demand for sisal. Northern Rhodesia, which in 1937 sold only one per cent of its total exports in the United States, sold about 15 per cent there in 1949. The French North African territories, however, showed little change. In the case of Algeria and Tunisia there was a slight decrease in 1949 as compared with 1937. French West Africa in 1937 sold about 4 per cent of its exports to the United States and in 1949 less than 3 per cent. On the other hand, the Belgian Congo increased its percentage of exports sold in the United States from about 2 per cent in 1937 (1936-38) to about 9 per cent in 1949.

Some African territories are important as contributors to the dollar pools of their respective currency areas. The dependent territories are particularly important in this respect since their economic policy, in large measure, has conformed in post-war years to the requirements imposed by the dollar shortages of the metropolitan Powers.

The net dollar contribution on current account of African territories to the currency areas of which they are part, is the product of three main factors: the extent to which they are able to supply the demands in their currency areas for materials which would otherwise come from the dollar area; the extent of their sales to the dollar area; and the extent of their purchases from the dollar area. The first of these is not directly measurable, but it has had a considerable influence on African production, particularly in the British and French dependent territories, in respect of such products as cotton, tobacco, vegetable oils and rice.

As a first approximation to a statement of the merchandise trade dollar balances of African territories, table 57 sets out the total imports and exports of the most important African territories with the United States for the years 1937, 1947, 1948 and 1949. Except for a few instances, trade with the dollar area is almost synonymous with trade with the United States and since data relating to trade with other countries in the dollar area

are not available for all territories, it is preferable in the first instance to consider the trade position of African territories in relation to the United States.

It will be seen that there has been no marked change in the pattern of trade between the United States and African territories in post-war years as compared with 1937. In both 1937 and 1949, the Union of South Africa, Southern Rhodesia, the French territories and the Belgian Congo had negative balances, while the British dependencies as a whole had positive balances in all years except 1947. Complete figures are not available for the Union of South Africa for the year 1947, but of the other groups covered by the table, all except the Belgian Congo experienced a decline in dollar imports in 1948 and 1949 compared with the previous year. In the case of British territories the decline was approximately 33 per cent between 1947 and 1949, and in the case of the French territories about 25 per cent.

The trend in exports to the United States is less uniform. Exports of the French territories increased between 1947 and 1948 by about 38 per cent, and remained at about the same level in 1949. Dollar exports of the British dependent territories, however, rose by nearly 31 per cent in 1948 over 1947, and by about 45 per cent in 1949 over 1948, chiefly on account of the trade of the Gold Coast, Nigeria and Northern Rhodesia. Exports of the Belgian Congo fell by about 25 per cent between 1947 and 1948 and remained at about the same level in 1949.

Within these groupings, there are some changes between individual territories. Northern Rhodesia reversed its pre-war position and in 1948 and 1949 had substantial surpluses on trading account with the United States, owing to an increase in exports of copper, which before the war was exported only in negligible amounts to the United States. The Gold Coast and Nigeria are both the largest exporters to the United States and the largest contributors to the surplus of British dependent territories in Africa.

Of the French territories, Algeria in 1937 had a surplus on trading account with the United States, but mainly because of an increase in imports from the United States, had substantial deficits in post-

war years. Tunisia and Morocco had deficits in trade with the United States in pre-war and post-war years, but the post-war deficits have been both absolutely and relatively greater than before the war, especially in the case of Morocco.

The most significant exports, in terms of value, from Africa to the United States are cocoa, sisal, vegetable oils, and a number of minerals, products that are produced in greater quantity in British dependent territories, the Union of South Africa and the Belgian Congo than in the French territories.

The external trade of the Non-Self-Governing Territories is strongly orientated towards the metropolitan Powers. Table 58 summarizes the facts in this respect and compares the position before and after the Second World War. It will be seen that, in general, dependence upon the metropolitan Powers in respect of both imports and exports was rather greater in 1949 than in 1937. In some cases the change has been very marked. Thus Tanganyika's trade with the United Kingdom increased from 24.3 per cent to 57.1 per cent of its total imports, and from 23.2 per cent to 41.1 per cent of its total exports, between 1937 and 1949. Nigeria sold 82.4 per cent of its total exports in the United Kingdom in 1949, compared with 43.5 per cent in 1937; it obtained 65.1 per cent of its imports from the United Kingdom in the post-war years compared with 54.4 per cent in the earlier year. Similarly, the Anglo-Egyptian Sudan disposed of 67.6 per cent of its total exports to the United Kingdom in 1949 against 42.7 per cent in 1937 and increased its proportion of imports obtained from the United Kingdom from 22.8 per cent to 33.1 per cent.

Of the French territories, French West Africa and French Equatorial Africa increased the proportion of imports obtained from France in 1949 compared with 1937, and French Equatorial Africa also increased the proportion of exports sold to France. The most striking change, however, occurred in respect of imports of the two Trust Territories: Togoland and the Cameroons under French administration. The proportion of total imports obtained from France increased from 8.8 per cent in 1937 to 69.2 per cent in 1949, in the case of Togoland, and from 13 per cent to 72.9 per cent in the total imports of the French

Table 58. Trade of Oversea Territories with Metropolitan Countries

Territory	1937				1949			
	Imports		Exports		Imports		Exports	
	Value	Per cent of total	Value	Per cent of total	Value	Per cent of total	Value	Per cent of total
Belgium ^a (millions of Congo francs):								
Belgian Congo and Runda-Urundi ^b	447 ^c	43.7	1,621 ^c	79.9	4,066	39.3	5,080	46.3
France (millions of francs):								
Algeria	3,125.0	76.5	3,559.0	82.1	99,078.8	77.5	67,626.2	76.2
French Cameroons	33.5	13.0	140.4	53.3	6,111.4	72.9	5,165.9	77.6
French Equatorial Africa	83.9	35.0	165.7	64.6	7,263.5	64.2	4,797.2	76.0
French Togoland	6.9	8.8	50.6	67.0	1,005.8	69.2	667.4	79.0
French West Africa	678.9	44.2	1,082.7	78.8	23,704.6	68.7	21,510.7	78.5
Madagascar	343.8	73.5	457.7	77.6	8,771.1	74.4	5,903.6	80.1
Morocco	558.2	31.6	536.6	46.9	60,448.0	58.5	26,578.6	49.7
Réunion	106.5	55.0	185.7	94.1	2,105.1	60.2	1,776.5	58.8
Tunisia	793.4	59.9	653.3	57.3	29,779.5	73.9	12,958.7	47.6
Portugal (thousands of angolares):								
Angola	97,319	45.3	193,029	56.2	607,881	45.5	602,915	33.6
Mozambique	116,490 ^d	24.2	170,380 ^d	36.7	519,187	29.7	366,444	38.0
United Kingdom (thousands of pounds sterling):								
Anglo-Egyptian Sudan (Condominium)	1,441	22.8	3,536	42.7	7,565	33.1	17,868	67.6
Gambia	323	45.8	213	32.0	..	..	..	..
Gold Coast	6,049	49.2	3,695	30.7	25,909	59.8	11,849	32.9
Kenya-Uganda	3,639	36.9	2,028	22.3	35,038	52.3	9,911	28.8 ^e
Mauritius	777	29.5	2,482	91.4	..	..	..	..
Nigeria	7,960	54.4	8,294	43.5	37,414	65.1	47,838	82.4 ^f
Northern Rhodesia	1,473	36.4	6,162	51.9	7,279	34.2	18,593	56.8
Nyasaland	313	41.9	821	92.6	3,096	55.3	3,638	79.6
Sierra Leone	1,141	67.4	1,684	66.0	3,703	63.7	3,661	36.7 ^g
Tanganyika	953	24.3	1,030	23.2	15,759	57.2	7,908	41.1 ^{g h}

Source: *Boletim do Instituto Nacional de Estatística, X-Imperio Colonial*, June 1950; *Anuario Estadístico de Angola*, 1937. Banque du Congo belge, *Bulletin mensuel d'information générale et Revue des marchés*, January and September 1949; *Statistique générale de la France, Annuaire statistique*, 1939; Ministère de la France d'Outre-mer, *Bulletin mensuel de statistique d'Outre-mer*, September-October 1950. United Kingdom Overseas Economic Surveys, *Portuguese East Africa* (London, 1949). *Statistical Abstract for the British Commonwealth*, 1936 to 1945. East African Customs and Excise Department, *Annual Trade Report of Kenya, Uganda and Tanganyika*, 1949. *Statement of Trade of Northern Rhodesia*, 1948 to 1949 (Lusaka, 1950). Nyasaland Protectorate Customs Department, *Annual Report on the Trade of the Protectorate*, 1949 (Zomba, 1950). *Nigeria Trade Summary*,

October-December 1949 (Lagos, 1950). *Gold Coast Gazette*, Trade Supplement, October 1950. Colony and Protectorate of Sierra Leone: *Trade Report for the Year 1949* (Freetown, 1950). Sudan: Barclays Bank, *Overseas Review*, May 1950 (London).

^a Trade with Benelux.

^b Domestic exports include gold.

^c 1936-38 figures.

^d 1939 figures.

^e Total domestic exports exclude transfers to Tanganyika.

^f Total exports include re-exports.

^g Total domestic exports exclude diamonds.

^h Total domestic exports exclude transfers to Kenya and Uganda.

Cameroons. On the other hand, the Belgian Congo was less dependent on the Belgian market for the sale of its exports, the proportion of exports sold to Belgium falling from 79.9 per cent in 1937⁸ to 46.3 per cent in 1949. There was no significant change in the proportion of imports obtained by the Belgian Congo from Belgium.

