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POPULATION DISTRIBUTION, INTERNAL MIGRATION  
AND URBANIZATION IN AFRICA

This Seminar has been organized by the secretariat of the Economic Commission for Africa in co-operation with the United Nations Bureau of Social Affairs, Statistical Office and Bureau of Technical Assistance Operations, and the Government of the United Arab Republic as host.

POPULATION DISTRIBUTION, INTERNAL MIGRATION,  
AND URBANIZATION IN AFRICA<sup>1/</sup>

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<sup>1/</sup> This document is subject to editorial revision.

## I. INTRODUCTION

1. The importance of studies on spatial distribution of the population, urbanization, internal migration is well known. These studies deserve high priority because their findings have many bearings on questions of programming in the economic and social fields. Policy making on such important studies as the location of industry, population settlement, and resettlement, urban development planning; "balanced" development of economic sectors, education and training programmes, location of economic infrastructure etc., stem from those studies and their immediate results, area population projections (urban-rural, metropolitan areas, economic regions etc.).

2. However, quantitative studies concerned with the economic and social effects of internal migration and urbanization have been limited mostly to industrialized countries. The available literature dealing with effects of internal migration in less-developed countries, specially in Africa, remains largely speculative, due to the lack of adequate demographic data and also to the standpoint from which these studies are conducted. Thus this paper will be less a review of studies already undertaken than an attempt to suggest some directions towards which demographers, economists and other scientists could concentrate their efforts.

3. In part II, attempts will be made to summarize so far as data available at the secretariat of the Economic Commission for Africa permit, the main features of the present situation with regard to spatial

## II. POPULATION DISTRIBUTION AND INTERNAL MIGRATION

### A. Population Distribution

#### Density

4. For Africa as a whole, population density is about 8 persons per square kilometre, which is one of the lowest observed among the major regions of the world. This is a basic feature of the hot and rainy lands<sup>1/</sup> which constitute the larger part of Africa. The same feature can be found in those parts of the American continent where similar conditions occur. In Africa North of Sahara,<sup>2/</sup> population density per square kilometre is slightly higher. But, in this sub-region, as well as in West Africa,<sup>2/</sup> and South<sup>2/</sup> and East Africa, the figures for population density given in table I<sup>3/</sup> must be interpreted cautiously.

5. The density of population is very uneven from one country to another. Moreover within each country and even within each administrative division, the distribution of population is also uneven. Table I shows the population density in relation to total land area and agricultural land and the range of densities for administrative divisions within countries. Thus, in all sub-regions of Africa, populated islands with densities quite comparable to those found in Central American Republics and

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1/ See P. Gourou. The Tropical World, Longmans third edition 1961.

2/ The three sub-regions into which Africa is, somewhat arbitrarily, divided are North Africa, West Africa and South and East Africa. The first two of these possess certain cultural and social similarities as well as potentialities which seem to justify more or less their treatment as entities. In the case of South and East Africa, which covers all the countries south of Sudan and the former French Equatorial Africa, demographic and economic conditions are not comparable, and their grouping together has been done more as a matter of convenience than as a result of demographic compatibility.

3/ In this paper, all tables are in the Annex.

countries of South East Asia, adjoin large areas which are scarcely populated. Localizing factors, such as rainfall etc., are particularly important in Africa. Consequently, problems related to demographic conditions such as availability of arable land, availability of manpower, can vary greatly between different areas.

6. For the region as a whole, the density per square kilometre of potentially productive land and per square kilometre of agricultural area (i.e. arable land, land under tree crops, and permanent meadows and pastures) are respectively 14 and 30. Thus great possibilities exist for extension of cultivation. In this respect, Latin America alone is in a more favourable position than Africa.

The pattern of settlement in relation to natural conditions

7. Within sub-regions differences in density are enormous from one area to another. Over a vast area of West Africa (coastal areas of Dahomey, Gambia, Liberia, Ghana, Nigeria, Togo and Camerouns), the density is comparatively high, 20 to 50 per square kilometre of land area, in Nigeria, it exceeds 100 in some places. Also in this part, vast areas are thinly populated. Generally, population is dense along the river valleys, in the coastal rain-forest belt and in the wooded and grassed lands, while areas with low rainfall and poor water resources are generally thinly populated. For example, in Mali, the population is concentrated mostly along the river valleys, while the areas bordering the desert are sparsely populated by nomads. In the North of Chad, population density averages 2 per 100 square kilometres. In equatorial and Central Africa, due to the forest barriers and the poverty of the soil, population densities are extremely low, except in a few areas of the Congo (Leopoldville) and in the Benguela highlands of Angola. Further south, South West Africa and Bechuanaland have population densities of about one or less per square kilometre.

8. In East Africa, the overall density is not much higher than in West Africa, but certain areas are heavily populated. In those parts of Uganda lying around Lake Victoria, the average density is as high as 80. The same high densities can be found in Ruanda and Burundi, Kenya, South Tanganyika, Nyasaland, and in the reserves of Southern Rhodesia. This density can be explained by the presence of volcanic soils, strong and fertile and the relative shortness of the dry season.
9. The same pattern of uneven distribution can be found in North Africa. In Algeria, where overall density is 4 persons per square kilometre, the population is mainly concentrated in the cultivable area of the North. In Libya, 60 per cent of the population is located in the fertile coastal strip and on the plateau known as the Barce plain, while the Fezzan is mostly desert. In the United Arab Republic, the population is concentrated in the Nile Valley, the Delta and the Canal Zone.

#### Economic significance of density measures

10. The economic significance of density measures such as those presented in Table I is rather difficult to grasp. When one moves to the question whether or not an area is over-populated, the problem of definition becomes infinitely more complex than merely depicting the relative density of any given area of population. There is no absolute measure of rural over-population or under-population, it varies within agricultural regions of a country, depending on the fertility of the soil, on the crops on the level of technical skill, on the facilities for transport, and on the level of general economic and social development of the community. Thus cultivation in cocoa areas of Ghana, with a good system of transportation of produce to markets relatively abundant and application of modern agricultural techniques, allowed the cocoa areas of Ghana to support a rural population many times as dense as that of many other areas in Ghana.
11. Over wide areas of Africa, shifting cultivation and nomadic pastoralism are practiced, of course in areas where population pressure is not too great, and where population densities are low. The fallow

period could be long enough to permit land to regain fertility. However, partly because of population pressure the fallow period has become shorter and shorter until now it is often wholly inadequate. While these methods are still being practised by an unknown but large part of African farmers, because of falling yields and decreasing farm incomes, agriculture has shown signs of gradual transition from traditional shifting cultivation towards settled forms of crops and restricted and controlled grazings. These profound changes in agricultural techniques and methods, such as the gradual replacement of the hand hoe by the plough, of hand labour by draught animals will permit a better use of natural resources and increase farm incomes even with higher population densities.

12. Likewise the introduction of cash crops and the increasing commercialization of agriculture have led to a considerable expansion of farm incomes. The same areas that before had supported at lower incomes, lower densities of populations support considerably higher concentrations of population at higher levels of living. This applies to many parts of Africa, whether in North, West, or East and South Africa.

13. It was pointed out that in some parts of Africa where population is concentrated in villages and hamlets, agricultural output can be increased without changes in methods of cultivation. A dispersal of dwellings on the cultivated land would extend greatly the arable areas, while at the present time, cultivable areas too far from the village sites remain uncultivated. The dispersal of the farmers on their own lands presupposes however, betterment of public security, and dissociation of peoples from their villages.

14. For Africa as a whole, despite low overall densities and low densities for its potential agricultural areas, the populations can be considered as too large in relation to the means of subsistence obtained from the soil. This will cease to be true when methods of cultivation have progressed in a more general fashion and if social structures can be transformed in ways which will permit a faster increase of output than increase in population.



The role of transport facilities in the geographical population distribution

15. The rate of transport development is of course one of the basic factors governing the geographical distribution of a region. Lack of adequate transport facilities has reduced agriculture in many regions to subsistence crops and also caused migration, seasonal or otherwise, of workers in search of employment. Hence, there are in Africa regions of labour shortage and regions of labour surplus, income being relatively lower in these regions which are also out-migration areas.

16. In West Africa for example, the location of towns and urban development specially in the coastal regions was also largely influenced by the transport pattern. Thus many towns grew up on trade routes. Kano, Bamako, Fort Lamy are typical examples of "road towns". In recent decades, the construction of railways had naturally been one of the principal factors in internal and international migration, specially in the coastal regions of West Africa, mining areas of Central Africa etc. Recently much of this former function of the railways has been taken over by trunk roads.

The role of traditional factors

17. Natural factors (climate, relief, rainfall, fertility of the soil etc.) and transport facilities are of course the basic factors in the geographical distribution of the population. However, other factors have sometimes proved themselves decisive. Attachment to the soil may be strong, even where the soil is poor and adjacent to more fertile lands. Thus "the Ibo of South-Eastern Nigeria are densely concentrated in a mediocre environment, but to the east are richer thinly populated lands. The same is true of fairly heavy concentration in Upper Volta of the Kabraï in the Altacora Mountains of Northern Togoland ..... and many more.<sup>1/</sup>" Slave-raiding and inter-tribal wars in the past resulted in depopulated areas, as for instance between the savannah and forest zones of West Africa.

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<sup>1/</sup> Church, R.J. Harrison "West Africa".

B. Internal migration

18. Apart from natural conditions, historical factors and the pattern of transport development, the geographical distribution of population is further influenced by migratory movements. These movements assume in Africa major importance; they stretch over long distances. International migration will be dealt with in another document.<sup>1/</sup> Four types of internal migration could be distinguished.

19. The movements of nomads. Pastoral tribes migrate seasonally to find grazings for their herds. This type of migration is observed in North Africa as well as in Africa South of the Sahara. As examples, we can cite in Egypt, the movements of nomads in the Western and Eastern Desert and Sinai. In Africa south of the Sahara, the poverty of grassland obliges the herdsmen to migrate continuously to find grazings. In Sahelian Africa, in Madagascar and other parts of Africa, overstocking aggravates the poverty of grassland and consequently induces pastoralists to migrate.

20. Another type of migratory movement originates from the system of recruitment and labour contracts. These movements are often under the control of authorities but in the majority of cases, they are outside any form of control. The duration of these movements as well as the distances covered by the migrants varies greatly from one country to another. The main feature is that it involves only the male labour-force without any movement of children or other dependents. Such movements are usually directed towards plantations and mines, and also to the farms of African producers of cash-crops.

21. A third type of migration is of more permanent character. It stems from the dual character of African economics. The traditional sector (family and subsistence agriculture, handicrafts..) and the modern sector (organized agriculture, industry and commerce). Considerable migratory movements occur, mostly from the traditional sector to the modern sector. By and large, stagnation reigns in the traditional agriculture and handicraft economy, the general picture is a considerable amount of unemployment and disguised unemployment in the sense

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<sup>1/</sup> E/CN.14/ASPP/L.2/E/CN.9/CONF.3/L.2

that without any improvement in technical methods, heavy out-migration in many parts of Africa would not reduce output.

