

Population Levels and Prospects in Africa

This article presents a review of (i) the present population levels in the African countries, (ii) the prospects for the future and (iii) the African approach for population programmes and policies.

1. POPULATION LEVELS

Population size and density

Over the years, Africa's share of the total population of the world has been on the increase. By mid-1970, Africa, with an estimated population of around 355 million, had increased its share in the world's total to 10 per cent from about 7.1 and 8 per cent in 1920 and 1930 respectively. Against this background of accelerated population increase, the Continent, with 22.0 per cent of the total land area of the world, experienced a corresponding increase in crude population density. In 1920, the Continent's population density was about 5 persons per sq. kilometer; it rose to 9 in 1960, and further to 12 in 1970. Even so, the Continent is relatively one of the most sparsely peopled areas in the world. Africa's density was in 1970 of the same order as those for the Americas and the U.S.S.R., and less than half the world level of 27 persons per sq. kilometer.

There is a marked heterogeneity in the spread of population among countries and regions in the Continent. In 1970, there were only 10 countries with ten million or more persons each. The greater part of the Nile valley, some areas in the equatorial hinterland of West Africa and the small off-shore islands have notably high densities of population. Basically, the urban and coastal areas are the most densely populated, and so are the localities near water, mineral deposits and industrial centres. The most sparsely populated countries (those with a density less than 5) fall into four main groups :

- (i) those partly or wholly situated in the Sahara;
- (ii) those partly or wholly situated in the Kalahari desert;
- (iii) the French Territory of the Afars and the Issas, and Somalia in Eastern Africa;
- (iv) the Central and South African countries on or near the Atlantic Coast such as the Central African Republic, Republic of Congo, Gabon and Angola.

The reasons for the lack of habitation in the first three of these regions are obvious ; but there is no readily apparent explanation for the low density of countries of the fourth group or for density variation within these countries. Possibly they have not yet fully recovered from depopulation brought about by the slave trade; the low fertility rates of parts of the region could also have contributed in some measure to the situation.

The use of crude density as a measure of population pressure is objectionable on the ground, among others, that it tends to distort the realities of economic conditions in a given situation by not considering the unevenness of resources for development, particularly in respect of agriculture. The density ratio which relates the size of arable land to the size of the agricultural population has, therefore, been preferred to the crude density ratio. The preference for the arable to the crude density ratio is underscored by the wide difference between the two in 1966, when crude density was only 11 persons compared to the arable density of 135 persons per square kilometer. The highest arable density was recorded in Egypt with 1,808, followed by Angola and Kenya with 573 and 522 persons per square kilometer respectively. The corresponding crude densities were, of course, far lower Egypt 30, Angola 4, and Kenya 17 persons per square kilometer.

Africa's arable density, when compared to crude density, imply an under-utilization of agricultural land. This has serious implications for controlling the levels of unemployment under-employment and urbanization. The holding back of labour on the farms in the villages, in particular, calls for the transformation of rural areas.

Age composition

The populations of African countries are young; children (under 15 years) usually form 44 per cent of the total population; population in working age group (15-59), about 53 per cent; and the aged (60+), about 3 per cent. A few countries have comparatively low percentages of children; this could be ascribed to comparatively low fertility; for example Gabon has 33 per cent of children, and a crude birth rate of 35 per 1000 persons

Sex ratio of population

Considering the total population, and also only the indigenous population females generally outnumber males in many of the African countries. The areas where this is clearly the case are Libya, Sudan, Egypt, Gambia, Ghana, Ivory Coast, Nigeria, Ethiopia, Angola, and Namibia; Libya tops the list with 108 males per 100 females.

Sex ratios seem generally low in Central and East Africa, particularly in Lesotho, Gabon, Rwanda, Republic of Congo, Chad and Malawi; in some of these countries this may be due to the migration of males to find work in neighbouring countries with better employment opportunities.

For all but four of the countries for which data are available, the sex ratio is higher in urban than in rural areas, the exceptions being Morocco (Moslem population), Mali, and Ethiopia. This is also the case for the non-African populations.

For most countries, the urban sex ratios, starting at a high level in localities of less than 200 inhabitants fall to a lower level in localities with inhabitants between 500 and 999; then the ratios rise again till, in most cases, they reach the highest level in the cities of 500,000 and more.