⁸ 1936-38 figures.

The tendency for the metropolitan countries in many cases to increase their share of the total trade in the oversea territories is accompanied by a decline in the relative share of Europe as a whole and an increase in the share of the United States in African trade. This phenomenon is partly explained by the almost complete exclusion, as a result of the war, of Germany, Italy and Japan from African trade. Table 59 sets forth the trade

Table 59. Share of Germany, Italy and Japan in Imports and Exports of Certain Countries, 1937

(In percentage of total)

Country	Imports			Exports		
	Germany	Italy	Japan	Germany	Italy	Japan
Anglo-Egyptian Sudan	—	—	19.2	—	4.0	3.7
Gold Coast	8.9	1.6	4.1	14.5	—	—
Kenya and Uganda	5.5	—	14.7	1.1	—	12.7
Nigeria	9.3	2.1	6.3	17.1	3.3	—
Northern Rhodesia	—	—	2.8	25.2	10.7	—
Nyasaland	—	—	27.7	—	—	—
Sierra Leone	2.7	—	1.7	17.4	—	—
Tanganyika	13.4	—	23.8	11.3	1.0	—
Algeria	—	—	—	2.2	—	—
French Cameroons	7.9	—	—	9.0	—	—
French Equatorial Africa	4.5	—	—	8.9	1.0	—
French Morocco	2.7	2.7	8.8	3.6	7.5	—
French Togoland	7.6	—	14.0	7.9	—	—
French West Africa	3.4	—	1.3	3.0	—	—
Madagascar	—	—	—	1.2	1.0	—
Tunisia	1.6	3.1	—	—	9.3	—
Belgian Congo ^a	4.8	—	15.0	6.3	1.6	—
Angola	7.6	—	6.7	1.4	—	—
Southern Rhodesia	2.7	1.0	2.7	1.3	—	—
Union of South Africa	6.6	1.0	3.7	4.1	—	2.7

Source: Angola: *Anuario Estatístico de Angola*, 1937 (Luanda, 1938). Belgian Congo and Ruanda-Urundi: Banque du Congo belge, *Bulletin mensuel d'information générale et Revue des marchés*, January and September 1949. Algeria, French Cameroons, French Equatorial Africa, French Morocco, French Togoland, French West Africa, Madagascar, Tunisia: *Statistique générale de la France, Annuaire statistique*, 1939.

Statistical Abstract for the British Commonwealth, 1936 to 1945. Colonial Annual Reports, *Gold Coast*, 1938-39 (London, 1939). *Annual Trade Report of Kenya and Uganda*, 1937. Nigeria: *Trade Report for the year 1937*. Tanganyika Territory, *Trade Report for the year 1938* (Dar es Salaam, 1939). *Annual Statement of the Trade of Southern Rhodesia*, 1940. *Official Yearbook of the Union of South Africa*, 1939.

^a 1936-38 figures.

of the most important African territories with Germany, Italy and Japan in 1937.

In 1949 trade with the former Axis countries was so small as not to be recorded separately in most official statistics. The only significant exceptions to this are in regard to trade between Japan and Kenya-Uganda, and Japan and the Anglo-Egyptian Sudan. In 1949 Kenya-Uganda exported to Japan goods to the value of £1.28 million, or 3.7 per cent of total exports, and imported goods from Japan to the value of £2.86 million, or 4.3 per cent of total imports. In 1948 the Anglo-Egyptian Sudan imported from Japan goods to the value of £.7 million, or 3.3 per cent of total imports.

These figures are evidence of the resumption of Japanese participation in African trade but they are small compared with pre-war figures. In 1930 Japanese goods had captured an increasing portion of the market, especially in the Congo Basin

Treaty territories, comprising the Belgian Congo, Kenya, Uganda, Tanganyika, Nyasaland, and a portion of French Equatorial Africa, where preferential treatment was excluded. Thus, in Kenya-Uganda the percentage of Japanese imports increased from about 5.6 per cent of the total in 1930 to about 15 per cent in 1937; in Tanganyika from about 6 per cent to about 24 per cent; in Nyasaland from about 5 per cent to about 28 per cent; in the Belgian Congo from about 5 per cent to about 15 per cent. In other African territories Japanese competition had been restricted by quotas and other discriminatory devices. Cheap textiles and footwear constituted the greater part of Japanese imports into Africa, and since these items accounted for a high percentage of all African imports, the cheap varieties supplied by Japan were of considerable importance in raising the low standards of life in these parts of Africa.

German trade with Africa was territorially somewhat more widely distributed than that of Japan, but in no case did German trade account for so large a proportion of the trade of any territory as that of Japan in British East Africa. Nevertheless, in pre-war years, both as buyer and seller, Germany was of considerable importance in African trade. In 1937 Germany and Japan together accounted for approximately 9 per cent of African imports. In 1949, making allowance for imports from countries not specified, it is probable that the comparable figure did not exceed one per cent. It may be supposed that, as production levels in Germany and Japan approach pre-war figures, both countries may become increasing competitors in African trade. Whether or not imports from these countries will again approach pre-war dimensions will depend in part upon commercial policy and, in particular, upon the future of the Congo Basin Treaties.

INTRA-AFRICAN TRADE

According to United Nations sources,⁹ intra-African trade amounted to 7.7 per cent of total exports in 1938, 13 per cent in 1948 and 13 per cent during the first half of 1949. Data based upon partial coverage of African territories¹⁰ do not show any significant change between 1949 and 1948. Even though figures are incomplete, it is safe to conclude that intra-African trade, still low, has slightly increased during the post-war years as compared with pre-war (1938). The explanation of this slow development of intra-regional trade must of course be sought in the complex conditions which have retarded African economic development in general. The primary production which accounts for most of African output is complementary with the industrialized regions outside Africa rather than with other parts of Africa. Of importance also in this connexion is the general poverty of transport and communications. The trade figures, however, underestimate intra-African trade in two ways: (1) they do not include all frontier trade; (2) they do not take account of many goods carried by migrant labourers.

⁹ United Nations Statistical Papers, *Summary of World Trade Statistics*, Series D, No. 2, 1 April 1950.

¹⁰ Covering Anglo-Egyptian Sudan, Ethiopia, Nigeria, Union of South Africa, Angola, Mozambique, Algeria, Tunisia, Morocco, French Equatorial Africa, French

In 1949, the Union of South Africa alone accounted for about 40 per cent of the intra-African trade; moreover, in 1949 more than 20 per cent of its exports went to African markets, against 8.6 per cent in 1937. Southern Rhodesia alone absorbed about 40.5 per cent of these exports. The distribution of exports to African territories from the Union of South Africa in 1949 was not significantly different from 1937. However, a major change occurred in the distribution of its imports between pre-war and post-war periods. The Belgian Congo, which in 1949 supplied the Union of South Africa with 25 per cent of its imports from Africa against 9.1 per cent in 1937, became its main African supplier. In 1937 the Union of South Africa obtained only 2.6 per cent of its total imports from other African countries against 6.3 per cent in 1949.

Southern Rhodesia's trade with African territories in 1949 showed about the same percentage of total trade as in 1937, but exports to Northern Rhodesia contracted from 60 per cent of total exports to Africa in 1937 to 46.3 per cent in 1949. It is, however, interesting to note that this loss was compensated by increased exports to the Union of South Africa, from 23.7 per cent in 1937 to 40.3 per cent in 1949. It is evident, therefore, that the increase in intra-African trade is in large measure due to the increase in exports from the Union of South Africa to other African territories and to a lesser extent to an increase in the Union of South Africa's imports from other parts of Africa. Moreover, this increased trade was mainly concentrated among the Union of South Africa, Southern Rhodesia, Northern Rhodesia and the Belgian Congo.

BALANCE OF PAYMENTS

Union of South Africa

Estimates of the balances of payments are available for only a very few countries in Africa. The most recently available publication of the International Monetary Fund on the subject, the *Balance of Payments Yearbook*, 1948, gave certain estimates for six African territories, namely,

West Africa, Sierra Leone, Northern Rhodesia, Southern Rhodesia, and the Belgian Congo. These data understate intra-African trade since figures relating to British dependencies, French dependencies, etc., that may have included African territories have been omitted.

the Belgian Congo and Ruanda-Urundi, Ethiopia, Liberia, Northern Rhodesia, Southern Rhodesia and the Union of South Africa. Estimates for the Sudan are also available in the *Official Foreign Trade Report* of the Sudan. Many of these estimates, however, are still in fragmentary state and in some cases are available for only a single year. In fact, only for the Union of South Africa are the estimates sufficiently complete and up-to-date to provide a picture of current movement. For this reason and also for the reason that the Union of South Africa is the only industrially developed economy in Africa, accounting for between 25 per cent and 30 per cent of the total trade of the area, the balance of payments of the Union of South Africa will be considered separately and in greater detail than is possible in other cases.

The balances of payments for the Union of South Africa for recent years are set out in table 60. The outstanding feature of its balance of payments in post-war years is the crisis which arose in 1948, with the development of heavy deficits in both 1947 and 1948, and a consequent depletion of gold and foreign exchange reserves, followed by a very considerable recovery in the latter part of 1949 and during 1950. This crisis

was due, in the first instance, to a great expansion of imports, particularly in 1947 and 1948, continuing into the first half of 1949.

In 1947, however, a heavy inflow of private capital, most of it sterling, offset the adverse balance on current account, and financed imports from the sterling area. In 1948 and through the first half of 1949 this flow of capital was very materially reduced with the result that the total deficit to be met out of reserves after allowing for the sale of practically all the current gold output, amounted to £85 million in 1948 and £94 million in the first half of 1949.