22. In this type of migration, we can classify part of the migratory flows from the countryside to urban areas,<sup>1/</sup> migration from upper Egypt to the Delta, migration in Morocco between different rural areas, non-seasonal migratory flows from the savannah zones to the coastal belts of West Africa etc. We can also include out-migration from areas where modern and mechanized agriculture has resulted in the displacement of agricultural labourers to the towns. This adds to the rural-urban migration of a large floating agricultural population which was unemployed or underemployed before mechanization. This type of migration is observed in some parts of North Africa, in Tunisia, in Algeria and also in East and South Africa.

23. Migratory movements of temporary and seasonal character. To a considerable extent, they represent an adjustment of labour to the unequal distribution of population in relation to resources. The volume of these movements is vaguely known, but their direction is mainly from subsistence rural areas to cash-crop areas, from rural areas to urban areas as temporary workers during the seasons where there is little to do on the land. As examples we can cite seasonal movements in West Africa from the steppe and savannah zones to the areas of cash-crops in the coastal belt. In areas of out-migration agricultural workers are mostly unemployed during the dry season, and the absence of men during half the year does not reduce output. It has been observed during the last decades that cash cropping in the coastal zones enables the surplus of manpower in the dry zone to earn cash-incomes by migrating seasonally. In Kenya, manpower movements are important between the "native reserves" to sisal and coffee plantations. As a general rule, Africans leave home at the end of the harvest and return at the beginning of the rainy season to do the sowing. The same type of

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<sup>1/</sup> Migration from the countryside to urban areas will be dealt with in the following section.

migratory movements can be found in Tanganyika and in Uganda, as in many other African countries. An extreme example may give an idea on the importance of these movements. P.H. Gulliver<sup>1/</sup> reports that in the Lake plains of Tanganyika, 95 per cent of men aged 17 to 35 have been away from their villages at least once. One third of all men, one half of younger men are away at the time of the survey.

C. Brief review of selected factors of internal migration

24. Generally speaking, internal migratory movements result from the state of imbalance between the economic and social organizations and levels of various areas of a country.

Economic motives

Whatever the type of migratory movements, the predominant cause of migration is economic pressure. Although no quantitative studies could be made in most African countries, it is noticed that in some areas of East Africa where cash-crop incomes are high, there is far less net out-migration than in subsistence-economy areas. However, not all migratory movements are reflected by net out-migration. It is possible that in these areas of low net migration, both in- and out-migration are important, the in-migrants being constituted mainly by the population from subsistence and low income areas, the out-migrants being constituted by the native population attracted to urban areas, for the very reason that their agricultural income prior to migration is comparatively high.

26. Economic pressure manifests itself acutely where the shortage of land in populated areas leads to widespread unemployment, to falling yields and shortening fallow periods. Under the shifting cultivation system (also called the fallow system) there is a maximum population

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<sup>1/</sup> P.H. Gulliver. Report on the migration of African workers to the Belt from the Southern Highland Province of Tanganyika. Mimeographed doc.

which could be supported. Consequently, the effect of natural increase in population<sup>1/</sup> leads to falling productivity per person of working age. As the fallow period cannot be shortened without reducing yields and fertility; part of the surplus labour with or without dependants migrate to areas of rising wages.

27. Technological advancement in the form of modernization of agriculture has been one of the push factors of migration in Africa (see paragraph 22).

#### Population increase

Population increase in various areas of Africa has been during the last decades an important factor of internal migration. (See section III).

#### Cultural factors

28. Another determinant of internal migration in post-war Africa is the increasing knowledge on the in-migration areas owing to the improvement of communications. The increased demand by Africans for money and goods available on urban markets was stimulated in the post-war world by returning soldiers from Europe, and by the general increased awareness of modern living conditions. Once a flow of out-migration from a depressed area has reached a certain importance, it tends to be cumulative. If the first out-migrants succeed, they may send for their families; their friends and relatives may follow. The financial contributions of out-migrants to relatives in their home areas also stimulate further migration.

29. Besides the above considerations, migratory movements are also induced in Africa as in other fast-changing societies by individual desires to break away from the constraints of rural society; the authority of the elders in most African societies and domination by tribal chiefs make the young seek independence.

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<sup>1/</sup> By and large, the most populated areas are also areas with fastest rates of population increase.

d. Effects of internal migration upon the composition of population in areas of in-migration and out-migration.

30. Internal migration tends to increase the size of the working age population in relation to the total population, and to lighten the dependency burden, in the areas of in-migration, while it has the opposite effects in the areas of out-migration. In addition, not an equal number of men and women migrate. Internal migration also has secondary effects on the age composition through changes in the number of births and deaths attributable either to in-migration or out-migration.

31. In Africa, because large scale migratory movements are still in the beginning and because migration is often of a temporary nature, migrants are predominantly young and male. However, in areas where in-migration has taken place for a long time, and where no administrative restriction is placed on settlement, the movements of dependents are becoming more and more important.

32. In certain countries, where the volume of migration in proportion to total population has been relatively large, the effects on age and sex distribution have been of importance. However, the lack of data on age and sex of migrants prevents any general study. The figures presented on Table II are limited to the sex and age structure of the urban population.

33. In comparison with the sex structure of the total populations, differences are found in both directions. In some urban populations, e.g. in Morocco, Togo etc., there is a shortage of men - whereas the cities of the Union of South Africa and, say, Dakar show a masculinity ratio<sup>1/</sup> of 119 and 106, respectively. One characteristic of less-developed regions subject to rapid immigration is that initially they receive more men than women - a common observation in demographic history. Later, the masculinity ratio tends to oscillate around 100,

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<sup>1/</sup> Number of men to 100 women.

as the urban economy becomes more diversified and the urban social organization more stabilized. But so long, for example, as a city's growth by immigration continues and available jobs are mostly suitable for men, the masculinity ratio may remain very high. Leopoldville is a case in point. Between 1926 and 1955, its population increased by more than ten times (from 23,000 to 290,000). During the same period, the masculinity ratio (base: 100) for the adult population was 360 in 1926-29, 230 in 1930-34, 190 in 1935-39, 190 in 1940-44, 180 in 1945-49 and 190 in 1950-55.<sup>1/</sup> In the Union of South Africa, where urbanization reaches the highest level on the continent (see Table V), structure by age and sex shows predominance of the population of working age (see Table II). In that age group (15-59 years) the masculinity ratio is very high, though a separate study of the non-indigenous population<sup>2/</sup> shows the number of men per 100 women to be normal, even in the working-age group; in the indigenous population<sup>2/</sup> between 15 and 59 years of age, on the other hand, the masculinity ratio is 200. This age group represents 72 per cent of the indigenous population<sup>2/</sup> living in urban areas. This is partly explained by the fact that many of the towns are mining towns where immigration from rural areas is to some extent temporary. It should be added, however, that in the Congo (Leopoldville) until recent years; and in the Republic of South Africa, sex and age structures of the urban population have been significantly affected by administrative rulings of immigration into urban areas.

34. The masculinity ratio of urban and rural populations in Guinea for 1955 shows that country to be one of net out-migration. This is especially clear for the 15-54 age group, for the population as a whole and for the rural population. In the case of urban areas, the masculinity ratio borders on 100 for all age groups and stands at 92 for the 15-54 age group.

<sup>1/</sup> From data published in "Leopoldville, Phénomène Urbain Africain" (by L. Baeck), extracted from "Zaire", No.6, June 1956.

<sup>2/</sup> As used in this document, the term "indigenous population" means the population classified as "natives" and the term "non-indigenous population" elements classified under other headings in the census of the Republic of South Africa.

35. According to the 1958 survey, the ratio at Bamako was under 100 for all age groups. Half of the inhabitants of Bamako were born in the city; among those born elsewhere, women predominate, particularly in the 15-59 age group.

36. Despite this diversity, African towns and also African in-migration areas generally speaking, may be said to attract more men than women from the rural areas. In that respect, Africa shown common features with most Asian countries, whereas in modern Europe, Latin America and almost all countries with a European population, the towns attract more women. One of the other factors, explaining this "abnormal" composition by age and sex is the structure of employment in African urban areas. Were we able to measure the average length of stay per immigrant and to classify immigrants as "temporary" or "permanent", masculinity ratios might be very high for the former but perhaps observably near 100 for the latter. This seems to be confirmed by the figures given in Table III.

37. It clearly emerges that in the Ghanaian towns selected<sup>1/</sup> the proportion of the population born locally is higher among women than men. In some towns the proportion born outside the limits of the census areas is very high, which argues both rapid urbanization and considerable mobility in Ghana's population. In fact, half of the urban and rural inhabitants were enumerated in 1948 outside their place of birth. It can also be seen that migrations are not entirely due to the flight from the land; they also affect town-dwellers. With the exception of Sekondi-Takoradi, masculinity ratios are comparatively low for town-dwellers of local origin. They are high, and sometimes very high, for those of non-local origin, except in Keta. The latter is not, however, a very big town; in small towns the age and sex structure can be completely upset by some local factor, e.g. the installation of an undertaking recruiting female labour. The high proportions of inhabitants born outside the census areas, as also the high masculinity ratios, demonstrate the extreme mobility of Ghana's urban and rural populations.

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<sup>1/</sup> This comparison is somewhat weakened by the errors attaching to classifying population by birth place.



However, the indirect measurement of the volume of migrations by masculinity ratios reflects only a minimum of migratory movements, because it cancels out an equal number of migrants of both sexes.

38. In countries with a European civilization, including those of Latin America, women are more attracted than men to urban areas. This fact has often been presented as a socio-cultural phenomenon with roots going deep into European culture. In countries with a non-European civilization, e.g. in Africa and South-East Asia, the flight from the land affects more men than women because, inter alia, women's work is there confined to the home. However, the need to ascertain present and future population trends in Africa demands a re-examination of certain views commonly held in the past. Many African towns and townships have more women than men. It would, to be sure, be wrong to underestimate the importance of cultural factors, such as the restriction of female labour to the home. It would seem nevertheless reasonable to argue that, while migrants make for the towns under the impact of socio-cultural factors, they also go there, mainly for economic reasons. On the one hand, most of the jobs offered on the urban labour market are unskilled jobs. On the other hand, most of the people newly absorbed into the urban communities have had no vocational training or tradition before being so absorbed. In the competition for the available jobs, most of which demand more physical strength than skill, men have the advantage over women. Moreover, young men may find it easier to break home and community ties than do young women.

39. In almost all countries throughout the world, the age composition of urban populations shows a higher proportion of adults between 15 and 59 years of age, and a smaller proportion of children and elderly people, than that of rural populations. The figures in Table II do not contradict that general rule. The rural areas have a markedly higher proportion of children. It is said that the differences between urban and rural populations are in reality slightly more marked still. It is well known that in African countries, as in most countries in

other parts of the world, under-enumeration of children is a classic defect of censuses and surveys, and one which is commoner in rural than in urban areas. The proportions of people of working age (15-59 years) and of young adults are much higher in urban than in rural areas, and the proportion of the dependents comparatively lower (see Tables II and IV). It is natural that young adults have the greatest mobility, for in the early years of adulthood, men have the best employment opportunities; their ties and responsibilities in their own communities are fewer than those of older men. Moreover, younger men need more cash (price of the bride, purchase of land, and other installation expenses etc.). In the case of migrants who leave permanently their former area of residence, younger men adjust more easily to new types of work and of residence.