Urban population

One of the most pressing problems currently facing many African countries is the population draft from the rural areas to the towns and cities, with its attendant economic and social implications.

Close comparisons between the sub-regions and between individual countries are made difficult by the lack of standardization of definition, firstly of what constitutes a locality, and secondly as to where to draw the line between "urban" and "rural". An attempt has been made to minimize the latter problem by defining localities by size class in the following way, in keeping with most recent United Nations studies.

Locality with 500,000 or more inhabitants=big city

Locality with 100,000 or more inhabitants = city

Locality with 20,000 or more inhabitants= urban locality

Locality with less than 20,000 inhabitants=rural locality

This is not, of course, a complete solution; Nigeria, for example, has habitants with more than 20,000 population but completely rural in character ; but it does go a long way towards eliminating the grosser inconsistencies.

The Northern sub-region is the most urbanized in Africa. All countries on the Mediterranean have between 20 and 40 per cent of their population in towns of 20,000 or more persons. This is not surprising as many North African cities had been centres of trade with non-African countries centuries before the exploration of sub-Saharan Africa. A majority of Central and West African countries lie in the medium range, their urban proportion varying from 5 to 20 per cent. At present, the East, barring Zambia, is the least urbanized sub-region. No sizable East African country has an urban proportion of more than 10 per cent; and even in Zambia the proportion is only about 16 per cent. The remaining African countries do not form a homogeneous group ; there, barring the Republic of South Africa, the level is generally low.

Most African countries have only one or two cities, that is localities with a population of 100,000 or more. Nigeria, South Africa, and the countries of North Africa excepting Sudan have, however, several cities each; in each case, the cities account for at least 10 per cent of the country's population. Taking the proportion of the city to the total urban population as an index of urban concentration, the degree of concentration is found to be generally high; only for Tunisia, Sudan, Tanzania and Zambia, this proportion is less than half; and in no country is the proportion less than one-third.

Rate of growth of population

In Africa the rate of growth was low and steady around 1.5 per cent during 1920-50. For the next two decades, it was as high as 2.3 per cent. The rate has, however, been accelerating, more strikingly during the latter part of the last decade, the average for which is estimated to be 2.8 per cent per year. Africa is amongst the regions showing high rates of population growth. In an estimated annual addition of about 75 million to the world's population. Africa is contributing some 10 million.-

Recent acceleration of population growth is quite a common feature of the African countries. The rate of growth continues, however, to vary widely in response to variations among these countries in the rate of net migration and in the rates of mortality decline.

Components of Growth

Taking the region as a whole, migration would not be as important a factor as fertility and mortality. The critical elements in the rapid growth of Africa's population, and the

resulting age-composition of population, is the balance between levels of fertility and mortality; more crucial of these two components for changes in the age-composition is, however, fertility.

Fertility : General levels

The birth rates generally range from 35 per 1,000 population in Gabon to 61 in Mali. Most of the countries have rates between 43 and 49, the model group being 45-59. Of the twelve high birth rates above 50, nine are recorded for countries in West Africa; this sub-region has a higher level of fertility than the others. The sub-regions are generally homogenous in regard to the fertility measures; the sub-regions do, however, differ in the number of countries not conforming to the average pattern.

Levels of fertility are comparatively low for non-African population groups, e.g., in Southern Rhodesia and South Africa ; and among the African populations, low rates are reported only for some nomadic groups in some parts of Central Africa. The relative infertility among these African groups is due not to adoption of family planning but to medical reasons (including, the effects of peripatetic movements on pregnancies for the nomadic populations), and partly also to social factors. There are, however, reasons to believe that fertility of these groups is likely to increase; important among these reasons are growing sedentarization of the nomadic populations and improvement in levels of living; and also the newer programmes, aided by UN agencies, relating to problems of sterility.

The available data indicate here too that fertility levels are generally higher in rural than in urban areas. Of the six countries for which there are comparable rates, it is only in Zaire that the urban rate (general fertility rate) is higher than the rural rate.

Fertility in monogamous and polygamous unions

Available data indicate that monogamous unions are generally more fertile than polygamous ones and that the fertility rate consistently falls as the number of wives increases. As African countries get more industrialized and polygamous marriages become less common, fertility may rise at least in the short run, unless other factors such as education and the practice of family planning, come into play.