The situation was complicated by the dollar shortage of the sterling area as a whole and by the particular place of the Union of South Africa within the sterling area. The post-war pattern of the Union of South Africa's import and export trade up to the end of 1948 showed an increase in the relative importance of the United States as a source of imports and a decline in importance of the United Kingdom as compared with pre-war years. Thus in 1937, 43 per cent of the Union of South Africa's imports were obtained from the United Kingdom, whereas in 1947 the comparable proportion was 31 per cent and in 1948, 34 per

Table 60. Balance of Payments^a of the Union of South Africa,^b 1947 to 1950 (Second Quarter)
(In millions of South African pounds)

Item	1947	1948	1949				1950	
	Annual	Annual	First half	Third quarter	Fourth quarter	Total	First quarter ^c	Second quarter
Total	—5	—85	—94	—12	40	—66	22	12
Imports, f.o.b.	299	351	174	78	60	312	58	69
Exports, f.o.b. ^d	96	131	66	31	41	138	45	39
Trade balance	—203	—220	—108	—47	—19	—174	—13	—30
Non-monetary gold ^e . . .	97	99	48	29	37	114	36	37
Other current items	—73 ^f	—46	—26	—11	—14	—51	—14	—11
Balance on current account . .	—179	—167	—86	—29	4	—111	9	—4
Subscriptions to International Bank for Reconstruction and Development, and International Monetary Fund	—6	—	—	—	—	—	—	—
Private capital movements ^g	180	82	—8	17	36	45	13	16
Omissions and errors . . .								

Source: South African Reserve Bank, *Quarterly Bulletin of Statistics*, September 1950.

^a Preliminary estimates.

^b Including South-West Africa.

^c Revised estimates.

^d Excluding ships' stores and gold products.

^e Gold production less net gold consumption in the Union of South Africa (including exports of gold products).

^f Including lend-lease payment of £25 million.

^g Including trade credits.

cent. Imports from the United States in 1937 were 20 per cent of the total, but in 1947, 34 per cent and in 1948, 35 per cent. In 1946 under an Anglo-South African agreement, South Africa was to sell to the United Kingdom a minimum of £70 million of gold in each of the years 1946 and 1947, while the Union of South Africa was to draw upon the sterling area pool for the hard currencies required to finance its imports from hard currency areas. The high level of imports acquired by the Union of South Africa from the United States resulted in considerably heavier drawings from the sterling pool by it than had been anticipated. Moreover, in 1947 large private sterling funds were being attracted to it. Consequently, the earlier agreement was replaced by the Gold Loan Agreement of November 1947, by which a gold loan of £80 million was made to the United Kingdom for a period of three years, the loan being repayable in sterling on demand in certain eventualities. The Union of South Africa for its part was to continue to draw sterling capital from Britain, to export to Britain up to £12 million yearly in processed foods and other commodities classed as non-essentials, and to reimburse Britain in gold for any purchase of non-sterling currencies. This arrangement, however, broke down following its balance of payments crisis in 1948, mainly as a result of two influences: a continued high deficit of the Union of South Africa with the dollar area, and the sudden and heavy reduction in the flow of sterling capital to it. The Union of South Africa exercised its option for the repayment of the gold loan from the United Kingdom in sterling in 1949, £50 million being repaid during the first half of the year and the remaining £30 million in the third quarter. Nevertheless, the Reserve Bank's holding of gold had fallen to £37 million by the middle of 1949 and its holding of sterling to only £3 million.

In the face of this situation, it was necessary for the Government of the Union of South Africa to take drastic measures to reduce its overseas expenditures. Import restrictions were imposed in 1948, particularly against imports from the dollar area, and even more drastic restrictions covering imports from all areas were imposed in mid-1949. In September 1949 the currency of the Union of South Africa was devalued along with sterling and in the same degree. The effect of these two

measures was on the one hand greatly to reduce imports, especially from dollar areas, and at the same time to increase income from exports, including gold. Thus, in the second half of 1949, imports fell to £138 million compared with £174 million in the first half of the year, while exports rose from £66 million in the first half to £72 million in the second half. Compared with 1948 as a whole, imports in 1949 fell from £351 million to £312 million and exports increased slightly from £131 million to £138 million. Private capital imports, which had been £82 million in 1948 fell to £45 million in 1949, and the total deficit on the balance of transactions was £66 million in 1949 compared with £85 million in 1948. However, the improvement in the situation which was particularly evident in the fourth quarter of 1949 was even more marked during the first half of 1950 when imports fell to £127 million and exports rose to £84 million, the increase in the value of exports being explained mainly by the increase in demand, particularly in the United States, for such products as base minerals and wool. Though imports of sterling capital apparently continued to fall in 1950, the effect of this decline was to some extent offset by the raising of government loans amounting to about £13 million from sterling, Swiss franc and dollar areas, and by capital loans amounting to about £6 million obtained by gold-mining companies in Switzerland and the United States. At the end of August 1950 the South African Reserve Bank had increased its gold holdings to £63.7 million and its foreign exchange reserve to £77.7 million.

One important aspect of all these developments is a movement towards the pre-war pattern of trade with imports from the United States becoming relatively less important than in the previous post-war years and imports from the United Kingdom becoming more important. In 1949, 42 per cent of the total imports of the Union of South Africa were obtained from the United Kingdom and only 26 per cent from the United States. Moreover, a new arrangement between the United Kingdom and the Union of South Africa more nearly re-establishes the pre-war pattern of the settlements of transactions. According to this agreement the Union undertakes to sell to the United Kingdom against sterling as much of the current gold output as is not required for

the purpose of maintaining its gold reserve at a defined level. The United Kingdom would permit the Union Government to raise loans in the London market up to a total of £20 million and also would permit the continued free flow of capital to the Union of South Africa for purposes of useful economic development. Import control in the Union of South Africa is an essential part of the arrangement, but the existing system was amended by the introduction of a system of "universal" permits for essential goods to be obtained in the most competitive markets. This category includes capital goods; the extent to which these will be obtained from sterling sources will depend partly on the relative availability of supplies as between sterling and dollar sources and partly on competitive prices. Restricted import permits for other categories of goods are limited to purchases from soft currency areas.

Other countries

Estimates of the balance of payments for other countries of Africa are too fragmentary to provide a basis for anything more than some general observations. As has already been pointed out, economic activity in Africa, other than for local subsistence production, depends in a high degree upon foreign capital applied to the production for export of a relatively small number of primary products, agricultural or mineral. Thus, the characteristic feature of the balance of payments of many African territories is the application of a considerable proportion of export income to dividends and interest on capital owned by foreigners.

There is, however, a wide difference in this respect between the territories, and this is to some

extent brought out if the amounts transferred as dividends and profits in the estimated balances of payments available are expressed as percentages of total merchandise exports, as is the case in table 61.

Northern Rhodesia and Liberia are extreme examples of countries with intensive export production based on foreign capital, having in other respects undeveloped economies. Both had large merchandise export surpluses in the years to which the balance of payments estimates refer. Ethiopia, on the other hand, provides an example of a country which is both little developed and has attracted little foreign capital. The largest component in the estimated dividends and profits transferred abroad in the case of Ethiopia is the excess of cash receipts over expenditures in Ethiopia of the foreign-owned railway company which operates between Djibouti and Addis Ababa. Southern Rhodesia, the Belgian Congo and the Anglo-Egyptian Sudan represent an intermediate position in which export production is somewhat more varied. The figures for the Union of South Africa reflect to some extent an increase in the proportion of gold-mining and other shares now owned by South Africans as compared with pre-war years and also the relatively low external government debt.

Southern Rhodesia had net deficits on merchandise trading account in both pre-war and post-war years, the deficit being relatively higher in 1947, 1948 and 1949 than pre-war, owing to the considerable increase in imports. In 1946 the net deficit on merchandise account, approximately £3.7 million was more than offset by sales of non-monetary gold, amounting to about £4.7

Table 61. Estimated Dividends and Profits Transferred Abroad by Certain Countries, Pre-war and Post-war

(In percentage of total exports)

Country	1937	1945	1946	1947	1948
Anglo-Egyptian Sudan	10.0
Belgian Congo ^a	7.5
Ethiopia	1.0	1.5	1.5
Liberia	53.0	..
Northern Rhodesia	..	26.0	32.0	43.0	..
Southern Rhodesia ^a	10.0	8.0	6.0
Union of South Africa ^a	17.8	..	11.7	12.0	10.0

Source: International Monetary Fund, *Balance of Payments Yearbook*, 1948 (Washington, D.C.); Sudan Government Department of

Economics and Trade, *Foreign Trade and Internal Statistics*, 1948.

^a Including non-monetary gold.

million. In 1947 and 1948, however, while the value of non-monetary gold exported remained at about the 1946 level, the net deficit on merchandise account alone increased to £14.2 million in 1947 and £17.7 million in 1948. In respect of interest and dividend payments, there was a net outward transfer of about £2 million in 1946, £1.9 million in 1947 and £1.7 million in 1948. A striking feature, however, of the Southern Rhodesian balances of payments is the large amounts of net private transfers of more than £2 million in 1946, about £4 million in 1947 and nearly £5 million in 1948, representing cash transfers made by white immigrants. The net inflow of white immigrants to Southern Rhodesia in recent years was 8,846 in 1946, 12,880 in 1947, and 12,363 in 1949.