40. Were it possible to analyze for most African countries the age structure of the urban and rural populations by place of birth, the age distribution of the "non-born" population would show an overwhelming majority of the working ages; as is clear from the data presented in Table VI.

41. The proportions of dependents in the urban population are generally higher than the figures in Table II would suggest; for a proportion of the urban population, varying from country to country, resides temporarily in the locality of employment. This floating urban population, whose dependents belong to the rural population, regularly sends some part of its earnings back to the village of origin. Accordingly, in the urban areas, where masculinity ratios are high, where the population includes a very high proportion of people of working age, the proportions of dependents as currently calculated i.e. separately for each population, exaggerate discrepancies between town and country.

42. This age and sex structure of urban populations has substantial repercussions on a whole series of economic and social policy problems, such as employment, education, housing, public health, establishment of

industries etc. With most of the population of working age, non-agricultural production development and consumption problems are not the same as in rural areas, especially in those that have lost a high proportion of their adults to the towns. And the predominance of people of working age is not without its disadvantages, e.g. the high proportion of unemployed adults in many African towns. In rural areas, partly thanks to the subsistence economy, problems of under-employment and unemployment are less serious, at least from the point of view of social and political consequences.

43. Studies on the sex and age structure of the population are also useful in seeking solutions to problems like the national financing of education or relief for the aged. Where town-dwellers of rural origin send part of their earnings to their families, there is a redistribution of national income in favour of the rural areas. However, as the central authorities cannot count merely on this spontaneous machinery, calls have been made through public finance channels on the incomes of town-dwellers to develop education in the countryside. This is, it may be added, a policy with many and varied aims and consequences. Assistance to rural education raises the educational standards of the working population, thus increasing the future flow of migrants into the towns. In addition, financing education and vocational training in the country out of urban funds does something to slow-up the flight from the land, thus rendering less thorny the problems facing the urban authorities.

### III. URBANIZATION IN AFRICA

#### A. Present stage of urbanization in African countries

44. Like most of the under-developed regions, Africa is only at the beginning of that economic expansion which turns predominantly rural societies into highly urbanized societies (see Table V). Africa, as a whole is today the least urbanized region in the world.

45. During the period between the two world wars, urban centres in Tropical Africa expanded very little. However, such a phenomenon as the ever-increasing exploitation of mineral wealth and of agricultural commodities during the Second World War and the post-war period was accompanied by increasing expansion of towns and cities in West, and South and East Africa.

46. Contrary to the pattern in Tropical Africa, the growth of urban centres in North Africa is not a new phenomenon. Urban centres have existed since time immemorial, with varying periods of growth and decline. In more recent times, the foundations of a modern economy were laid in the region as early as the 19th century, in particular in Egypt, Tunisia and Algeria and, at the beginning of the 20th century, in Morocco. In that sub-region the process of urbanization speeded up in the years preceding the Second World War (see Table VII).

47. The urbanization of African countries has been most intensive in the Union of South Africa, where it also most closely reflects the development of the non-agricultural sectors of the economy. At the end of the 19th century, mining enterprises led to the development of many urban centres, which were not slow to expand. Over the past thirty years, the processing industries and related economic activities have played an ever-increasing role in economic development and urbanization.

48. Around the year 1960, when about one third of the world's population dwelt in towns of 20,000 or more inhabitants, only some six per cent of the population of Africa south of the Sahara lived in towns

of similar size. Urbanization in North Africa (excluding the Sudan) - measured by the numbers living in localities of 20,000 or more - affected between 20 and 30 per cent of the population. Taking the above definition of "urban centre", urbanization in Africa is far lower, particularly south of the Sahara, than in the countries of Latin America and South-East Asia.<sup>1/</sup>

49. Table V shows, for a certain number of African countries for which data are available, the percentage of the total population considered as living in urban areas. These percentages are useful only for purposes of approximate comparison, since definitions of "urban area", usually complex enough in any case, being based both on size of population and on the relative diversification of the economy, vary so much from one African country to another. It is therefore perhaps preferable, at least for better comparability, to regard the figures in column 6 of Table V as the best indices of urbanization levels. On the basis of these figures, it will be noted that, with the exception of Nigeria,<sup>2/</sup> Senegal, Mozambique, Zanzibar and Pemba, the percentage of the population living in towns with not less than 20,000 inhabitants does not exceed 10 in most countries of Tropical Africa.

B. Concentration of urban populations

50. In many African countries, the mass of the urban population is concentrated in one or two towns or cities. For example, Tripoli (Libya), Porto Novo (Dahomey), Abidjan (Ivory Coast), Lome (Togo) and

<sup>1/</sup> The percentage of the population living in towns or cities in Latin America is roughly 24; in the countries of South-East Asia, between 10 and 35. United Nations, The Population of South-East Asia (including Ceylon and China (Taiwan)). New York, 1958.

<sup>2/</sup> United Nations, Report on the World Social Situation, New York, 1957. It should be noted that a good many urban centres in Western Nigeria consist of sprawling rural centres (or large villages) whose economic activities hardly justify the designation of "urban centres".

the cities of most countries of South and East Africa account for more than 50 per cent of their respective countries' urban population. A comparison of columns 5 and 6 in Table V shows that in most countries for which data are available, the percentage of the total population residing in small towns is so slight that these towns, with their restricted populations, can play no effective part in the urbanization process, i.e. can provide no basis for diversification of the economy.

51. However, urban hypertrophy seems less serious in African countries than in other regions of the world; taking the percentages of town dwellers living in centres with 100,000 or more inhabitants as an indication of the concentration of urban populations.

52. The figures in Table VII show that towns and cities of 100,000 or more inhabitants have grown rapidly during the past thirty years. With very few exceptions, the rates of growth of these towns are distinctly higher than those noted or estimated for all the countries taken together. In certain cases, these rates may be slightly exaggerated, calculated as they are from census data or urban population estimates, in view of under-enumeration in censuses conducted before the Second World War and of changes in territorial boundaries. In other, probably more numerous cases, the rates of population growth have been under-estimated because urban localities have over-run the territorial limits of recently created or ancient towns.

53. Except in the Republic of South Africa, where urban populations living in cities of 100,000 or more inhabitants have grown at approximately the same rate as in cities of 20,000 to 100,000 inhabitants, during the period 1951-1960, African capital cities and main ports have, as a general rule, grown more rapidly than medium-sized cities and provincial towns. These differential rates of growth seem to originate in the concentration of the modern economic and social infrastructure, among other important factors.

C. Urban-rural differences in population structure, fertility and mortality.

Age and Sex Structure.

54. The composition by sex and age of the population of certain urban zones in Africa is shown in Table II.<sup>1/</sup> The effects of rural-urban migration on the composition of population by sex and age was studied in the preceding section (paragraph 30 to paragraph 43).

Fertility and mortality differential rates

55. The occasional data available on urban birth and death rates are derived from sample surveys conducted mainly in West Africa (Tables VIII and IX). While the results of these surveys cannot pretend to demonstrate in any reliable way the probable effects of urbanization for all Africa, they nevertheless confirm observations made on differential birth and death rates in other parts of the world.

Mortality

56. Except in Senegal and the Central African Republic, crude death rates are higher in rural than urban areas (Table VIII). The exceptions may be due merely to under-estimation of crude death rates in the rural areas. The infant mortality rate<sup>2/</sup>, for instance, is lower in town than country in the Basse Vallée of Senegal. In the other

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<sup>1/</sup> Population composition by age is of course subject to error, due to under-enumeration of children and other forms of under-enumeration or multiple enumeration. Such errors do not, however, distort comparisons between Tables IV and V. Where censuses and surveys more frequently under-enumerate young children in rural than in urban areas, the real distributions by age and sex tend rather to strengthen than to weaken the arguments used in this part of the study.

<sup>2/</sup> The infant mortality rate remains a good index to general mortality levels, despite fluctuations around the same general mortality index. (See UN Demographic Bulletin No. 6).

countries considered, crude death rates are so much higher in country than town that death rates have probably been underestimated in rural areas of the Basse Vallee of Senegal, and especially in the rural areas of the Central African Republic.

57. It has sometimes been thought that higher female mortality rates may have led to a surplus of men in African urban areas. Considering the high mortality rates<sup>1/</sup> observed in Africa, excess mortality may affect women of certain ages, particularly those corresponding to the reproductive period. It is unlikely that high mortality in women can significantly alter masculinity ratios. Likewise, it could be thought that mortality might be higher in African urban areas than in rural areas, as happened in industrialized countries in the 19th and early 20th centuries. It is difficult to judge the merits of this view in the absence of adequate statistics and systematic population surveys. Nevertheless, from detailed studies<sup>1/</sup> recently made by the UN Secretariat on mortality trends in less-developed countries there have emerged certain conclusions that cast serious doubts on the possibility of higher mortality in urban populations. At the higher mortality levels, as e.g. in most African countries, most deaths are due to infectious, parasitic and respiratory diseases. Such causes of death have been greatly reduced by the relatively inexpensive medical techniques elaborated in recent decades; and in African countries public health facilities (hospitals, doctors, medicines) are much better in the urban than in the rural areas. There is, of course, no pretence that urban living conditions are always very healthy or all tend to reduce mortality risks; but, despite slums, despite malnutrition, it would be really surprising if mortality was higher in the urban than in the rural areas of Africa, except in extreme - and very rare - cases. Apart from the Central African Republic, infant mortality rates are much lower in towns than in the countryside. It should, however, be noted that the rates are still pretty high, particularly compared with the rate observed in Congo (Leopoldville), or with the rates observed in low-income countries of other regions, e.g. South East Asia and Central America.

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<sup>1/</sup> Also UN Demographic Bulletin No. 6.



### Fertility

58. Except in Senegal and Congo (Leopoldville), crude birth rates for the urban population are lower than those observed for the rural population. From the results of the survey of the Basse Vallée in Senegal, the crude reproduction rate was estimated at 2.5 for the population of Dakar and at 3.0 for the population in general. So, there is every reason to think that the crude birth rate for rural populations in Senegal does not represent their real fertility levels. Again, the same survey established that the number of live children that had been born to women of between the ages of 45 and 59 years<sup>1/</sup> was 4.2 for women living in towns and 5.2 for countrywomen.

59. In Congo (Leopoldville), the birth rate for the urban population may be explained on health grounds, as (1) country-dwellers newly integrated into the urban community may preserve the procreative habits they have acquired in the country and (2) fertility may be increased by reduction in the incidence of certain diseases, like malaria, and the mitigation of morbidity. But an examination of age distribution in the under-5 section of the population suggests more under-enumeration of children in rural than in urban areas, hence under-estimation of the birth rate for the rural population.

While the birth rate gives an initial measure of the fertility level, that measure is no more than approximate. The gross reproduction rate is a more exact measure of fertility. In Guinea, it was 2.8 for the urban population and 3.6 for the rural population; in Mali (1957-1958), 3.0 and 3.5; in the Central African Republic (survey of Centre-Oubangui in 1959), 1.8 and 2.0.