The high rates of polygamy are recorded in West Africa, with Guinea recording the highest rate of 37 per cent; Excluding North Africa, almost all the countries of West, Central, and East Africa have about one-fifth of their men with two wives, except for Guinea and the Republic of Congo where over one-fourth of men have two wives.

Mortality

The crude death rates range among the African countries from 14 in Egypt and Southern Rhodesia to 35 per 1,000 population in Upper Volta. The model group is 20-25.

As many as 14 of the African countries record an infant mortality rate of over 150 per 1,000 live-births. The expectation of life at birth ranges from 27 years in Guinea and Mali to 50 years or more in Egypt, Morocco, and Southern Rhodesia. The available data also

indicate the crude death rates are, as a rule, lower in urban areas than in rural areas, with the only exception of the Central African Republic, where the two rates are the same.

For the region as a whole, the crude birth rate has been estimated by the United Nations at 23 per 1,000 during 1960-1966 ; the implied expectation of life at birth is 40 years. A later estimate of the crude death rate for the period 1965-70 was about 21 per 1,000 population for all Africa as compared to 14 for the world.¹ The slight drop is paralleled by an estimated increase in the expectation of life at birth from 41 years during 1960-66 to 43.3 years during 1965-70. All available indications suggest that the trend of mortality decline will continue in the future; and this, coupled with generally high and constant fertility, raises the problem of rapid population growth.

Migration

The figures available in most cases cover only migrants travelling to and from the countries by air and sea. This limitation of data collection implies for most countries, under-estimation of the volume of migration, as migrants in Africa by and large travel on foot or by road transport across land frontiers. The land frontiers are usually long and points of crossing, numerous, and it is difficult to cover all the routes adequately. In some countries, however, the volume of immigration is indirectly derived from statistics on alien workers. These indicate that net-immigration is consistently shown only by South Africa, Namibia and Mozambique, while net-emigration is recorded for Morocco, St. Helena, Mauritius, Kenya, Zanzibar and Zambia. The flows of both immigration and emigration are appreciable for Libya, St. Helena, Mauritius, Seychelles, Algeria, and Morocco.

The sex ratios of migrant groups indicate male selectivity, while their age distribution shows a concentration in the middle age groups 23-48, with the age group 30-34 usually recording the highest proportion. In general, the percentage of children among migrants ranges between 25 and 30, which is much lower than the corresponding percentage in the total population.²

Growth of urban population

Of greater significance than the level of urbanization here is the rate at which the level is rising. Africa, at present the least urbanized world region, has the highest urban growth rate. In most countries the urban population is increasing at twice, and sometimes as much as 4 or 5 times, the rate for the total population. In general, the population in cities is increasing faster than that in towns. The rate of growth is lowest in the currently highly urbanized sub-regions.

2. POPULATION PROSPECTS

Population projections — total populations

The population projections for the region as a whole according to the "low", "high" and "medium" variants of the United Nations are shown in the following table

Population Estimates and Projections (in millions), Africa

Variants	1970	1975	1980	1985
Low	344	392	448	512
Medium	344	395	456	530
High	346	400	466	549

Source : United Nations, World Population Prospects as Assessed in 1968.

The variants reflect the different assumptions involved concerning mortality and fertility trends. Thus, in 2000 A. D., Africa's total population could be between 734 and 906 million, depending on the actual path of fertility and mortality. The divergence, between the "high" and the "low" estimates, of 172 million, slightly less than half the present population of Africa, shows the difference a very effective population policy could make. For the present purpose, we confine ourselves to implications of the medium variant.

Population Growth

The current estimate of 2.8 for the rate of population growth is based on mortality levels which are higher than, say, Latin America or even South Asia. Anticipating mortality to decrease progressively, unaccompanied by any significant decline in fertility, the medium variant of the United Nations projections implies an increase in the growth rate to 3.0 by the end of this decade. The medium variant projections thus estimate that the present population of Africa would increase by 54 per cent to 530 millions in 1985. By the end of the century, it may reach 818 million, or 137 per cent larger than it was in 1970.

Fertility

The crude birth rate for Africa is expected to decline from the middle of the next decade and reach 38 per thousand near the end of the century as compared to the present level of 47. The level of birth rate in Africa will still be higher than those of other underdeveloped regions and much higher than the birth rates of developed countries.