It is also worthy of note that administrative services of government and other official and semi-official organizations have had to be supplied for many African territories in very large measure from outside Africa, resulting in substantial transfers of funds annually in the form of pensions and other emoluments. Although an increasing proportion of administrative officials are recruited from the local populations, this process is limited

by the rate at which education and sufficient means of technical training can be increased. Moreover, the very fact of increased government services in the fields of education, public health, economic development and social welfare demands increases in staff not all of which is available locally. Hence, the foreign transfers which arise from this source do not necessarily decrease with an increase in the proportions of officials recruited locally. On the other hand, account has to be taken of remittances to various parts of Africa made to missionary societies and other philanthropic organizations, and of grants-in-aid made by the metropolitan Powers to their dependencies. In the case of the Sudan, for example, about £E 400,000 (1.5 per cent of the total value of merchandise exports) was transferred in 1948 on account of pensions and gratuities by commercial firms and the Government, while about £E 60,000 was received as contributions to missions.

Remittances by migrant African workers are of some importance as between certain African countries. For the Union of South Africa such remittances represent a net debit item and for Northern Rhodesia (and no doubt for Nyasaland, for which no estimates are available) a net credit.

Chapter 8

NOTE ON DEMOGRAPHIC ASPECTS¹

The greater part of the population in Africa has never been enumerated in an adequate population census. Estimates of population for a large number of African territories are poor. Vital statistics and accurate data on continental and inter-continental movement of population are almost entirely lacking. Even at the present time the most authoritative estimates² of population are no more than rough approximations, while little can be said with confidence about present and past growth rates.

According to the United Nations *Demographic Yearbook* for 1949,³ areas containing 44 per cent only of the current estimated population of Africa have ever experienced a more or less adequate population census.⁴ With the exception of the population of European stock in the Union of South Africa and some few countries on the North African coast, reliable vital statistics do not exist. The *Demographic Yearbook* also gives information on the methods used by the various countries in preparing estimates for three recent years, 1947, 1948 and 1949. Of those areas for which information was available, only five, containing 10 per cent of the 1949 population, used the relatively reliable method of a census and records of births and deaths, with or without allowance for migration, to arrive at current estimates of population. Seven areas, representing another 10 per cent of the population, prepared estimates by means of mathematical extrapolation of census totals, while two others, representing 2.5 per cent of the total population, applied an estimated rate of population change to a census figure. An additional nine areas and probably the majority of those for which no information is available, use non-censal meth-

ods to prepare estimates; these vary from head counts and "group enumerations", to estimates based on the number of male taxpayers multiplied by a factor, and some that are hardly more than guesses.

The totals for Africa and the various regions and political subdivisions, as given below, were derived from the available census figures and the best available official and unofficial estimates for individual countries. All official and unofficial estimates were carefully examined to appraise as far as possible their completeness and reliability and to correct any apparent errors and inadequacies. An attempt was made to obtain population estimates with a uniform time reference as of the middle of each year. This was found extremely difficult in the case of some countries, especially for earlier years; in these cases approximations for the midpoint of the year in question were obtained by interpolations or extrapolations of population estimates and census data for other years.

SIZE, DENSITY AND GROWTH OF POPULATION

The estimates of population in millions and the density of population per square kilometre for each of the years 1920, 1930, 1939 and 1949, together with the average annual percentage increases, are presented in table 62. The area figures used here were mainly obtained from the data for individual countries shown in the United Nations *Demographic Yearbook*, and relate to land area plus inland waters. The population figures for 1949 were for the greater part taken from this source, but the estimates for the three other years were adjusted where necessary in order

¹ This section is based on a memorandum prepared by the Population Division of the United Nations Department of Social Affairs. Data include Egypt.

² See United Nations *Demographic Yearbook, 1949-1950: "World Population Trends, 1920-1949"*.

³ *Ibid.*, table 1, page 71, ff.

⁴ The rather lenient criteria set up to qualify a count as a census were: (1) that it covered the majority of the population; (2) that it was obtained by the method of individual enumeration; and (3) that it was effected within the space of less than a year.

Table 62. Population Estimates and Density,^a Selected Years

Year	Midyear population (millions)	Average annual increase since preceding date (per cent)	Persons per square kilometre
1920	136	—	4.6
1930	155	1.3	5.2
1939	175	1.4	5.9
1949	198	1.3	6.7

^a Including Egypt.

to present a reasonably consistent pattern of changes.

In view of the many reservations with regard to these population estimates, it is evident that no great reliance can be placed on the figures, especially on those for earlier years, and in particular on the implied changes in population between the years specified in the table. According to the estimates, the population of Africa increased from 136 million in 1920 to 198 million in 1949, or by about 62 million in a generation. This implied increase amounts to an average growth of 1.3 per cent per year over the period 1920 to 1949. The true rate may be considerably lower; nevertheless, there can be little doubt that the population of Africa is increasing rapidly at the present time. Since 1920 it has very probably been growing at a rate much more rapid than the average of past centuries for this continent. There are indications that, while human fertility remains at an extremely high level in most African territories, mortality rates are gradually being lowered. If this process should continue, it would lead to a still more rapid and accelerating rate of population growth in the future.

With an area of approximately 30,252,000 square kilometres, Africa is the second largest of the continents. Its area is more than that of Europe and the whole of the Union of Soviet Socialist Republics together, and more than ten times that of the combined area of North-West-Central and Southern Europe. In 1949 Africa, representing 23 per cent of the world's land area, contained only 8 per cent of the world's people. The population had a density of 7 persons per square kilometre compared with a world average of 18 and a figure many times that in large areas of the world.

⁵ United Nations *Demographic Yearbook, 1949-1950*: "World Population Trends, 1920-49".

It should be emphasized, however, that the density of population, expressed as the average number of persons per square kilometre of land area, does not take into account important variations in natural resources, topography, climate, and economic activity. For example, large parts of the African continent consist of desert area unsuitable for human habitation. In addition, the tropical zone claims a greater proportion of Africa than of any other continent. Fortunately, Africa also has a smaller proportion of low-lying lands than any other continent, and these consist mainly of desert and semi-desert areas rather than unhealthy marshes and rain-forest as in the tropical areas of America and Asia. Except for small areas in the north and south with a Mediterranean climate and certain high plateaus mostly near the east coast, Africa has been a relatively unattractive area for European settlement.

The majority of countries in Africa have no comprehensive system of vital registration, and in most of the remaining areas such registration as exists is incomplete so that the official vital statistics understate the birth and death rates. A recent attempt at estimating the current levels of birth and death rates (around 1947) for various regions of the world, including Africa, resulted in an estimate of a birth rate of 40-45 and a death rate of 25-30 per thousand population for the whole of the continent.⁵ These approximate rates are considered very tentative in view of the fact that adequate birth and death statistics were available for a limited area only, and various indirect methods had to be used in order to arrive at average rates for Africa as a whole. A similar attempt at estimating the pre-war birth and death rates of the African population⁶ give the same probable range for the birth rate but a death rate of 30-35 per thousand population.

Africa has begun to experience the kind of population expansion which occurred earlier in Europe and some other parts of the world, with the death rate declining under the impact of social and economic changes while the birth rate has been kept at a high level by the traditional culture, beliefs and mores. If the rapid rate of growth experienced during recent years continues to pre-

⁶ United Nations, *World Population Trends, 1920-1947*, December 1949, page 10.

vail in the immediate future, which is more than likely as a minimum estimate, a population of about 290 million would result in 1980. That this may be a conservative guess is indicated by the results of a recent study of the population of the Union of South Africa,⁷ in which the natural increase rate of the Bantu population was estimated at about 17 per thousand during the period 1936-46. Census figures for this population indicate that the average growth rate during recent intercensal periods was never lower than 1.5 per cent and often higher than 2.0 per cent per year.

It may safely be stated that births and deaths and not migration have been responsible for the rapid growth of the African population in recent decades. Probably the greatest inter-continental movement of population in the history of Africa was connected with the slave trade of the eighteenth century. The most important inter-continental migration during the last hundred years, as well as at the present time, is that of European settlers to various parts of Africa, particularly South and East Africa. This movement reached a peak of about 75,000 persons per year during a very brief period immediately following the Second World War, but the number has been considerably reduced in more recent years.

AGE COMPOSITION OF THE POPULATION

The age composition of a population depends upon past trends in fertility and migration. Since little is known with any degree of accuracy about these factors, no more than a rough guess at the probable age structure of the African population can be attempted here. Age distributions derived from censuses cover only a minority of African countries. These, together with estimates of various kinds, such as generalization from information for certain areas within a particular country, were used to calculate approximate percentages of the African population in broad age groups, as shown in table 63.

The age distribution of the African population, as estimated, is typical of a population charac-

Table 63. Estimated Numbers and Percentages of the Population^a in Specified Age Groups, 1949

Age	Estimated percentage	Estimated population (in millions)
Under 15 years	40	79.2
Under 1 year	3	5.9
1-4 years	11	21.8
5-14 years	26	51.5
15-59 years	55	108.9
60 years and over	5	9.9
All ages	100	198.0

^a Including Egypt.

terized by high birth rates as well as high death rates. The population may be described as "young", that is, the proportion of children and young persons is high, and that of old persons is low. This is so partly because high mortality prevents more than a small proportion of persons from living to an advanced age, while sustained high fertility leads to large contingents of young persons in the population. As a result the proportion of persons of productive age is relatively small in comparison with highly industrialized countries,⁸ while the proportion of persons dependent upon their care and production efforts is large.