60. Another approach to fertility consists in determining the total number of children given birth to by women of different ages. In the case of the 3 countries covered by Table IX, fewer children are born

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<sup>1/</sup> i.e. women who have completed their reproduction period. This age group (45-59 years) is preferred to the commonly used "45 and over" group, as it eliminates to a certain extent the effects of forgetfulness in older women.

to townswomen than to countrywomen. This may be a very accurate pointer to fertility levels; but it must not be forgotten that the fertility of a population depends on a whole complex of demographic variables, quite apart from other economic and social factors. As regards the urban population, lower fertility rates may be due to lower marriage rates, or even to selective migrations. Countrywomen who settle in urban areas may belong to a socio-economic category with different procreative habits from the rest of the population. In addition, improved public health in towns, inter alia, together with lessened morbidity, may have the opposite effect in tending to increase fertility. It is often held that in Africa, urbanization loosens traditional customs (specification of duration of suckling, periods of abstinence etc.), which have so far resulted in keeping fertility at a certain level, and it is thought that their abandonment by incomers to town from the country is helping to raise the birth rates. While the effects of this relaxation of traditional customs must not be underestimated, the question may be asked whether they are really significant and conclusive. An analysis of census data and the population surveys that are expected to be carried out in Africa in the near future will show whether there is any marked difference in fertility trends as between urban and rural populations, such as has been observed since the start of urbanization in economically developed countries and, very recently, in Latin American and Asian countries. Such beginnings of differential fertility as have been noted in Guinea, Mali and Senegal are following the lines already noted in the economically advanced countries.

#### D. Causes of Urbanization

61. The reasons for urbanization are complex, and involve a whole series of socio-economic and demographic variables. A detailed account of these factors, on which much has been said, is outside the restricted scope of this paper; they will be only cursorily mentioned in suggesting the studies to be made.

62. Broadly speaking, urbanization is the result of a state of imbalance between the economic and social organizations of the urban and rural areas. This state has always existed; but it would appear that, owing to the co-existence of different civilizations and of varying technological levels, the dissimilarities in levels and modes of living between town and country have never been more pronounced. This was and remains true in most of the economically advanced countries. At the present time, the gap between town and country in the less-developed countries of Africa has so widened that, even without a high rate of population growth, urbanization would have been rapid even where an increase in the rural population had not led to pressure on rural resources.

63. In addition to the economic and social aspects (emergence of a rural monetary economy, expansion of the market economy, increased productivity, industrialization, greater chance of social betterment, cultural role of the city, etc.), the present-day city or town has acquired a new role, that of receiving station for some of the "surplus" rural population. This phenomenon can be noted the world over, in Africa as in economically advanced or other less-developed regions.

64. Urbanization in the industrialized countries has generally absorbed more than the actual increase in the rural population, which is itself lower. In these countries the constant shift of workers from the agricultural sector to the non-agricultural sector goes hand in hand with increased productivity on the part of the farmers left behind. At the same time, economic progress continues in the non-agricultural sectors, and the diversification of the economy and the employment situation are such that in many industrialized countries (particularly in western Europe and in Japan) the immigrant from the country is rapidly absorbed in the urban working population. On the other hand, in the less-developed countries rural population growth is generally more rapid, while agricultural productivity either remains stationary or increases but slightly. Thus, the main effect of out-migration from agricultural areas is a partial reduction of unemployment and

disguised unemployment. In many countries, allowing for unemployment, and comparing agricultural production with the working-age group of the population, we find productivity decreasing. The problem is particularly acute in those areas where cultivable land is limited, as in many densely populated zones of North Africa.

65. The problem is different in most of the African countries south of the Sahara, where the ratio of population to potential agricultural resources is satisfactory. In that respect, their position is somewhat similar to that of the Latin American countries. However, the development of their potential wealth is hindered by an inflexible economic and social structure. As generally rural labour force grows faster than rural resources expand, a redistribution of population - often irrational in character - becomes essential because non-agricultural jobs are not created as fast as the working-age population increases.

66. At the present time, rural and urban population increases would seem to prevail over other economic and social factors in urbanization. In that light, the next decades will see a continued and even faster urban growth, even in the event of reduced economic activity in urban zones and of recession in international trade. The return of some town-dwellers to the country - a phenomenon often observed in Africa between the two wars and also in recent times - will become less and less common owing, among other reasons, to the present increase in population.

67. Although industrial development has been rapid in some African countries, that expansion was mostly limited to mining (Rhodesia and Nyasaland, Congo (Leopoldville), iron ore in Liberia, petroleum in Gabon and Nigeria, bauxite in Ghana etc.). However, mining is highly capital-intensive and creates relatively little increase in employment. On the contrary, the increase in manufacturing activity for domestic markets, which would conduce to large increases in employment, has been on a narrow base in most African countries. Thus, it can be said that the relationship between urbanization in African

countries and regional economic development is, on the whole, pretty loose. In other words, urbanization has been more rapid than diversification of the economy, industrialization and, more generally, the creation of non-agricultural employment. In North Africa, for instance, certain studies and surveys have revealed steady and substantial unemployment in centres like Tunis, Casablanca, Cairo and Alexandria. Unemployment also appears to have spread during certain recent years in some cities of Tropical Africa.

68. Due to the above selected factors of African urbanization, these studies could be suggested:

- Relationship between population increase and urbanization. To what extent, urban growth has been accelerated by rapid population growth.
- Relationship between the availability of rural resources and urbanization.
- Relationship between differences in levels of income (per capita incomes between town dwellers and country dwellers), and urbanization.
- Extra economic factors, particularly the psycho sociological motives affecting urbanization are also important points meriting study.
- Studies should also be made on other important problems such as the slow rate of growth of manufacturing industry in most African urban areas. The size of the markets, the levels of income, the growth of rural economy, lack of skill and of adequate policies are suggested as the underlying factors to be investigated. These studies are important because industrialization is the only partial and rational solution to the current problem of unemployment in the big urban agglomerations.

69. In view of the concentration of urban population, which may increase the size of capital cities and main ports beyond the desirable

optimum, possibilities of directing rural-urban migratory movements towards medium-sized cities or newly-created towns by adequate industrial location should also be studied. It must be realized that maybe even in the long run industrialization will not in itself solve the unemployment problem in urban areas, and that consequently transfers of labour force must be planned from agriculture to light industries, handicrafts and services in rural centres, which should be developed for the purpose.

#### IV. MEASUREMENT OF INTERNAL MIGRATION. REGIONAL, URBAN-RURAL, AREA POPULATION PROJECTIONS

70. Studies of internal migration, and the measurement of its volume and of its characteristics provide material for the preparation of population projections for parts of the country. The results of such studies and projections have many bearings on questions of policy and the planning of economic and social programmes. The prospective changes in the pattern of population distribution and densities are directly relevant to policy with regard to these important issues: location of industry, location of major projects (power plants, dams, railroads, roads), balance of economic development between rural and urban areas, between agriculture and non-agricultural activities etc.

##### A. Measurement and estimation of the volume and characteristics of internal migration

71. Methods of measuring internal migration may be classified as "direct" and "indirect", direct if measurement is done by means of information obtained individually from the migrants, indirect if estimation was effected by comparing certain statistical data relating to certain population segments. Many of these methods are substitutes, to the extent that they were devised because of the kind of information available.

##### 72. Direct methods

1. Net migration on the basis of population census data relating to

(a) place of residence at a given prior date,

(b) place of birth. For example, the census of Sudan classifies the population according to the place of birth of the persons living in large urban areas, in small urban areas, in rural sedentary areas, and in rural nomadic areas.

2. Migration data of the above type obtained through population sampling.

3. Measurement of migration on the basis of data from registers, administrative card system and other similar services. This system is applied in the Congo (Leopoldville).

73. Indirect methods

Net migration can also be measured on the basis of census data and birth and death statistics.

Measurement of migration by the use of information on the place of birth

74. The data obtained in many censuses and surveys of African countries were tabulated according to the place of birth. For example, the censuses of 1948 and 1960 in Ghana, the census of Sudan of 1955-1956, the census of Dakar, etc., obtained information on the place of birth (province, territory etc., according to the denomination used in each country). An additional item is often found in many surveys made in West Africa, persons born in the administrative division surrounding the city or the urban area.

75. The 1948 census of Ghana provides data on the population enumerated in each territory (and main town), classified by place of birth as follows:

- (a) the same enumeration district,
- (b) not the same enumeration district, but within the same territory,
- (c) in other territories,
- (d) in a foreign country.

Some applications of this classification may be cited:

(1)	: Population present in Ashanti territory.....	817,782
(2)	: Population born in Ashanti and present in the territory .....	675,841
(3)=(1)-(2)	: In-migrants from other territories and foreign countries .....	141,941
(4)	: Population born in Ashanti territory .....	713,231
(5)=(4)-(2)	: Out-migrants from Ashanti territory .....	37,390
(6)=(3)-(5)	: Net migration .....	+104,551



76. The following relations can be calculated:

(a) rate of in-migration :  $\frac{141,941}{817,782} = 17.4$  per cent

(b) rate of out-migration :  $\frac{37,390}{817,782} = 4.6$  per cent

(c) rate of net migration :  $\frac{104,551}{817,782} = 12.8$  per cent

(d) Index of migration, which is the ratio of net migration to the total number of in-migrants and out-migrants :  $\frac{104,551}{179,331} = 0.583$

77. Wherever possible, two or more censuses should be used in order to obtain more accurate and especially more usable results, mainly because data from one census do not indicate the period of time during which the migratory movement takes place. Analysis of data from two censuses also gives migration trends; and migration annual rates, of a province, of a city, of a territory, can then be assessed. These rates could then be used as a base for formulating assumptions regarding internal migration before any area projection could be made.

#### Natural growth rate method

78. If the total counts of the population of an area are available from two censuses, a rough indication of the extent of net migration may be obtained by comparing the rate of growth of the area with the rate of natural growth of the whole country. This method assumes:

(a) No significant international migration is observed for the country (or the population is classified "local-born" and "foreign-born").

(b) The rate of natural increase could be reasonably assumed to be the same throughout the country.

(c) A high degree of accuracy in the two censuses.

#### Net balance of migration on the basis of census data and birth and death statistics: The use of the balancing equation

79. This method, widely used in countries with good statistics is inadequate in African countries, because of the absence or deficiency of statistical data on deaths and births. Thus, only a brief description is given here.

The population increment between two censuses is, of course, the result of natural increase and the migratory movement. Hence, the calculation of the net migration can be expressed by the following simple formula:

$${}^1P - {}^0P = B - D \pm NM$$

where  ${}^1P$  and  ${}^0P$  represent the population at the later and the earlier censuses (or surveys); B is the number of births and D the number of deaths during the same interval and NM the volume of net migration (in-migration - out-migration).

80. Clearly, this method cannot be applied to African countries without modifications necessitated by the deficiency of statistical data on deaths and births. The numbers of deaths and births occurring between the two censuses (or surveys) have to be estimated, mostly through data from intercensal surveys on mortality and fertility trends. The foregoing equation is applicable to particular segments of the population, for example the working-age population of an area. One weakness is inherent in this method, the balance of migration may be of little significance, even if the numbers of in-migrants and out-migrants are high. Thus, economic and social consequences of migration can hardly be analyzed.