The prevailing patterns of marriage, particularly the custom of early marriage among many African groups, requires some attention. Raising the legal age at marriage through legislation, education, and training programmes might, in the long run, influence the level of fertility particularly if the timing and tempo of fertility during reproductive span is not altered. About polygamy, it seems almost certain that its decline will tend to depress the fertility level of males, and to increase that of females. The decline of polygamy is likely to speed up on account of education, upward social mobility, urbanization and newer forms of marriage. As against this, factors which depress fertility at present like partial sterility and prolonged breast feeding, might tend to loose force.

That improvement in female social status by education and employment participation is associated with lower fertility is demonstrated by a number of studies in Africa. Such studies show that education and employment outside the home encourage the adoption of small

family ideals and of the means to achieve them. There are, however, some countries, particularly in Central Africa, where the level of fertility is relatively lower, apparently due to poor health and excessive sterility. For these countries, the projections assume an increase in the fertility upto 1985, due especially to improvement in public health conditions.

Mortality

The death rates in Africa are likely to maintain, until the mid-1980's, the present lag of five points behind those of the developing countries. The medium projections imply a death rate of 10 at the end of the century. Life expectancy at birth is estimated now at about 45 years and is expected to improve continuously; the assumptions imply a gradual gain raising it to 58.5 years in 1995-2000.

Dependency Ratios

It is expected that the process of youngening of African populations will continue during the next 15 years or so. The percentage of children below 15 years may reach 45 in 1985-90. The dependency ratio, denned as the combined number of persons of ages below 15 and of those 65 or more, per 100 persons in the working age group of 15-64 is estimated at about 86 in Africa, as also for South Asia and Latin America, as compared to 59 in the developed countries. In Africa alone, this ratio is expected to increase to about 92 in the late 1980's when the corresponding ratio will be 74 for all developing countries taken together.

Working-age population and labour force

In Africa, the working age group is now growing at a slower rate than that of the total population due to sharper decline in mortality for young children. In the evolving situation the growth of the working age group is likely to accelerate and according to the medium projections the annual rate will by the end of the century reach a level of 3.2 as against 2.8 for the total population. The economies of African countries will need to meet the challenge of absorbing the anticipated increase in the working-age group, which may amount to 92 million or 50 per cent, within the next 15 years and 255 million or 140 per cent within the next 30 years, and deal simultaneously with the already existing problems of under-employment, unemployment, and lack of skills. The implications of demographic trends—high fertility with declining mortality — clearly impose a heavy burden in absolute terms in planning for employment, education and training of the work force in a population, which will include a high proportion of young dependents.

Females in reproductive ages

Females in the reproductive ages, 15-44, will experience a gross process similar to that of the working age population. Thus the medium variant increase in the group is about 140 per cent over the next 30 years. In order to counterbalance the effect of this increase on reproduction it would be necessary in North Africa, for instance, to reduce the present fertility rates by roughly 40 per cent in order to have, by the end of the century, the same annual number of births which the region has at present.

School-age population and school enrolment

The rate of growth of this group may reach 3.2 or 3.3 during the decade of the 1980's; the rate may then decline in the 1990's but even towards the turn of century it may still be 2.6. According to these figures, Africa would find it necessary to face, in addition to the educational needs of its estimated 89 million school-age population in 1970, the needs of 54 million new additions between 1970 and 1985 and of another 77 million between 1985 and 2000.

Almost all African governments are spending money on education on an ever-increasing scale. Most governments, however, face difficulties in satisfying the demand for schooling. For Africa as a whole, the increase in school enrolment implied by the "low", "medium", and "high" assumptions is between 225 per cent and 259 per cent over that in 1965. It is likely that the total enrolment will nearly double by 1985, and the educational facilities will be seriously overtaxed by population growth and may not suffice even to maintain in 1985 the 1965 enrolment ratio.

In more concrete terms, an adequate stepping up of the enrolment ratio involves an increase in the gross expenditure on education and in its share of the total national expenditure. The magnitude of the increase will tend to vary according to the rate of population growth as shown by the estimates for Nigeria, where educational expenditure would be 39 per cent less in 1975-76 if the population follows the "low" rather than the "medium" variant.³

Urban population

According to "medium" projections the number of people living in towns of 20,000 or more persons will increase from an estimate of 50 million in 1965 to 100 million in 1980.