If the African population were to be presented in the standard graphic form with the age groups represented by bars in ascending order of age, the resulting population chart would undoubtedly have a pyramidal form, that is, a broad base which tapers off rapidly in regular fashion and all but disappears at age 60. It is also possible to guess that the numbers of males and females in the African population are very nearly equal, that minors form a majority of both sexes, that the median age is around 18 years and that the overwhelming majority of women over the age of 15 years have not yet passed out of the child-bearing period.

GROWTH OF POPULATION BY REGION

For the purposes of this description of population trends there are delineated, arbitrarily, four large regions which are somewhat homogeneous

⁷ See L. T. Badenhorst, "The Future Growth of the Population of South Africa and its Probable Age Distribution", *Population Studies*, vol. IV, No. 1, June 1950.

⁸ In 1947, for example, the percentage of estimated

population 15-59 years of age in the United States and Canada was 64, and 62 in North-West-Central Europe. See United Nations, *World Population Trends, 1920-1947*, page 15.

with respect to population, climate, topography and nature of contacts with other parts of the world, and which are at the same time easily identifiable geographically. These are North, West Central, East Central and South Africa.

North Africa includes all countries on the North African seacoast from Egypt in the east to French Morocco in the west, including Ifni (part of Spanish West Africa) and the Northern Zone of the Spanish Moroccan Protectorate. South Africa includes the Union of South Africa, South-West Africa, Bechuanaland, Basutoland and Swaziland. The central area between these two regions has been subdivided by a line running from north to south along the eastern borders of French Equatorial Africa, Belgian Congo and Angola. All countries to the east of this line, from the Anglo-Egyptian Sudan in the north to the Rhodesias and Mozambique in the south, including all islands off the east coast, form East Central Africa. All countries to the west of the above line constitute West Central Africa.

The area, density in 1949, and population estimates for each of the years 1920, 1930, 1939 and 1949 are presented for these four regions in table 64.

As regards population growth during the last few decades in the regions under discussion, very little can be said with confidence. However, some tentative conclusions may be drawn from the population totals presented in table 64.

First, all four regions show a consistent and rapid growth throughout the period 1920-1949. The growth rate over the period covered by the table was highest in South Africa, the region in which the social and economic forces that usually

accompany a decline in the death rate have been in operation most effectively and for the longest period of time. But it is a well established fact that the same forces that are responsible for a decrease in the death rate—industrialization, urbanization, rising standards of living, improved means of communication, modern sanitation and epidemic control, to mention only a few—may also, in the long run, be responsible for a decline in the birth rate. The average rate of growth in South Africa was 2.2 per cent per year during the period 1920-1930; 1.9 per cent during the years 1930-1939, and 1.6 per cent only during 1939-1949.

The growth rate of the population of North Africa averaged 1.5, 1.7, and 1.9 per cent per year, respectively, for the three periods under discussion. The upward trend is probably significant, and one may venture the conclusion that it is the result of the extraordinarily high death rates being increasingly lowered, while the high birth rates remain unaffected. For the first time in recent decades the growth rate of North Africa exceeded that of South Africa in the period 1939-1949.

The growth rates for West and East Central Africa must be interpreted with extreme caution in view of the tentative nature of the population estimates for countries in these regions. The average annual growth rates implied by the population totals for the years specified were as follows: in East Central Africa, 1.3, 1920-1930; 1.3, 1930-1939; and 1.2, 1939-1949. In West Central Africa, they were 1.2, 1920-1930; 1.2, 1930-1939; and 0.9 1939-1949. Although quite high, the growth rates in these regions were not so high as in the other two regions.

Table 64. Population, Area and Density of Major Regions,^a Selected Years

Area, density and population	Region			
	North Africa ^a	West Central Africa	East Central Africa	South Africa
Area in thousands of square kilometres	5,561	13,030	8,854	2,806
Persons per square kilometre (1949)	8	6	7	5
Population (in millions):				
1920	26.9	54.6	46.5	7.8
1930	31.1	61.3	52.6	9.7
1939	36.2	68.1	59.2	11.5
1949	43.5	74.4	66.4	13.5

^a Including Egypt.

PLANS FOR ECONOMIC DEVELOPMENT

Chapter 9

GOVERNMENT PROGRAMMES

GOVERNMENT-SPONSORED DEVELOPMENT PLANS

During and following the Second World War, government-sponsored development plans were projected and drawn up for almost every territory in Africa, and some important development projects have already been begun. Since the greater part of Africa is non-self-governing, the initiative for the development plans for much of it comes from the Administering Powers.

In the case of the British, French and Belgian territories, comprehensive plans covering a number of years have been drawn up and are already being executed or are in an advanced stage of preparation.¹ These plans cover in the main developments which are not likely to yield a direct financial return and are therefore not likely to be undertaken except by government initiative. An assumption underlying all the plans is that investments made by private enterprise will continue to provide capital for agricultural, mining and industrial development.

In the independent countries of the Union of South Africa, Liberia and Ethiopia, a number of important specific projects, both governmental and private, are planned or have been begun. In Liberia an official United States economic mission established for the purpose of providing technical assistance in the formulation of plans for the country's economic development has been in operation since 1944; a five-year plan for the development of agriculture, industry and transport, and improvement of health and education services has been prepared.

Southern Rhodesia, which has a large measure of autonomy, has a four-year plan of development

covering agricultural irrigation projects, communications, electricity supply, and other public utilities. The plan anticipates an expenditure of £48 million over the four years from April 1949 to 1953.²

In the Union of South Africa there is no integrated plan, but a variety of governmental institutions are concerned with research and the planning, financing and administration of specific projects.³ The most considerable development project calls for the opening up of the new gold fields in the Orange Free State and the western Transvaal, involving a total investment both private and public of the order of £200 million over a number of years.

As regards the development plans of the major Administering Powers, the main objectives common to all are to increase productivity and raise levels of output, thus improving standards of consumption of the indigenous populations both directly and through increased exports. Increased exports of primary products are also designed to improve the trade balances of the currency areas to which the territories belong. Within the framework of these general objectives there are some differences of emphasis. Thus, for example, the ten-year development plans of the British territories are conceived as part of a general colonial development and welfare policy. In the case of the French territories the development plans have been to some extent brought into line with the priorities established within the framework of the European Recovery Program and, in consequence, are largely projected until the end of 1952. The plan for the Belgian Congo is a comprehensive

¹ A more complete account of the development plans for the Non-Self-Governing Territories may be found in United Nations, *Information from Non-Self-Governing Territories*: Summary of information transmitted by the Government of the United Kingdom of Great Britain and Northern Ireland; by the Government of France; by the Government of Belgium. These documents were

presented to the fifth session of the General Assembly.

² A brief account of the administrative agencies in Southern Rhodesia concerned with development is given in United Nations, *Economic Development in Selected Countries: Plans, Programmes and Agencies*, vol. II (1950).

³ *Ibid.*, pages 243 ff.

and co-ordinated plan of development for a ten-year period.

The British ten-year plans have grown out of a series of parliamentary actions going back to the Colonial Development Act of 1929, and culminating in the Colonial Development and Welfare Acts of 1940, 1945, 1949 and 1950. The Act of 1945 provided for £120 million to be spent over a period of ten years for economic development and social welfare in the colonies, the expenditure in any one year being limited to £17.5 million. In 1949 the maximum annual amount which could be paid out under the Act was raised to £20 million, and in 1950 it was raised again to £25 million. The territories were requested in relation to this Act to draw up ten-year development plans. Subsequently, in 1948, the Overseas Resources Act provided for the establishment of the Colonial Development Corporation and the Overseas Food Corporation, with total borrowing powers of £165 million, through which various forms of colonial development in addition to the ten-year plans might be initiated and assisted.

Development plans for the French overseas territories were begun in 1946 when a Commission for the Modernization and Equipment of Oversea Territories was given the task of drafting a ten-year plan for these territories as a whole. In 1947, pending elaboration and approval of the various ten-year plans, annual schemes were set up for the individual territories. After June 1949 development programmes were prepared for a four-year period with credits voted annually. The ten-year plan prepared in 1946 and 1947 for the French overseas territories by the above-mentioned commission did not include French North Africa, which, since 1949, has been integrated into the expansion plan for the French Union.

The ten-year plan for the economic and social development of the Belgian Congo was drafted in 1947 and 1948 and published in 1949. A law authorizing the Minister of Colonies to finance the ten-year plan with the help of extraordinary appropriations was adopted by the Chamber of Representatives in 1950. The 1950 budget of extraordinary receipts and expenditures for the Belgian Congo provides for approximately 6,000 million Congo francs for expenditure over a period of three years on projects in the ten-year plan.

Fundamentally all the plans recognize that if the populations of Africa are to achieve higher standards of living it is important to raise levels of production. For example, in the case of the Belgian Congo it is proposed by 1959 to increase the production of root crops by 89 per cent over the 1947 level, maize by 51 per cent, rice by 70 per cent, ground-nuts by 192 per cent, palm oil by 92 per cent, coffee by 120 per cent and fibres by 150 per cent. Copper production is expected to rise from 155,000 tons in 1948 to 180,000 tons within ten years, and tin production is expected to increase by 30 per cent over the 1947 level by 1953. In French West Africa, production of rice is expected to increase to 320,000 tons in 1952 compared with 250,000 tons in 1948, and shelled ground-nuts to 720,000 tons in 1956 against 480,000 tons in 1948. In French Equatorial Africa the output of cotton is expected to reach 42,000 tons in 1952 against 27,000 tons in 1948.