81. A similar method to the balancing equation method is known as the "cohort" method. It consists in ageing each age-group of the population enumerated in a given area at the first census, by applying probabilities of survival, up to the date of the second census. The subsequent results are then compared with the population actually enumerated at the second census to obtain the volume of net migration.

82. The application of this method is difficult in African countries where obviously the data from post-war censuses were clearly of inferior quality to those obtained in recent censuses. Another difficulty of application relates to the choice of an adequate life table. However, as a substitute for statistical data on migration, this method may be used to estimate net migration of the working-age population, for example:

$$NM_{15-64} = {}^0P_{5-54} - {}^1P_{15-64} - D$$

where  $NM_{15-64}$  represents the net migration of the population aged 15 - 64 during the intercensal period, taken here as ten years;  ${}^0P_{5-54}$  the population aged 5 - 54 at the earlier census;  ${}^1P_{15-64}$  the population aged 15 - 64 at the later census, 10 years later; and D the number of deaths.

83. It should be borne in mind that the expressed relation does not take into account the unimportant migration movements of children under 15 and of persons 55 years and older. Secondly, the choice of survival probabilities should be deduced from observations on mortality trends within the area and period under study. One way of surmounting the absence of life tables in African countries would be to adjust the model life-tables according to scanty data obtained from demographic surveys.

B. Data required for studies and projections of internal migration and population distribution

84. Tabulations of the population by place of residence (or of enumeration) will be of undoubted value for reaching a certain knowledge of internal migratory flows, for projection purposes, and for analyzing their effects on the population of the areas of arrival and departure. The cross-classifications which would be most useful for development planning would be: age, occupation, level of education, number of children and previous place of residence (size of locality, rural or urban). It should be noticed that if these characteristics were introduced - and census and/or survey authorities are urged to introduce them - the population of each area would be simply classified "born where enumerated" and "not born where enumerated"; non-migrants and migrants.

85. For the analysis of migration trends, it is recommended, as far as possible, not to classify the population according to administrative divisions. Internal migration involves a series of economic and social factors, it implies redistribution of the population among areas with different economic and social characteristics. Therefore, the administrative division is not suitable for spatial analysis. These divisions can be indicated:

- (a) urban and rural areas,
- (b) localities of different size,
- (c) metropolitan areas,
- (d) principal urban areas
- (e) economic regions (for example, cocoa belt, copper belt, etc).

86. Thus it will be possible to study the relations between migration trends and changes in the economic and social conditions of an area (per capita income, wages levels, production of energy, employment in industrial activities, transfer of agricultural manpower to other activities).

87. However, administrative and political divisions cannot be completely neglected because some relevant information from other sources than censuses and surveys will be available only on this basis.

#### Temporary and permanent migrations

88. The estimation of the volume of migratory flows is not sufficient for analysing migration trends and for making assumptions before any population projection can be made. Other characteristics of internal migration have also to be assessed, among which the most important is, especially in African countries, the duration of the movement.

89. For measuring the duration of migration, a simple question on length of residence in an area may not be enough, but special questions in census or survey schedules are recommended. For example, the census of Guinea gives this classification of persons away from home: (a) less than 30 days; (b) 30 days to one year; (c) one year and longer.

Questions of the following type can be introduced in census or survey schedules:

- (a) How long have you lived in .....(community of present residence).
- (b) If respondent has lived here (in the community of present residence) less than one year (2 years or five years) ask where were you living one (or 2, or 5 years) year ago?

90. This kind of measure is of special importance in many African countries where migration to urban and developing areas is often of temporary nature. For example, in a study made in Tanganyika, it was found that most migrants go away from home for an average of 18 months, although they may go away many times during their working age. Professor J.C. Mitchell found that Tanganyika labourers who migrated to Ndola and Luanshya had spent less than one quarter of their time in town since first leaving home, and that other Africans had spent about half of their time in urban areas, since first leaving home.

C. Regional Urban-Rural and Local Population Projections

91. Economic development planning requires estimates of future population by state, province, urban and rural population, metropolitan areas, cities, economic regions, etc. From the statistical standpoint, the methods used for projecting the population of areas of a country may be conveniently divided into two groups.

(a) those which use only the data of the areas (urban-rural, province, economic region etc.)

(b) those which take into consideration the proportion of the regional population (province, urban rural etc.) in total national population.

92. The data required for the first group (a) of methods are similar to the data needed for national population projections. Both the mathematical method and the component method may be applied, either to the total population or to each sex and age group separately. Particular attention has to be given to the estimate of future internal migration. In some areas of Africa, especially urban, the in-migration component of population growth is as much as 2, 3, 4, or 5 times the rates of natural increase.

93. The data required for the second group (b) of methods are those required for estimating the proportions of the regional population in the total population. The past proportions are projected and provide

the basis on which the total national population projections have to be distributed to get the regional projections. This method is particularly helpful in countries where the volume of migration could hardly be measured. The past proportion of the regional population can be projected in various ways, with different assumptions regarding economic trends of the region or the area.

#### Projection of the urban and rural populations

94. In most countries of Africa, the only available data which could be used as a basis for projections are those in the published censuses. Statistics on births, deaths, and migration, are lacking. Reliable life tables exist only for the European fraction of the population, when they are established. The census counts themselves are mostly unique. With all these limitations and the still unknown amount of error in the recent censuses, and in the immediate post-war censuses, it would not be advisable to use highly refined techniques of projection.

95. Two types of methods could be used:

- (a) the rural population is estimated on the basis of a projection of the economically active population engaged in agriculture, and the urban population is obtained as the difference between this estimate and the total population. This method has been used in different United Nations publications.<sup>1/</sup> The economically active population is projected in two main sections, agricultural and non-agricultural, by using objectives of the relevant plan, the possibilities for agricultural development by assuming certain increases in productivity and by making use of the correlations between levels of industrialization and labour-force participation rates. On the basis of the

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<sup>1/</sup> Population growth and manpower in the Philippines (A joint study by the United Nations and the Government of the Philippines)

Human Resources of Central America, Panama and Mexico in 1950 - 1980, and their relationship to certain aspects of economic development.  
TAA/LAT/22.

projected agricultural active population, the ratio of economically active population engaged in agriculture to rural population is used to determine the future rural population. This ratio is ordinarily assumed to remain constant in the future, in short-term projections.

- (b) Projections of the urban and rural populations are calculated according to the traditional methods after mortality and fertility have been estimated and assumptions have been established for migration between the two populations. The assumptions on the migration between the two populations should take into account the objectives of the plans, the possibilities of employment in urban areas, and the possibilities of extension of agriculture. However, in Africa, as exodus from rural areas is not always related to the possibilities of employment in urban areas, in certain cases it is advisable to project the migratory flows from rural to urban areas in conformity with trends observed in the past.

96. Certain projections assume the same natural rates of increase for urban and rural areas, due to the lack of knowledge on differential mortality and fertility trends. Wherever possible, it is recommended that these trends be studied, or a survey undertaken, before making any projection.

#### BRIEF REVIEW OF SELECTED ASSUMPTIONS REGARDING AREA POPULATION PROJECTIONS

##### Internal Migration and Economic Assumptions

97. It seems obvious that demographic assumptions alone are not sufficient for making area population projections. Economic changes which are likely to happen during the period covered by the projection should also be taken into account (also see paragraph 68). Expected growth rates of income per capita in an area should be used to assess likely future

rates of in-migration and out-migration. Likewise, the availability of land in an area, as well as possibilities for developing cash-crop farming, or handicrafts etc. should also be studied before formulating assumptions on the migration trends; etc.

98. Demographic Assumptions

- (a) differential rates in mortality decline. Although some differential rates of mortality have been observed in some African countries, so far data obtained are not detailed and continuous enough to sponsor another assumption than a uniform tempo of decline, parallel in urban and rural areas, parallel in different rural areas.

99. Differential rates in fertility declines

- (b) So far, a slight downward trend in fertility has been observed in certain African urban areas; but this is not decisive, since in other urban areas, fertility seems to be higher than in the rural hinterland. In any case, natural increase in urban population would not be lower than in the rural population through a slight decrease in fertility, owing to a relatively lower death rate. On the other hand, the modifications due to fertility declines in the age structure of the (native) urban population could be seen only in long-term projections.

100. Acceleration of rural-urban migration and limited growth in rural population

- (c) It can be assumed that in all countries sooner or later, rural population growth tends to be compensated for by an increasing incidence of rural-urban migration. This assumption deserves careful consideration, since during the last decade natural increase in the rural population and rural-urban migration have gained momentum in African countries. The appraisal of such possibilities as a faster acceleration of urbanization can be best assessed in comparing urban growth in the African situation with the situation prevailing in other areas



of the world. In Latin America considered as a whole where potential land resources are even more abundant than in Africa, rural population growth has considerably slowed down in several countries, and rural urban migration has absorbed the greater part of natural increase.

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TABLE I

POPULATION DENSITY IN RELATION TO TOTAL LAND AREA AND  
AGRICULTURAL LAND FOR AFRICAN COUNTRIES, AND RANGE OF  
DENSITY FOR ADMINISTRATIVE DIVISION WITHIN COUNTRIES

| Country                      | Population<br>1959<br>( '000s) | <u>Density per Km<sup>2</sup></u><br>of Land Area of Agricul-<br>tural Land |     | Range of<br>Density of<br>Land Area<br>within<br>Adminis-<br>trative<br>Divisions <sup>a/</sup> |
|------------------------------|--------------------------------|---|-----|---|
| AFRICA                       | 246,043                        | 8   | 30  |   |
| <u>North Africa</u>          |                                |   |     |   |
| Total                        | 64,178                         | 8   | 56  |   |
| Algeria                      | 10,930                         | 5   | 23  | 0-139   |
| Libya                        | 1,172                          | 1   | 11  | 1-3   |
| Morocco <sup>b/</sup>        | 11,382                         | 26  | 63  | 10-73   |
| Sudan                        | 11,459                         | 5   | 37  | 2-24  |
| Tunisia                      | 3,935                          | 31  | 79  | 4-116   |
| UAR, Egypt                   | 25,300                         | 592 <sup>e/</sup>   | 973 | 269-833   |
| <u>West Africa</u>           |                                |   |     |   |
| Total                        | 75,395                         | 8   | 27  |   |
| Cameroon                     | 3,225                          | 7   | 22  | 1-94  |
| Former French<br>West Africa | 21,502                         | 5   | 14  |   |
| Dahomey                      | 2,000                          | 17  | ... | 4-55  |
| Guinea                       | 2,727                          | 11  | ... | 5-24  |
| Ivory Coast                  | 3,103                          | 10  | ... | 2-14  |
| Mali                         | 4,300                          | 4   | ... | 0-16  |
| Mauritania                   | 730                            | 1   | ... | -06   |
| Niger                        | 2,555                          | 2   | ... | 0-11  |
| Senegal                      | 2,550                          | 13  | ... | 2-47  |
| Upper Volta                  | 3,537                          | 13  | ... | 4-37  |