Population dependent on agriculture

Food and Agriculture Organisation's estimates and projections of the population dependent on Agriculture anticipate for Africa a decline in the proportion of such persons in the population from 70 per cent in 1970 to 60 per cent in 1985. If the assumptions underlying the projections turn out to be true, the population dependent on agriculture in Africa would increase by one-third during the next 15 years.

Households and Families

An increase of about 52 per cent in the number of households and families during 1970-85 is foreseen for Africa by the medium projections, which is about the same as the percentage in the developing countries as a whole. As might be expected, both the amount and the rate of this increase are only slightly higher than those of the working age population. The conspicuous aspect of the projections for Africa is that the average size of households is expected to increase, albeit slightly, contrary to the universal decreasing trend in other areas of the world. This reflects the increase in the number of children due to improvement in mortality which is not offset by fertility decline or changes in socio-economic factors affecting household size during 1970-85.

3. DEMOGRAPHIC CONTENT. OF AFRICAN DEVELOPMENT PLANS

Against this background, we briefly refer to the review, by the EGA Secretariat, of the demographic contents of the African Development Plans, in order to indicate the extent to which these plans take the population factor into account.

Population Size

Some African Plans, such as Somalia and Ethiopia, do not consider it to be a problem for development, and imply indirectly a desire for bigger populations for three main reasons : existing low densities, need to provide ready market for their home production and adequate labour for development projects. In Cameroon, in view of the smallness of the population, the Government has 'no intention to take any action for decreasing population growth until the population reaches 15 million. A few countries have, however shown in their plans a desire for rates of population growth lower, than anticipated in plan projections.. Foremost among these are Kenya, Mauritius, Tunisia, and Morocco Their plans emphasize the welfare of the individual and the family; adequate maternity; care for ensuring better health to mothers and for the lowering of infant and child mortality' family costs on the education of children ; shortage of housing, water and food supplies; and the need of increasing savings.

Education

One topic to which African development plans have given great attention and on which all African governments are spending large sums of money is the provision of educational facilities. Many governments do so because of the pressing need for trained manpower and also because educational achievement is desirable by itself. Apart from countries with population policies, the Central African Republic and Upper Volta show in their plans an increasing concern with this problem.

Migration

Another problem attracting attention in African plans is the high rate of rural-urban migration. Here, all plans try to make special provisions for employment, health, education housing, transportation, etc. in the urban areas, simultaneously making provision for better facilities in the rural areas with a view to counteracting the effects of rapid urbanization and holding rural-urban migration in check. These are especially highlighted in the development plans of Nigeria, Uganda, Mauritania, the Central African Republic, Ivory Coast and Gabon.

With regard to international migration, many governments have had to adopt in the last two to three years, measures of reserving jobs for nationals and of expelling non-nationals engaged in replaceable jobs. Principal among these countries are Ghana, Zaire, Sierra-Leone Guinea, Kenya, Uganda, and Tanzania. Some Governments are also attempting through bilateral agreements, to regulate the flow of migration.

Manpower and Employment

All development plans in Africa give particular attention to the question of employment and manpower. The plans stress the need for trained manpower to replace the expatriates. The education programmes in many countries are geared especially to expansion of higher

education to meet this need. Plans usually include estimates of the labour force and employment opportunities for the plan period; and some include detailed projections of the labour force. These estimates and projections help to make the Governments aware of the extent of the problem. Uganda's First Five Year Plan, for instance, notes that while the population was growing annually at 2.5 per cent, wage employment, which had increased at an annual rate of 1 per cent in the 1950's, recorded a fall in absolute terms during 1960-62, the fall being 11 per cent in 1961-62. Similar expressions of concern are found in the plans of Mauritius, Morocco, and Ghana. Ethiopia's Second Five-Year Plan, on the other hand, is not perturbed by the high rate of population growth. The plan only mentions that wage employment had increased from 18,700 to 27,600 during the first plan and is expected to increase further by 5,900 in the second. It does not compare this with the likely increase of labour force during the plan period, and so fails to indicate the extent of the problem involved.