These increases in output are part of the targets which it is the aim of the development plans to achieve. Attainment of these targets, however, depends upon considerable direct and indirect investment over a wide field in agriculture, industry, transport and social welfare. The funds required to finance these plans are considerable, particularly in relation to the financial capacities of the countries themselves. They are, however, exclusive of private investment, which in all cases, it is assumed, will continue parallel with the official development expenditures. In drawing up the plan for the Belgian Congo, for example, it was anticipated that, over the ten-year period of the plan, private investment equal to the official expenditures on the plan would take place. Moreover, the plans do not cover all development expenditures undertaken or anticipated by the Administering Powers. The most considerable scheme not included in the British plans is the British East Africa ground-nut scheme, on which the outlay had already reached about £36 million at the end of 1950. It has since been discontinued as a major development project and will be operated as a pilot and research scheme. The approximate total expenditures (in United States dollars at post-devaluation exchange rates) envisaged in the plans to date are \$434 million in the British territories over the ten-year period,

\$515 million for the French territories south of the Sahara to the end of 1952, \$758 million for French North Africa to the end of 1952 and \$500 million for the Belgian Congo in the ten-year period. It should be emphasized that these totals are approximate and subject to revisions, mainly in an upward direction, through changes in the plans. In the case of Uganda, revision of the plan in 1949 included also a departure from the general method of financing United Kingdom plans. The grant from the general welfare fund is to be consolidated into general revenue to meet increased recurrent expenditure. It is anticipated that by 1956 Uganda will be in a position to bear the full cost of this increased recurrent expenditure.

In order to provide some indication of the relative magnitudes of investment, the estimated existing populations of the African territories of the three major Administering Powers may be set beside the figures of total expenditure quoted above. The population of the Belgian Congo (excluding Ruanda-Urundi) is approximately 11 million; of French North Africa, approximately 20 million, and of other French territories, approximately 30 million; of the ten British territories listed in table 67, approximately 54 million.

The main items of expenditure and the totals involved in each of the three groups of plans are set out in tables 65, 66 and 67.

For purposes of comparison the items of expenditure in the Belgian and French plans have been grouped according to the classifications adopted in the British plans. From these tables it will be seen that in the British plans as a whole more than 50 per cent of the total expenditure is for social services, including education, public health and housing. In the plans for French territories approximately 19 per cent of the total expenditure is to be spent on social services, including education, public health and housing; for the Belgian Congo, approximately 34 per cent. In connexion with the British plans, however, a large part of the outlays falling under the heading "social services" are regarded as an "economic expenditure for promoting the greater efficiency of the worker and preventing a great deal of waste."⁴

⁴ Secretary of State for the Colonies, in the House of Commons, 27 May 1949.

The fundamental importance to economic development in Africa south of the Sahara of an improvement in communications is emphasized in all the plans. In the plans for French territories south of the Sahara, about 61 per cent of the total expenditure is to be applied to the development of new communications and the improvement of existing ones. In the case of the Belgian Congo, more than 50 per cent of the total is for the development of transport and communications; in the British plans, about 23 per cent will be devoted to improvements in communications.

In all cases, the largest single item of expenditure under the heading of communications is for the construction of new roads and the improvement of old ones. In French West Africa, for example, it is proposed to develop 18,000 kilometres of new roads, and in French Equatorial Africa, where there are at present about 15,000 miles of dirt roads, mostly not usable in the rainy season, an extensive programme of reconstruction and surfacing to create all-weather roads is projected. In British Africa expenditure on roads is a large proportion of the total anticipated expenditure for all territories with the exception of Zanzibar. In central and east Africa, plans provide

Table 65. Classification of Schemes in the Ten-Year Development Plan for the Belgian Congo
(In millions of Congo francs)

Item	Proposed expenditure	
	Total	25,228
Communications:		
Aviation		964
Railways		1,263
Roads		6,100
Telecommunications		250
Water transport		4,385
Economic development:		
Agriculture		964
Electric power		1,909
Fisheries		90
Soil conservation		154
Stock-breeding		180
Social development:		
Education		1,838
Housing and town planning		3,100
Immigration		586
Medical and health services		1,978
Water supplies		1,052
Miscellaneous		415

Source: *Plan décennal pour le développement économique et social du Congo belge*, vol. I (Brussels, 1949).

Table 66. Classification of Schemes in the Development Plans of Certain French Territories
(In millions of metropolitan francs)

Item	Proposed expenditure							
	French West Africa	French Equatorial Africa	French Togoland	French Cameroons	Madagascar	Comoro Islands	French Somaliland	French North Africa
Total of plans	70,006.4	23,538.4	3,172.0	17,148.0	17,418.7	518.0	2,854.0	264,882
General expenditure	125.6	177.4	3.0	82.6	112.7	11.1	—	—
Communications:								
Civil aviation	747.7	182.0	—	210.0	621.3	—	—	876
Ports and harbours	13,274.5	1,558.0	86.0	3,199.4	2,839.5	143.4	1,494.0	17,196
Railways	10,479.4	2,458.8	697.0	4,233.0	3,271.0	—	—	29,129
Roads	13,657.9	9,347.8	614.0	4,582.0	3,586.0	131.6	100.0	11,868
Telecommunications and posts	2,858.7	984.8	108.0	400.0	649.8	9.4	16.0	11,772
Water transport	277.6	1,183.0	—	26.8	817.0	—	—	—
Economic development:								
Agriculture	7,826.5	1,126.0	226.0	461.8	1,573.0	51.5	6.7	31,807 ^a
Electricity and power	2,528.9	769.0	—	1,212.2	120.6	2.0	552.7	61,753
Forestry	362.8	151.4	23.0	64.4	169.0	2.6	—	—
Fisheries	158.1	—	—	2.0	20.0	—	0.3	—
Industrial development	127.3	705.8	—	210.0	167.4	—	—	9,895 ^b
Stock-breeding	3,246.0	571.2	38.0	176.0	290.4	1.0	4.3	—
Water supplies	—	—	—	—	—	—	—	90,586
Social development:								
Education	5,113.7	1,252.0	244.0	438.0	943.0	110.4	165.0	—
Housing and town planning	848.9	276.0	81.0	194.0	293.4	—	141.0	—
Medical and health services	3,777.3	1,945.2	900.0	668.0	1,478.6	36.0	86.0	—
Water supply and sanitation	4,595.5	850.0	152.0	988.0	466.0	19.0	288.0	—
Complementary works:								
General expenditure	200.0	100.0	—	20.0	100.0	—	—	—
Agriculture	5,500.0	1,600.0	—	500.0	1,000.0	—	—	—
Communications	11,000.0	5,200.0	—	2,680.0	5,100.0	—	—	—
Electricity and power	1,000.0	1,100.0	—	150.0	100.0	—	—	—
Housing and town planning	4,800.0	1,600.0	—	1,100.0	1,100.0	—	—	—
Industrial development and mining	500.0	400.0	—	50.0	100.0	—	—	—
Total, complementary works	23,000.0	10,000.0	—	4,500.0	7,500.0	—	—	—

Source: France, Commissariat général du plan de modernisation et d'équipement, *Etat des opérations du plan de modernisation et d'équipement: Outre-mer* (Paris, December 1949).

^a Including 9,445 million francs for soil conservation.

^b Mining and prospecting.

for the construction of arterial roads in Kenya, Northern Rhodesia, Nyasaland, and Tanganyika.

Railway development, though important in specific cases, plays a relatively small part in the development plans as a whole. Although in the French territories south of the Sahara it is anticipated that railway traffic in 1956 will be twice the 1948 volume, new railway construction is of secondary importance in the plans. Most of the expenditure will be devoted to the improvement of existing lines.

In French North Africa, also, a considerable amount is to be devoted to improvement and repair of existing railways which suffered damage during the war. The Belgian Congo plan provides for the construction of a new branch line between

the Grands Lacs and the Haut Katanga, connecting Kamina with Kabalo, which is expected to be financed by private enterprise. In the plans of the British territories apart from Tanganyika, railway development projects are insignificant; improvement of existing rail systems and rolling-stock is to a large extent taking place outside the ten-year development plans.

Water transport is of considerable importance to the Belgian Congo. Of 23,000 kilometres of navigable waterways, 12,000 are at present accessible to barges of 40 tons, 9,000 to barges of 150 to 350 tons, and only 2,600 kilometres to barges of 800 to 1,200 tons. The plan provides for the further development of navigable waterways, especially between Matadi and the ocean, and

Table 67. Classification of Schemes in Ten-Year Development Plans of Certain British Territories^a
(In thousands of pounds)