TABLE 1 (cont'd)

| Country                     | Population<br>1959<br>( '000s) | <u>Density per Km<sup>2</sup></u><br>of Land Area of Agricul-<br>tural Land |                   | Range of<br>Density of<br>Land Area<br>within<br>Adminis-<br>trative<br>Divisions <sup>a/</sup> |
|-----------------------------|--------------------------------|---|-------------------|---|
| <u>Former French</u>        |                                |   |                   |   |
| <u>Equatorial Africa</u>    | 5,000                          | 2   | 6                 | ...   |
| Central African<br>Republic | 1,185                          | 2   | ...               | ...   |
| Chad                        | 2,600                          | 2   | ...               | ...   |
| Congo (Brazzaville)         | 795                            | 2   | ...               | ...   |
| Gabon                       | 420                            | 2   | ...               | ...   |
| Gambia                      | 301                            | 29  | 151 <sup>f/</sup> | ...   |
| Ghana <sup>c/</sup>         | 6,612                          | 28  | 125               | 2-84  |
| Liberia                     | 1,250                          | 11  | 60                | ...   |
| Nigeria <sup>d/</sup>       | 33,663                         | 38  | 151               | 7-157   |
| Sierra Leone                | 2,400                          | 33  | 41                | ...   |
| Togo                        | 1,442                          | 25  | 63                | 7-71  |
| <u>South and East</u>       |                                |   |                   |   |
| <u>Africa</u>               |                                |   |                   |   |
| Total                       | 106,470                        | 8   | 21                | ...   |
| Angola                      | 4,550                          | 4   | 15                | ...   |
| Basutoland                  | 674                            | 22  | 169 <sup>g/</sup> | ...   |
| Bechuanaland                | 337                            | 1   | 1                 | ...   |
| Congo (Leopoldville)        | 13,821                         | 6   | 27                | 3-9   |
| Ethiopia                    | 21,800                         | 18  | 31                | ...   |
| French Somaliland           | 70                             | 3   | 35                | ...   |
| Kenya                       | 6,450                          | 11  | 248               | 1-49  |
| Malagasy Republic           | 5,239                          | 9   | 14                | ...   |
| Mauritius                   | 621                            | 333   | 621               | 47-680  |
| Mozambique                  | 6,310                          | 8   | 14                | 2-19  |
| Reunion                     | 324                            | 129   | 324               | ...   |

TABLE 1 (cont'd)

| Country                                | Population<br>1959<br>( '000s) | Density per Km <sup>2</sup><br>of Land Area of Agricul-<br>tural Land |     | Range of<br>Density of<br>Land Area<br>within<br>Adminis-<br>trative<br>Divisions <sup>a/</sup> |
|--|--------------------------------|---|-----|---|
| Rhodesia and<br>Nyasaland              | 8,130                          | 7   | 20  | ...   |
| Ruanda-Urundi                          | 4,780                          | 38  | 120 | 32-177  |
| Somalia                                | 1,990                          | 3   | 9   | 1-9   |
| South West Africa <sup>h/</sup>        | 554                            | 1   | 1   | ...   |
| Swaziland                              | 250                            | 14  | 16  | ...   |
| Tanganyika                             | 9,076                          | 10  | ... | 4-17  |
| Uganda                                 | 6,517                          | 27  | 225 | 15-41   |
| Union of South<br>Africa <sup>i/</sup> | 14,673                         | 12  | 15  | ...   |
| Zanzibar and<br>Pemba                  | 304                            | 115   | 152 | ...   |

Note: 1959 population estimates for Morocco, Ghana and Egypt are derived from preliminary result of recent census held in 1960.

Data on population (total area) are for mid-year 1959, except for Liberia (1956).

a/ For each country the smaller administrative divisions for which census or survey data exists has been considered. Thus in some cases the districts are given by large tracts such as regions and governorates. In the figures presented for range of densities within countries, urban densities have been excluded wherever possible.

b/ Former French Zone plus northern part of former Spanish Zone.

c/ Includes Togoland under British Administration.

d/ Excludes Cameroons under British Administration.

e/ This density has been calculated on the basis of non-barren land (and not in relation to total superficial area) in order to provide land areas used for range of density of administrative divisions and also since land density on the basis of superficial area has no meaning for a country in which over 96 per cent of the land area is desert.

f/ Density of estimated area of shifting cultivation.

g/ When calculating density data for area of permanent meadows and pasture are not considered.

h/ Includes Walvis Bay.

i/ Excludes Walvis Bay.

TABLE 2

SELECTED AFRICAN COUNTRIES - URBAN POPULATION (or population  
of selected cities) BY BROAD AGE-GROUPS AND SEX

|                             |           | Distribution per 1000 persons |         |            |                          |
|-----------------------------|-----------|-------------------------------|---------|------------|--------------------------|
|                             | Age group | Males                         | Females | both sexes | Sex-ratios <sup>1/</sup> |
| <u>Congo (Brazzaville)</u>  | 0-14      | 171                           | 169     | 340        | 101                      |
| <u>Bacongo - Poto Poto</u>  | 15-59     | 380                           | 274     | 654        | 139                      |
|                             | 60 +      | 3                             | 3       | 6          | 100                      |
| 1955-56                     | All ages  | 554                           | 446     | 1 000      | 124                      |
| <u>Congo (Leopoldville)</u> | 0-14      | 206                           | 202     | 408        | 102                      |
|                             | 15-54     | 323                           | 250     | 573        | 129                      |
| 1955-57                     | 55 +      | 11                            | 8       | 19         | 138                      |
|                             | All ages  | 540                           | 460     | 1 000      | 117                      |
| <u>Congo (Leopoldville)</u> | 0-14      | 176                           | 177     | 353        | 99                       |
|                             | 15-54     | 400                           | 233     | 633        | 171                      |
|                             | 55 +      | 7                             | 7       | 14         | 100                      |
| 1955                        | All ages  | 583                           | 417     | 1 000      | 140                      |
| <u>Ivory Coast</u>          | 0-14      | 163                           | 158     | 321        | 103                      |
|                             | 15-54     | 410                           | 255     | 665        | 161                      |
| <u>Abidjan</u>              | 60 +      | 9                             | 5       | 14         | 180                      |
| 1955                        | All ages  | 582                           | 488     | 1 000      | 119                      |
| <u>Ghana</u>                | 0-15      | 180                           | 186     | 366        | 97                       |
|                             | 16-45     | 278                           | 219     | 497        | 127                      |
| <u>Accra</u>                | 45 +      | 70                            | 67      | 137        | 105                      |
| 1948                        | All ages  | 528                           | 472     | 1 000      | 112                      |
| <u>Guinea</u>               | 0-14      | 204                           | 199     | 403        | 102                      |
|                             | 15-54     | 258                           | 282     | 540        | 92                       |
| "Urban areas"               | 55 +      | 30                            | 27      | 57         | 111                      |
| 1955                        | All ages  | 492                           | 508     | 1 000      | 97                       |
| <u>Libya</u>                | 0-14      | 169                           | 164     | 333        | 103                      |
|                             | 15-54     | 321                           | 269     | 590        | 119                      |
| <u>Tripoli</u>              | 55 +      | 37                            | 40      | 77         | 92                       |
| 1954                        | All ages  | 527                           | 473     | 1 000      | 110                      |

Source : Outre-Mer 1958 - Service des statistiques d'outre mer -  
Paris 1959.

and from census and survey data

<sup>1/</sup> Sex ratio : Number of men for 100 women.

TABLE 2 (cont'd)

|                                     | Age groups | Distribution per 1000 persons |         |            | Sex ratios |
|-------------------------------------|------------|-------------------------------|---------|------------|------------|
|                                     |            | Males                         | Females | both sexes |            |
| <u>Mali</u>                         | 0-14       | 208                           | 196     | 404        | 106        |
| Bamako                              | 15-59      | 265                           | 287     | 552        | 92         |
|                                     | 60 +       | 25                            | 19      | 44         | 126        |
| 1958                                | All ages   | 498                           | 502     | 1 000      | 96         |
| <u>Niger River Valley (Mali)</u>    | 0-14       | 177                           | 189     | 366        | 94         |
|                                     | 15-59      | 249                           | 314     | 563        | 79         |
| Urban areas                         | 60 +       | 36                            | 35      | 71         | 103        |
| 1958                                | All ages   | 462                           | 538     | 1 000      | 86         |
| <u>Morocco</u> <sup>4/</sup>        | 0-19       | 219                           | 235     | 454        | 93         |
| 10 cities                           | 20-59      | 241                           | 257     | 498        | 93         |
| 1951-1952                           | 60 +       | 20                            | 28      | 48         | 73         |
|                                     | All ages   | 480                           | 520     | 1 000      | 92         |
| <u>Nigeria (West)</u>               | 0-14       | 266                           | 253     | 519        | 105        |
| (8 cities) <sup>2/</sup>            | 15-49      | 208                           | 200     | 408        | 104        |
| 1952                                | 50 +       | 36                            | 37      | 73         | 97         |
|                                     | All ages   | 510                           | 490     | 1 000      | 104        |
| <u>UAR (Egypt)</u>                  | 0-14       | 192                           | 196     | 388        | 98         |
| Cairo and                           | 15-59      | 292                           | 272     | 564        | 197        |
| Alexandria                          | 60 +       | 24                            | 24      | 48         | 98         |
| 1947                                | All ages   | 508                           | 492     | 1 000      | 103        |
| <u>Central African Republic</u>     | 0-14       | 152                           | 138     | 290        | 110        |
| Bangui                              | 15-59      | 384                           | 318     | 702        | 121        |
| 1955                                | 60 +       | 4                             | 4       | 8          | 100        |
|                                     | All ages   | 540                           | 460     | 1 000      | 118        |
| <u>North Rhodesia</u> <sup>3/</sup> | 0-14       | 228                           | 216     | 336        | 105        |
| (8 cities)                          | 15-59      | 321                           | 232     | 553        | 148        |
| 1960                                | 60 +       | 2                             | 1       | 3          | 287        |
|                                     | All ages   | 551                           | 449     | 1 000      | 123        |

<sup>2/</sup> Lagos, Ibadan, Abeokuta, Iwo, Ogbomosho, Oshogbo, Ije, Oyo.

<sup>3/</sup> From Report on Northern Rhodesia African Demographic Survey 1960, Table 11, page 4.

<sup>4/</sup> Casablanca, Marrakesh, Fes, Rabat, Meknes, Oujda, Safi, Kenitra, Sale, Mazagan.