Fertility and Mortality

No topic seems to be more neglected in African plans than that of fertility and mortality. High fertility accompanied by declining mortality is causing rapid population growth, leading to high proportions of children in the populations, high dependency ratios, and consequent high expenditures on education, health, housing, etc. In most plans, expenditure on health facilities is quite heavy. Tanzania's aim is to increase the life expectancy from the present 35-40 years to 50 years by 1980. Gabon's health programme (1966-1971) aimed at organisation of health services covering practically the whole population and paying particular attention to the protection of infants. Barring exceptions, fertility has received little attention in the development plans. Notable among the countries which have considered the issue are the eight countries with family planning policies, viz. Egypt, Ghana, Kenya, Mauritius, Morocco, Tunisia, Botswana and Nigeria.

There is no doubt, however, that African planners are aware of the effect of population-growth on economic development. All things being equal, the higher the rate of population growth the greater the investment required in social and economic overheads, merely to maintain the same basic services and standards for increased numbers. The Alice-through-the-Looking-Glass-World situation in which most African countries are now placed is described aptly in the plan of Uganda: "Uganda must keep moving in order to stay in the same place". In all the plans reviewed by the EGA Secretariat, there is a stress on the fact that economic growth has to be higher because of the high rate at which population is growing. Examples, other than the eight countries with population policies, are found in the plans of Sudan, Zambia, and Madagascar.

4. APPROACH TO AFRICAN POPULATION PROGRAMMES AND POLICIES

Consideration of population problems of African countries has progressively increased and several studies have been completed under the auspices of the United Nations, particularly the Economic Commission for Africa. Conclusions of these studies are relevant in the present context and we may sum them up here as shown below.

1. Given even fairly optimistic estimates of future output and investment resources, it might still be very difficult to achieve goals of providing jobs, education, public health, etc., if the population growth rate remains high.

2. At the same time, a lower rate of population growth will not necessarily 'buy' social and economic development. Other variables and constraints are: effective use of available natural resources, labour and capital, export prices and import costs, which are all inter-linked in these areas.

3. Studies focussing on nutrition and child health reveal extremely high susceptibility to chronic and infectious diseases and low physiological and intellectual development of children. These studies stress the importance of maternal and child health programmes as an integral part of family planning. Nutrition is a problem of paramount importance both at micro and macro levels.

4. The rate of growth of population, rather than its size, is more relevant in development planning. The complexity of the overall economic and social situation in Africa indicates that development needs to be based not only on the efficiency of investment programmes but also on basic structural changes occurring within the society. This emphasises that although reduction in population growth may release investment resources, this will not by itself speed up the development process without concurrent transformation of social structure.

5. Any population policy to be viable and effective must be coupled with economic and social policies aimed at improving life in all sectors of the population.

6. Social and economic problems resulting from this rapid increase of population have their major roots in inadequate development of economic resources; unsatisfactory utilisation of the resources in use; and social structure and constraints. Hence, the importance of undertaking, simultaneously with attempts to restructure economy, social reforms and measures to keep the growth of population within limits that the economy can sustain without adversely affecting the standard of living and the quality of life.

Finally, it may be noted that, from the experience of planning and from the studies undertaken so far, a general consensus is emerging that the family planning to be effective must discard the uni-dimensional approach of offering family planning services only. The relationship of family planning to all aspects of life must be recognised so that the programmes can find their place and function within the existing services and institutions such as the maternal and child health services, educational services, and rural extension activities. The growing philosophy about family planning practice has been its integration with health services. It has been followed in many countries where clinics have been established, and the more common form of integration has been with maternal and child health services.

The Accra Conference of African demographers adopted a resolution which reflects the conviction that economic and social development is an essential element of, and a prerequisite to, effective population policy and urges the member states to give full attention to demographic objectives; to take steps for improving demographic statistics, research and planning machinery, needed for development of population policies and programmes; and to cooperate in achieving a substantial reduction in the rates of growth in countries where this is warranted. The Conference specified the demographic objectives to be : (a) reduction of mortality and infant mortality in particular, (b) fertility regulation including high fertility as well as sub-fecundity and sterility, (c) moderation of population growth where it is high,

(d) improvement in distribution of population, especially between sub-national areas, and between big cities, small towns and rural areas, (e) under some circumstances, emigration of population and of labour force as appropriate, and (f) measures of improving the structure of population, particularly the ratio between economically active and dependent population.

References

- 1 UN Population Division, *World Population Projections, 1965-85*, as assessed in 1968.
- 2 *Demographic Handbook for Africa*.
- 3 C. Okonjo, "Population Dynamics and Nigerian Development", African Population Conference, POP, CONF. 1,5.