Item	Proposed expenditure									
	Gold Coast	Nigeria	Sierra Leone	Gambia	Kenya	Tangan-yika	Zanzibar	Uganda	Nyasa-land	Northern Rhodesia
Administration and organization	1,000	995	236	—	889	1,000	—	1,630	230	1,150
Physical planning surveys and census	—	—	92	—	108	405	—	360	5	—
Communications:										
Civil aviation	—	—	—	—	40	435	—	230	303	525
Ports, harbours and water transport	150	3,518	700	—	—	1,038	—	—	—	100
Railways	—	—	—	—	—	1,038	—	—	—	—
Roads	800	7,046	380	90	1,355	4,216	20	859	618	875
Telecommunications and posts	450	820	75	—	791	219	—	421	230	320
Economic development:										
Agriculture and veterinary	600	3,056	488	226	1,471	1,284	130	1,389	629	1,811
Fisheries	120	157	8	—	18	—	—	128	—	133
Forestry	28	929	197	—	459	268	—	139	96	314
Irrigation and drainage	—	—	178	—	1,070	428	—	677	114	300
Land settlement	—	—	—	—	3,200	50	—	—	—	—
Soil conservation	—	—	12	—	2,250	200	—	—	—	100
Electricity and power	528	1,544	—	—	—	—	—	—	—	—
Industrial development	—	261	10	45	250	25	—	—	—	250
Social development:										
Education:										
Primary and secondary	—	6,273	673	246	2,391	1,905	456	720	1,281	1,886 ^b
Technical and vocational	2,166	1,585	175	—	310	341	15	180	173	—
Higher	—	—	—	—	—	—	29	—	29	—
Housing and town development	1,725	332	400	1,000	560	1,429	240	3,000	300	1,000
Medical and health services	1,893	10,903	1,000	309	867	3,004	336	1,350	863	1,598
Nutrition	—	—	—	—	—	—	—	—	—	—
Water supplies and sanitation	1,736	8,062	510	—	1,150	428	50	—	100	670
Broadcasting and public information	100	—	—	—	17	—	—	73	60	50
Welfare	50 ^c	384	77	—	18	42	—	100	—	—
Miscellaneous	107 ^d	2,180	45	14	932	250	14	1,675	250	1,750
Total of schemes	11,453	48,045	5,256	1,930	18,146	18,005	1,290	12,931	5,281	12,832
Add reserve interest charges, etc.	—	6,955	—	50	3,854 ^e	—	146	932	365	168
Total of plans	—	55,000	5,256	1,980	22,000	18,005	1,436	13,863	5,646	13,000

Source: United Kingdom, *The Colonial Empire, 1947-1948*, Cmd 7433 (London, 1948); United Nations, *Information from Non-Self-Governing Territories*; Summary of information transmitted by the Government of the United Kingdom of Great Britain and Northern Ireland (document A/1277).

^a The figures shown are provisional since some of the plans are being revised.

^b Figure includes sums to be spent on technical education, but the allocation to each type of education is not available.

^c Includes £5,000 for geological surveys.

^d Social services.

^e Includes approximately £3.5 million recurrent expenditure on the development programme.

Leopoldville and Stanleyville. The improvement of the inland waterways calls for further development of the seaports of Matadi and Boma and the river ports of Leopoldville and Stanleyville.

Port and harbour development and construction constitute a significant part of the plans for French West Africa, where provision is made for the development of Conakry into a new and well-equipped port, and the transformation of the

port of Abidjan into a deep-water harbour. In French North Africa modernization and reconstruction of port facilities are important, especially at Oran, Algiers and Bône in Algeria, and at Tunis, Goulette, Sfax and Sousse in Tunisia.

Included in the British ten-year plans is a deep-water quay being constructed at Freetown, Sierra Leone, as well as major works of port improvement in Nigeria and the Gold Coast.

Improvements in methods of agriculture and levels of agricultural production are vital to any development programme throughout Africa, both as a means of improving local standards of nutrition for increasing populations and as a means of increasing exports. All the plans, therefore, visualize considerable expenditure for agricultural development and research. The projects cover a wide variety of measures, from the development of irrigation schemes to the establishment of agricultural research stations and the dissemination of knowledge of improved methods of cultivation.

In French North Africa, for instance, the most important single item in the plans for agricultural development is for water conservation and irrigation. In French West Africa experimental stations have already been established for the purpose of studying, in particular, problems connected with the production of coffee and cocoa, and also for the development of new agricultural techniques. Also, in French West Africa, rice production has been developed in the Sudan and ground-nut production in Senegal. The Niger River project, the most important irrigation project in that area, is intended to bring one million acres of additional land into use for the cultivation of cotton and rice. Attention is also to be given to the improvement and exploitation of the forestry resources of French Equatorial Africa. Since the most accessible areas are nearing exhaustion, improved transport facilities are required to exploit the considerable resources further inland.

In the ten-year plan for the Belgian Congo, agricultural development is conceived as playing a particularly important part. The aim is to develop a stable class of small farmers who, by improved methods of cultivation, will produce a greater variety and quantity of products, for local consumption as well as for export. Particular attention is being given to the problem of introducing improved techniques of production suited to the local conditions or peculiarities of soil and climate. Some progress has already been made in developing a *paysannat indigène* through the distribution of small holdings arranged to make possible a satisfactory rotation of crops. Some 25,000 families have already been settled in this

way. These schemes would be considerably extended under the ten-year plan.

In the British schemes, also, a considerable proportion of the total expenditure in respect of every territory is being devoted to agricultural development. The arrest of soil erosion, especially, is of vital importance in many parts of East and Central Africa. In Kenya, more than £3 million is to be devoted to resettlement and land improvement in African areas, and more than £2 million to soil conservation. Some thirty betterment and resettlement schemes have already been launched.

As regards the financing of the development schemes in Africa, the essential point is that a large proportion of the capital required must be provided from outside sources. Thus, in the case of the British territories, approximately one-third of the capital cost of the approved plans is to be provided by the Colonial Development and Welfare Fund; of the remaining two-thirds about one-half will be raised from local revenue sources and the remainder from loans.

For French territories south of the Sahara, financing of the plans is to be secured by the Investment Fund for the Economic and Social Development of the Oversea Territories (FIDES), which in turn will obtain funds from annual appropriations of the metropolitan Government and contributions from the oversea territories. The Central Fund for Overseas France is authorized to advance to the territories concerned the amounts required to cover their own contributions at an interest of one per cent, repayable in 25 years. The respective contributions from metropolitan France and the territories are fixed annually. For the time being, the metropolitan Government will assume the entire costs of the research projects, 65 per cent of the expenditure for social welfare and 50 per cent of the expenditure on economic development projects.⁵ The approved plans for the French North African territories will be financed by local funds and, to a greater extent, by the modernization fund, which also covers the financing of development plans for metropolitan France. Since this fund

⁵ M. J. Ferrandi, "Les plans des Territoires d'outre-mer", *Cahiers français d'informations* (Paris), 15 February 1950.

is limited to projects chiefly of an economic nature and not for social welfare, the French North African territories are to continue as in the past to finance their own social welfare projects, which are, therefore, not included in the development plan submitted for approval.

In respect of the British and French plans, some of the relevant facts are summarized in tables 68 and 69. The Belgian Congo plan will be financed to a large extent through the issue of government securities. Other funds will be drawn from the colonial treasury, the Native Welfare Fund, the Fund for Scientific Research in Central Africa (IRSAC) and other para-state bodies.

It is to be concluded from official statements that the execution of the British plans has to date been slower than anticipated, the main difficulties being shortages of skilled staff, equipment and commodities. However, the total of £120 million provided under the Colonial Development and Welfare Act of 1945 for development up to 31 March 1956 is to be increased by £20 million, an increase necessitated both by increased prices and by revisions of original plans. It was stated in the House of Commons on 9 November 1950 by the Secretary of State for the Colonies that an increase in the rate of expenditure could be expected to absorb the total allotments by 31 March 1956.

Some indication of the rate of progress made in the execution of the development plans for French territories south of the Sahara is provided by table 70, which shows the approved amounts of credits (*crédits d'engagement*) for schemes expected to be largely completed by 1952, together with the cumulative anticipated expenditures from the beginning of the plans to 31 March 1950, and the actual disbursements. There is evidence that the execution of the plans gathered impetus in 1949 and 1950, as did the British plans. Nevertheless, it seems evident that an increased tempo of expenditure will be required to achieve the targets set for 1952.

It is clear that the progress of the development plans has not, up to the present, been impeded by lack of finance in terms of currencies of the metropolitan Powers, but rather by lack of adequate trained staff, equipment and materials. In this regard the application of Economic Cooperation Administration aid to oversea territories in Africa has been significant, since it has made available essential equipment and technical assistance not procurable at the time outside the dollar area. Among the projects for which expenditures have been approved for African territories from ECA reserve funds are various road construction schemes and the development of iron ore resources in French West Africa; under the strategic materials programme funds have been

Table 68. Financing of Development Plans in Certain British Territories^a
(In thousands of pounds)

Territory	Total	Colonial Development and Welfare Fund	From other sources		Total, local and loan resources
			Loan funds	Local resources	
Gambia	1,980	1,300	250	430	680
Gold Coast ^b	11,452	3,500	4,000	3,952	7,952
Kenya	22,000	5,100	7,000	9,900	16,900
Mauritius	7,698	1,786	3,750	2,162	5,912
Nigeria	55,000	23,000	16,000	16,000	32,000
Northern Rhodesia	17,000	2,728	9,000	5,272	14,272
Nyasaland	8,258	2,303	2,500	3,455	5,955
Sierra Leone	5,256	2,900	1,400	956	2,356
Tanganyika	18,005	7,150	6,879	3,976	10,855
Uganda	5,086	1,717	2,000	1,369	3,369
Zanzibar	1,594	1,064	—	530	530

Source: *The Colonial Territories, 1948-49*, Cmd 7715 (London, 1949) and 1949-50, Cmd 7958 (London, 1950).

^a Most of the figures are based on published plans of the colonies concerned, but a number

of substantial revisions in the plans have been taken into account. The figures shown are provisional, since they are all liable to review, and for this reason totals in this table do not all agree with totals in table 67.

^b Not approved.