TABLE 2 (cont'd)

|                               | Age groups | Distribution per 1000 persons |         |            | Sex ratios |
|-------------------------------|------------|-------------------------------|---------|------------|------------|
|                               |            | Males                         | Females | both sexes |            |
| <u>Senegal</u>                | 0-15       | 177                           | 182     | 359        | 97         |
| Dakar                         | 15-59      | 317                           | 285     | 602        | 116        |
|                               | 60 +       | 20                            | 19      | 39         | 105        |
| 1955                          | All ages   | 514                           | 486     | 1 000      | 106        |
| <u>Senegal - Lower Valley</u> | 0-14       | 196                           | 194     | 390        | 101        |
| urban areas                   | 15-59      | 234                           | 308     | 542        | 76         |
|                               | 60 +       | 33                            | 35      | 68         | 94         |
| 1957                          | All ages   | 463                           | 537     | 1 000      | 86         |
| <u>Togo</u>                   | 0-14       | 216                           | 235     | 451        | 92         |
|                               | 15-59      | 248                           | 271     | 519        | 92         |
| 1958                          | 60 +       | 10                            | 20      | 30         | 50         |
|                               | All ages   | 474                           | 526     | 1 000      | 90         |
| <u>Union of South Africa</u>  | 0-14       | 153                           | 155     | 308        | 99         |
|                               | 15-59      | 363                           | 269     | 632        | 135        |
| 1951                          | 60 +       | 28                            | 32      | 60         | 88         |
|                               | All ages   | 544                           | 456     | 1 000      | 119        |



TABLE 3

GHANA 1948 - SEX RATIOS (Number of men for 100 women)  
IN SELECTED CITIES OF GHANA AND DISTRIBUTION BY BIRTH

PLACE (born (local) and not born (non-local) where  
enumerated)

| Cities and urban<br>agglomerations | Sex ratios<br>according to birth place |           |       | Distribution<br>(%)<br>by birth place |           |       |         |
|------------------------------------|--|-----------|-------|---------------------------------------|-----------|-------|---------|
|                                    | local                                  | non local | total | local                                 | non local |       |         |
|                                    | a)                                     | b)        |       | c)                                    | b)        | Males | Females |
| Accra                              | 81                                     | 157       | 109   | 46                                    | 63        | 54    | 37      |
| Kumasi                             | 93                                     | 119       | 112   | 28                                    | 32        | 72    | 68      |
| Sekondi-Takoradi                   | 101                                    | 134       | 129   | 20                                    | 25        | 80    | 75      |
| Cape Coast                         | 80                                     | 129       | 95    | 59                                    | 70        | 41    | 30      |
| Kafofidua                          | 91                                     | 107       | 101   | 32                                    | 35        | 68    | 65      |
| Winneba                            | 87                                     | 125       | 95    | 74                                    | 80        | 26    | 20      |
| Keta                               | 82                                     | 8         | 86    | 51                                    | 53        | 49    | 47      |
| Ghana <sup>c)</sup>                | 85                                     | 127       | 102   | 47                                    | 58        | 53    | 42      |

Source: According to data published in "Census of population, 1948,  
Report and tables."

- a) born where enumerated;
- b) not born where enumerated;
- c) total population, population of Ghana, urban and rural.

TABLE 4

AGE COMPOSITION OF THE POPULATION FOR SELECTED AFRICAN COUNTRIES  
(Estimated percentage of total population)

| Country                                | Census date | Percent of total population aged : |       |             |
|--|-------------|------------------------------------|-------|-------------|
|  |             | Under 15                           | 15-59 | 60 and over |
| <u>North Africa</u>                    |             |                                    |       |             |
| Algeria                                | 1954        | 41.0                               | 53.0  | 5.9         |
| Libya                                  | 1954        | 38.0                               | 52.4  | 9.5         |
| Morocco                                | 1951-52     | 40.6                               | 52.5  | 3.5         |
| Sudan <sup>a/</sup>                    | 1956        | 46.6                               | 49.8  | 3.5         |
| Tunisia                                | 1956        | 41.8                               | 52.6  | 5.6         |
| UAR (Egypt)                            | 1947        | 38.0                               | 55.7  | 6.0         |
| <u>West Africa</u>                     |             |                                    |       |             |
| Cameroun <sup>c/</sup>                 | 1958        | 28.6                               | 68.2  | 2.5         |
| Guinea <sup>c/</sup>                   | 1955        | 42.1                               | 52.9  | 4.9         |
| Ivory Coast <sup>c/</sup>              | 1958        | 44.9                               | 51.1  | 4.0         |
| Mali <sup>c/</sup>                     | 1958        | 36.4                               | 55.7  | 7.9         |
| Senegal <sup>c/</sup>                  | 1958        | 40.1                               | 53.4  | 6.5         |
| Central African Republic <sup>c/</sup> | 1958        | 34.7                               | 62.9  | 2.4         |
| Congo (Brazzaville) <sup>c/</sup>      | 1959        | 41.6                               | 56.4  | 2.0         |
| Chad <sup>c/</sup>                     | 1959        | 42.5                               | 53.9  | 3.6         |
| Ghana <sup>d/</sup>                    | 1960        | 44.5                               | 50.6  | 4.9         |
| Gambia                                 | 1959        | 31.2                               | 59.9  | 8.9         |
| Nigeria <sup>b/</sup>                  | 1952-53     | 40.2                               | 53.9  | 4.9         |
| <u>South and East Africa</u>           |             |                                    |       |             |
| Angola                                 | 1950        | 39.1                               | 56.0  | 4.7         |
| Basutoland                             | 1946        | 37.6                               | 53.5  | 8.9         |
| Bechuanaland                           | 1946        | 36.5                               | 55.7  | 7.8         |
| Congo (Leopoldville)                   | 1953        | 35.2                               | 58.4  | 6.4         |
| Mauritius                              | 1959        | 44.1                               | 41.0  | 5.0         |
| Mozambique                             | 1956        | 40.4                               | 54.5  | 5.0         |

a/ From an adjusted age distribution obtained by use of United Nations model population methods for a joint study by the United Nations and the Government of Sudan on population growth and manpower in Sudan (report under publication).

b/ Census age categories revised to five-year age groups by mathematical methods.

c/ Based on the results of a demographic sample survey covering only part of the national area.

d/ Based on 10% sample.

TABLE 5

Annex  
Page 9

PERCENTAGES OF POPULATION IN SELECTED COUNTRIES OF AFRICA  
CLASSIFIED AS RESIDING IN URBAN AREAS IN LARGEST CITY AND  
IN CITIES OF POPULATION 100,000 AND OVER AND OF 20,000 AND  
OVER

| Country                      | Date    | Percent of Population Living in: |                   |                             |                            |
|------------------------------|---------|----------------------------------|-------------------|-----------------------------|----------------------------|
|                              |         | Urban Areas                      | Largest City      | Urban area 100,000 and over | Urban area 20,000 and over |
| (1)                          | (2)     | (3)                              | (4)               | (5)                         | (6)                        |
| <u>North Africa</u>          |         |                                  |                   |                             |                            |
| Algeria                      | 1948    | 23.6                             | 3.1               | 6.6                         | 14.1                       |
| Libya                        | 1954    | 22.7                             | 11.9              | 11.9                        | 18.3                       |
| Morocco                      | 1960    | 29.3                             | 8.3               | 18.9                        | 24.0                       |
| Sudan <sup>a/</sup>          | 1955-56 | 8.3                              | 2.4 <sup>a/</sup> | 2.4 <sup>a/</sup>           | 4.5                        |
| Tunisia                      | 1946    | 29.9                             | 11.3              | 11.3                        | 19.2                       |
| UAR (Egypt)                  | 1947    | 30.1                             | 11.0              | 19.3                        | 20.1                       |
| <u>West Africa</u>           |         |                                  |                   |                             |                            |
| Dahomey                      | 1955    | 7.1                              | 3.5               | -                           | 5.5                        |
| Guinea                       | 1955    | 6.5                              | 1.1               | -                           | 5.1                        |
| Ivory Coast                  | 1956    | 11.1                             | 5.1               | 5.1                         | 6.8                        |
| Mali                         | 1956    | 5.1                              | 1.8               | -                           | 1.8                        |
| Mauritania                   | 1956    | 4.5                              | 1.4               | -                           | -                          |
| Niger                        | 1956    | 2.7                              | 0.8               | -                           | -                          |
| Senegal                      | 1956    | 22.9                             | 9.9               | 9.9                         | 19.0                       |
| Upper Volta                  | 1956    | 4.0                              | 1.3               | -                           | 2.3                        |
| Ghana                        | 1948    | 14.3                             | 3.3               | 3.3                         | 5.0                        |
| Nigeria                      | 1952-53 | 17.5                             | 1.5               | 4.1                         | 11.4                       |
| Togo                         | 1958    | 9.6                              | 4.5               | -                           | 4.5                        |
| Gambia                       | 1951    | 71.8                             | 71.8              | -                           | -                          |
| <u>South and East Africa</u> |         |                                  |                   |                             |                            |
| Angola                       | 1955    | 7.4                              | 4.4               | 4.4                         | 6.0                        |
| Congo (Leopoldville)         | 1957    | 9.8                              | 2.2 <sup>c/</sup> | 3.5 <sup>c/</sup>           | 7.1                        |
| Kenya                        | 1948    | 15.0                             | 2.2 <sup>c/</sup> | 2.2 <sup>c/</sup>           | 3.8                        |
| Mozambique                   | 1954    | 13.9                             | 2.5               | 6.6                         | 13.9                       |
| Mauritius                    | 1952    | 34.9                             | 13.5              | -                           | -                          |
| Rhodesia and Nyasaland       | 1950    | 13.6                             | 1.7               | 1.7                         | -                          |
| Tanganyika                   | 1957    | 3.3                              | 1.5               | 1.5                         | 1.9                        |
| Uganda                       | 1948    | 0.8                              | 0.4               | -                           | -                          |
| Republic of South Africa     | 1951    | 42.6                             | 5.0               | 24.0                        | 30.7                       |
| Zanzibar and Pemba           | 1948    | 20.0                             | 17.1              | -                           | 17.1                       |

<sup>a/</sup> The three municipalities of Khartoum, Khartoum North and Omdurman are taken together since they are contiguous and for all practical purposes form one economic unit.

<sup>b/</sup> For Northern Rhodesia only.

<sup>c/</sup> Represents the population of Nairobi. The results of the 1957 sample survey of the city show that the city has 4.2 percent of the 1957 estimated population of the country.

TABLE 6

GUINEA 1954-1955 DISTRIBUTION OF POPULATION BY AGE GROUP, SEX AND BIRTH PLACE  
(born or not-born where enumerated)

[illegible]

TABLE 7  
CITIES AND URBAN AGGLOMERATIONS OF 100 000 AND MORE INHABITANTS AVERAGE ANNUAL  
RATES OF INCREASE BETWEEN THE POST-WAR PERIOD AND RECENT YEARS  
(C : city proper; A : urban agglomeration).

| Countries and cities | Period         | Increase<br>per cent | Period         | Increase<br>per cent |
|----------------------|----------------|----------------------|----------------|----------------------|
| <u>North Africa</u>  |                |                      |                |                      |
| <u>Algeria</u>       |                |                      |                |                      |
| Alger                | C 1936-1954    | 1.74                 | A 1948-1959    | 4.68                 |
| Bône                 | C 1936-1948    | 0.80                 | C 1948-1954    | 6.53                 |
|                      |                |                      | A 1948-1959    | 2.12                 |
| Constantine          | C 1936-1948    | 2.84                 | C 1948-1954    | 10.93                |
|                      |                |                      | A 1948-1959    | 6.50                 |
| Oran                 | C 1936         | 1.66                 | C 1948-1954    | 3.37                 |
|                      |                |                      | A 1948-1959    | 2.80                 |
| Sidi-bel-Abbès       | C 1936-1948    | 0.85                 | C 1948-1959    | 5.94                 |
| <u>Morocco</u>       |                |                      |                |                      |
| Casablanca           | C 1936-1951-52 | 6.49                 | C 1951-52-1960 | 4.11                 |
| Fes                  | C 1936-1951-52 | 1.37                 | C 1951-52-1960 | 2.23                 |
| Marrakech            | C 1936-1951-52 | 0.80                 | C 1951-52-1960 | 1.40                 |
| Meknes               | C 1936-1951-52 | 4.11                 | C 1951-52-1960 | 2.8                  |
| Oujda                | C 1936-1951-52 | 5.68                 | C 1951-52-1960 | 5.79                 |
| Rabat                | C 1936-1951-52 | 4.15                 | C 1951-52-1960 | 4.40                 |
| Tetoun               |                |                      | C 1945-1960    | 0.48                 |
| <u>Tunisia</u>       |                |                      |                |                      |
| Tunis                | C 1936-1946    | 5.19                 | C 1946-1956    | 1.17                 |
| <u>Egypt</u>         |                |                      |                |                      |
| Alexandria           | C 1937-1947    | 2.97                 | C 1947-1959    | 3.17                 |
| Asyut                | C 1937-1947    | 4.13                 | C 1947-1959    | 2.50                 |
| Cairo                | C 1937-1947    | 4.77                 | C 1947-1959    | 2.63                 |
| Damanhur             | C 1937-1947    | 3.08                 | C 1947-1959    | 3.28                 |
| El Mahalla el Kubra  |                |                      | C 1947-1959    | 2.72                 |
| Giza                 | C 1937-1947    | 5.68                 | C 1947-1959    | 8.39                 |
| Ismailia             | C 1937-1947    | 6.28                 | C 1947-1959    | 4.32                 |
| Mansura              | C 1937-1947    | 3.98                 | C 1947-1959    | 2.92                 |
| Port Said            | C 1937-1947    | 1.39                 | C 1947-1959    | 2.01                 |
| Suez                 | C 1937-1947    | 7.89                 | C 1947-1959    | 2.98                 |
| Tanta                | C 1937-1947    | 3.95                 | C 1947-1959    | 1.88                 |
| Zagazig              | C 1937-1947    | 3.18                 | C 1947-1959    | 3.30                 |

TABLE 7  
(Cont'd)\*

| Countries and cities                  | Period      | Increase<br>per cent | Period      | Increase<br>per cent |
|---------------------------------------|-------------|----------------------|-------------|----------------------|
| <u>West Africa (cont'd)</u>           |             |                      |             |                      |
| <u>Congo (Braz)</u>                   |             |                      |             |                      |
| Brazzaville                           | C 1931-1946 | 9.96                 | C 1946-1959 | 3.74                 |
| <u>Chad</u>                           |             |                      |             |                      |
| Ndjamena                              | C 1936-1948 | 5.56                 | C 1948-1960 | 11.29                |
| <u>Guinea</u>                         |             |                      |             |                      |
| Conakry                               | C 1936-1946 | 7.18                 | C 1946-1960 | 3.65                 |
| <u>Ivory Coast</u>                    |             |                      |             |                      |
| Abidjan                               | C 1933-1946 | 7.49                 | C 1946-1955 | 10.92                |
| <u>Nigeria</u>                        |             |                      |             |                      |
| Ibadan                                | C 1936-1952 | 1.08                 |             |                      |
| Ife                                   | C 1931-1952 | 7.53                 |             |                      |
| Iwe                                   | C 1931-1952 | 2.72                 |             |                      |
| Kano                                  | C 1931-1952 | 1.82                 |             |                      |
| Lagos                                 | C 1936-1950 | 3.77                 | C 1950-1960 | 4.69                 |
| Ogbomoso                              | C 1931-1952 | 2.29                 |             |                      |
| Oshogbo                               | C 1931-1952 | 4.27                 |             |                      |
| <u>Senegal</u>                        |             |                      |             |                      |
| Dakar                                 | C 1936-1946 | 3.51                 | C 1946-1954 | 7.40                 |
| <u>Sierra Leone</u>                   |             |                      |             |                      |
| Freetown                              |             |                      | C 1947-1959 | 3.65                 |
| <u>Central Africa</u>                 |             |                      |             |                      |
| <u>Congo (Leo)</u>                    |             |                      |             |                      |
| Elisabetville                         |             |                      | C 1946-1959 | 9.52                 |
| Leopoldville                          | C 1938-1947 | 14.21                | C 1947-1959 | 10.67                |
| <u>Malawi and Nyassaland, féd. of</u> |             |                      |             |                      |
| South Rhodesia                        |             |                      | A 1946-1959 | 10.31                |
| Salisbury                             |             |                      | A 1946-1959 | 11.01                |

\* Figures computed according to data given on Demographic Yearbook 1960, Table 7.  
For the population of these cities and urban agglomerations see the same table.  
C : city proper; A : urban agglomeration.

TABLE 7  
(Cont'd)

| Countries and cities         | Period      | Increase<br>per cent | Period      | Increase<br>per cent |
|------------------------------|-------------|----------------------|-------------|----------------------|
| <u>East Africa</u>           |             |                      |             |                      |
| <u>Ethiopia</u>              |             |                      |             |                      |
| Addis-Ababa                  | C 1938-1957 | 2.73                 |             |                      |
| <u>Kenya</u>                 |             |                      |             |                      |
| Mombasa                      |             |                      | C 1948-1959 | 5.43                 |
| Nairobi                      |             |                      | C 1948-1959 | 7.40                 |
| <u>Madagascar</u>            |             |                      |             |                      |
| Tananarive                   | C 1936-1948 | 3.24                 | C 1946-1959 | 3.18                 |
| <u>Mozambique</u>            |             |                      |             |                      |
| Lourenço Marques             | C 1935-1950 | 4.73                 | C 1950-1956 | 1.04                 |
| <u>Tanganyika</u>            |             |                      |             |                      |
| Dar-es-Salaam                | C 1931-1948 | 6.68                 | C 1948-1957 | 7.20                 |
| <u>South Africa</u>          |             |                      |             |                      |
| <u>Union of South Africa</u> |             |                      |             |                      |
| Benoni                       | A 1936-1946 | 1.03                 | A 1946-1960 | 4.38                 |
| Bloemfontein                 | A 1936-1946 | 2.63                 | A 1946-1960 | 3.86                 |
| Cape Town                    | A 1936-1946 | 2.19                 | A 1946-1960 | 3.19                 |
| Durban                       | A 1936-1946 | 3.36                 | A 1946-1960 | 4.12                 |
| East London                  | A 1936-1946 | 2.63                 | A 1946-1960 | 2.73                 |
| Germiston                    | A 1936-1946 | 4.66                 | A 1946-1960 | 3.25                 |
| Johannesburg                 | A 1936-1946 | 3.06                 | A 1946-1960 | 2.64                 |
| Port Elisabeth               | A 1936-1946 | 3.01                 | A 1946-1960 | 4.42                 |
| Pretoria                     | A 1936-1946 | 6.49                 | A 1946-1960 | 3.88                 |
| Springs                      | A 1936-1946 | 2.47                 | A 1946-1960 | 1.41                 |
| Vereeniging                  | A 1936-1946 | 5.24                 | A 1946-1960 | 7.90                 |
| <u>West Africa</u>           |             |                      |             |                      |
| <u>Angola</u>                |             |                      |             |                      |
| Louande                      | C 1930-1950 | 5.26                 |             |                      |
| <u>Cameroun (Yaounde)</u>    |             |                      |             |                      |
| Douala                       | C 1931-1954 | 6.44                 |             |                      |

TABLE 8  
BIRTH AND DEATH RATES FOR URBAN AND RURAL AREAS OBTAINED  
FOR AFRICAN SAMPLE SURVEYS

| Country                                   | Year | U R B A N                       |                                 |   | R U R A L                       |                                 |  |
|---|------|---------------------------------|---------------------------------|---|---------------------------------|---------------------------------|--|
|   |      | Birth<br>rates<br>(per<br>1000) | Death<br>rates<br>(per<br>1000) | Infant<br>mortality<br>rate (per<br>1000<br>births) | Birth<br>rates<br>(per<br>1000) | Death<br>rates<br>(per<br>1000) | Infant<br>mortality<br>rate (per<br>1000 live<br>births) |
| Central African<br>Republic <sup>a/</sup> | 1959 | 38                              | 27                              | 197   | 40                              | 26                              | 188  |
| Congo (Leo.) <sup>b,c/</sup>              | 1957 | 52                              | 9                               | 66  | 41                              | 23                              | 113  |
| Guinea <sup>b/</sup>                      | 1955 | 52                              | 29                              | 189   | 63                              | 41                              | 218  |
| Mali <sup>a/</sup>                        | 1957 | 44                              | 31                              | 246   | 52                              | 47                              | 320  |
| Senegal <sup>a/</sup>                     | 1957 | 53                              | 27                              | 152   | 52                              | 25                              | 172  |

<sup>a/</sup> Demographic sample survey covering only part of the national area.

<sup>b/</sup> National demographic sample survey.

<sup>c/</sup> The population living in "mixed" areas (i.e. sub-urban areas with 12 % of the national population) has been excluded in these estimates).



TABLE 9  
AVERAGE NUMBER OF CHILDREN EVER BORN BY AGE OF MOTHER

| Age<br>Groups | Guinea (1955) |       | Mali (1957) |       | Senegal (1957) |       | Républi-<br>que cen-<br>tre Afri-<br>caine<br>(1959) |       |
|---------------|---------------|-------|-------------|-------|----------------|-------|--|-------|
|               | urban         | rural | urban       | rural | urban          | rural | urban  | rural |
| 15 - 19       | 0.6           | 0.5   | 0.5         | 0.6   | 0.5            | 0.4   | 0.4  | 0.3   |
| 20 - 24       | 1.7           | 1.8   | 1.7         | 1.9   | 1.7            | 1.7   | 1.1  | 1.2   |
| 25 - 29       | 2.6           | 2.9   | 2.7         | 3.2   | 2.7            | 2.9   | 2.0  | 2.1   |
| 30 - 34       | 3.6           | 3.9   | 4.0         | 4.1   | 3.2            | 3.9   | 2.3  | 2.6   |
| 35 - 39       | 4.3           | 4.5   | 4.1         | 4.8   | 3.9            | 4.6   | 2.8  | 3.2   |
| 40 - 44       | 4.8           | 5.0   | 4.4         | 4.8   | 4.1            | 5.0   | 3.5  | 3.8   |
| 45 - 59       | 5.3           | 5.3   | 4.9         | 5.0   | 4.2            | 5.2   | 3.5  | 4.2   |

Source : Annuaire statistique. Années 1955-1956 et 1957 - vol.6,  
tome 1. Haut Commissariat général à Dakar - Dakar 1959.

1/ Enquête démographique Centre Oubangui 1959. Paris, mai 1960.