Table 69. Financing of Development Plans in Certain French Territories

A. SOUTH OF THE SAHARA

(In millions of francs)

Territory	Cumulative anticipated expenditure to 31 March 1950	Sources from which anticipated expenditure in development plans to 31 March 1950 will be met ^a		
		Metropolitan grants	Loans	Local resources
Comoro Islands	433.9	239.6	194.3	-
French Cameroons	11,711.5	3,957.6	4,891.9	-
French Equatorial Africa	9,546.8	3,689.7	3,643.8	59.5
French Somaliland	1,804.7	898.3	906.4	-
French Togoland	1,930.0	814.6	845.4	-
French West Africa	39,423.9	12,896.6	14,980.7	1,456.6
Madagascar	10,059.5	3,607.1	3,950.2	170.0

^a Total of last three columns is less than total of anticipated expenditure up to 31 March 1950, since part of the credit for 1949-50 was blocked.

B. FRENCH NORTH AFRICA

(In thousand millions of francs)

Item	Total	Metropolitan resources			Total	Local resources
		Modernization fund	Metropolitan budget	Other metropolitan resources		
1949 estimates:						
Algeria	31.4	16.1	0.2	2.1	18.4	13
Tunisia	8.1	8.1	-	-	8.1	-
Morocco	16.2	10.2	-	-	10.2	6
Total	55.7	34.4	0.2	2.1	36.7	19
1950 estimates:						
Algeria	40.2	23	-	1	24	16.2
Tunisia	10.0	10	-	-	10	-
Morocco	19.3	14	-	-	14	5.3
Total	69.5	47	-	1	48	21.5

Source: French territories south of the Sahara: Ministère de la France d'Outre-mer, *Bulletin mensuel de statistique d'Outre-mer*, July-August 1950. French North Africa: Commissariat général du plan de modernisation et d'équipement, *Etat des opérations du plan de modernisation et d'équipement: Outre-mer*.

provided for the purchase of machinery for tin-mining in the Belgian Congo, for production of industrial diamonds in French West Africa and, subject to final negotiations, for development of the port of Beira in Mozambique.⁶

INTER-GOVERNMENTAL CO-OPERATION

International co-operation in matters of common interest in Africa has had a long and fruitful history, dating back to the struggle against slavery and the slave trade and the signing of the Congo Basin Treaties at the Berlin Conference in 1885.⁷ Before the Second World War a wide

variety of economic, social and technical matters had been the subject of co-operation on the part of various organizations, conferences and conventions. Since the close of the war the tempo, scale and scope of international co-operation have been heightened. Conferences have been held frequently on a number of subjects. A new organization of six governments having responsibilities in Africa—the Commission on Co-operation in Technical Matters in Africa South of the Sahara—came into being in 1950 to institutionalize their co-ordinated activities. Furthermore, the international agreement reached in the Charter

⁶ Economic Cooperation Administration, *Ninth Report to Congress*, for the month ended 30 June 1950.

⁷ "Origins and Problems of Chapter XI of the Char-

ter", in United Nations, *Non-Self-Governing Territories, Summaries of Information Transmitted to the Secretary-General during 1947 (1948)*.

Table 70. Credits and Disbursements from the Investment Fund for the Economic and Social Development of Oversea Territories (FIDES)

(Special budget;^a in millions of francs)

<i>Territories</i>	<i>Credit approved for projects to be completed by 1952^b</i>	<i>Cumulative anticipated expenditure to 31 March 1950</i>	<i>Actual disbursements to 31 March 1950</i>
Comoro Islands	518.7	433.9	77.2
French Cameroons	17,136.5	11,711.5	4,043.5
French Equatorial Africa	23,538.4	9,546.8	3,835.5
French Somaliland	3,011.1	1,804.7	808.3
French Togoland	3,168.2	1,930.0	713.5
French West Africa	70,218.1	39,423.9	18,606.8
Madagascar	17,418.7	10,059.5	3,845.6

Source: Ministère de la France d'Outre-mer, *Bulletin mensuel de statistique d'Outre-mer*, July-August, 1950.

^a In addition to the special budget, the fund includes relatively small allocations (general section) for general purposes. It is not pos-

sible to determine the amount allocated for each territory.

^b Total of projects approved up to 31 December 1949; a small fraction of the credits is to be spent after 1952.

of the United Nations, particularly in Chapters XI, XII and XIII, as well as Article 55, and the actions taken in relation thereto, are of special importance to the economic and social advancement of Africa and its indigenous peoples.

The range of subjects covered by recent inter-governmental conferences in Africa has included transport and communications, labour, indigenous rural economy, food and nutrition, education, trypanosomiasis, scientific questions, soil conservation, forestry problems, fisheries, veterinary matters and the control of agricultural pests such as locusts. By agreed recommendations, conventions and various new organizations, the governments have taken positive decisions in these fields.

A very significant development in this connexion was the agreement reached in January 1950 between representatives of the Governments of Belgium, France, Portugal, Southern Rhodesia, the Union of South Africa and the United Kingdom to set up a Commission on Co-operation in Technical Matters in Africa South of the Sahara, with a small permanent secretariat in London. This commission has held two sessions. Its terms of reference, in brief, are:

(a) To review periodically technical subjects on which co-ordinated action can usefully be undertaken by member governments;

(b) To co-ordinate proposals for future technical conferences;

(c) To prepare joint requests to the specialized agencies of the United Nations for assistance

on the basis of proposals put forward by the permanent organizations for inter-African co-operation, and to note individual requests which governments may decide to address to the specialized agencies;

(d) To advise on any other subject in the field of technical co-operation which member governments may bring to its notice;

(e) To give particular attention to the views and recommendations put forward by the Scientific Council for Africa South of the Sahara.⁸

GENERAL CONSIDERATIONS

To raise considerably per capita levels of production and consumption in Africa calls for heavy and sustained capital investments and extensive reorganization of the traditional economy. Yet it is abundantly clear that in most of inter-tropical Africa local capacity for internal capital formation, whether originating in government or private sources, is small. In an important sense this low capacity for capital formation is an aspect of the dual nature of the economy in which, as we have seen, by far the greatest section of the population is engaged mainly in subsistence agriculture while the sector of the economy not involved in subsistence activities is largely concentrated upon production for export, principally on the basis of imported capital, and to a con-

⁸ This Council was established as a result of the Regional Scientific Conference held in Johannesburg in October 1949.

siderable extent dependent upon migrant labour drawn from the subsistence sector of the economy. In the post-war years the capacity of many African territories to finance investments appears to have increased by comparison with pre-war. Nevertheless, in relation to the total sums likely to be required for any considerable economic advancement in Africa, the capital available from local sources is small. Both the sums to finance development and the equipment to achieve it must in present circumstances be imported in large measure from outside.

Although the impact of investments on production for export has had profound effects on African society, it has had only a relatively slight effect in generating secondary income in Africa, except in the Union of South Africa and in certain limited areas elsewhere. Even in the absence of a detailed study of recent investments, it is safe to say that the greater part of recent investment in inter-tropical Africa has been directed towards increasing export production. Further capital investment devoted mainly to the development of primary production for export may lead to a very one-sided development unless additional investment is applied to the fruitful exploitation of resources for internal needs. For although investment in production for export has in many respects favourably influenced internal development and has been the means of bringing larger areas of Africa within reach of modern economic development, the productivity of the internally oriented sector of the economy—which in any case had a lower level of technique and capitalization—has clearly lagged behind that of the export sector; indeed with existing techniques the subsistence sector of the African economy has even in some instances suffered loss of productivity through withdrawal of part of its labour force. Further expansion of export production may be expected to accentuate certain of these tendencies towards decline in productive power for internal needs unless they are offset by a simultaneous development of production for internal consumption. Such development of production for internal consumption is needed to mitigate the effects of the dualism which in greater or less degree is characteristic of the economy of most African countries.

The post-war efforts directed towards comprehensive planning for economic and social development represent a significant step in the direction of overcoming lags in the internally oriented sector of the African economy, raising the efficiency of use of local resources and securing a fuller participation by the indigenous populations in modern forms of economic life. The uniqueness of the post-war plans lies in their provision for systematically supplementing local governmental resources directed towards improving the productivity of the local factors of production. The role of government in such undeveloped economies as are found in Africa is especially great in respect of the provision of initiative and capital resources for internal development, a role accentuated by the probability that most of the new private capital which will be attracted to inter-tropical Africa will, as heretofore, be invested in the export sector. With few exceptions, the internal market of Africa has not been sufficiently large in terms of purchasing power to attract the external capital needed for any considerable development of local resources to supply such a market.

A sound development of the African economy with special attention to its internally oriented sector, as the governmental plans imply, calls for a careful direction of available resources of capital, both local and external, and of technical skill. It will be mainly through such balanced internal-external economic development that the capacity for local capital formation may be achieved; hence the importance of initial governmental investment externally supplemented, to increase productivity in local production and to assist in establishing the conditions for self-generating development. Over-all improvement in productivity depends largely upon the provision of more capital and equipment, wide dissemination of technical knowledge and improvement of human skills.

The development of the internal resources for the needs of the indigenous populations does not depend only on availability of external capital; it depends also upon administrative action involving the expansion of social services, in particular, the expansion of education and of technical training, public health and social welfare, some elements of which can be provided from local re-

sources. This is a feature of the government-sponsored development plans. It depends, too, upon measures which will lead to the development of increased labour efficiency such as the substitution in some regions of a permanently established and more highly remunerated labour force in place of migrant labour, the further development of labour organizations and, in all regions, the achievement of a higher utilization

of local resources through the application of improved techniques. The possibility of balanced development would be enhanced by the growth of industry other than that directed towards export, by the opening up of employment opportunities within the internally oriented sector of the African economy and the adaptation of indigenous institutions to the needs of modern economic development.

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