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**SOCIO-ECONOMIC AND DEMOGRAPHIC CONSEQUENCES OF
POPULATION AGE STRUCTURE IN ECA MEMBER STATES**

INTRODUCTION

1. The three major demographic components of fertility, mortality and migration are the determinants of population change. Therefore demographic structure and its growth are determined by the variation in the processes of fertility, mortality and age composition¹. African populations, apart from sporadic refugee movements, are largely closed to effects of international migration.
2. The fact is that awareness of population matters such as its demographic structure, rate of growth and levels of fertility and mortality among ECA member states is almost unanimous. For example about sixty percent of countries in the region considered the rate of population growth as unsatisfactory because it was very large. The level of mortality as measured in terms of life expectancy was considered to be not acceptable because life span was very short in about 94 percent of the countries in the region. Fertility level was not satisfactory because it was too high in almost 60 percent of the countries.²
3. Therefore these unanimous views of governments provide strong evidence of existence in similarity of patterns of population growth rates and demographic structures of their populations. African population profile is therefore characterized by high levels of fertility and mortality in the whole region. Some differentials do exist, but these are minimal between various countries. It is likely that eventually formulation and implementation of common population policies designed to reduce levels of fertility and mortality would influence existing demographic structures. The Kilimanjaro Programme of Action for African Population and Self-Reliant Development and the Dakar/Ngor Declaration have strategies that would influence changes for socio-economic development. For example family planning and maternal child health programmes are the case in point.³
4. The existing demographic profile in the Africa region is characterized and associated with higher rates of mortality and fertility levels on one hand, with comparatively lower levels of social and economic development. For example the GDP, despite its numerous limitations as a measure of development, suggests that African countries are associated with low per capita income that the majority of African countries belong to the group of the Least Developed Countries (LDC).
5. In this paper an overall analysis has focused on population structure, its growth components of fertility and mortality, age distribution structure and dependence. The synthesis of consequences of population and socio-economic development have also been deduced. The

¹ G.W.Barclay, Techniques of Population Analysis, John Wiley & sons 1958.

² UN, Results of the Sixth Population Inquiry Among Governments, New York 1990, World Population Policies Volumes I,II and III,New York,1989.

³ ECA, Kilimanjaro Programme of Action for African Population and Self-Reliant Development, Arusha, Tanzania, 9-13 January 1984.

data used come from population projections prepared recently⁴. These data are not the best available because of their underlying assumptions, therefore one needs to be cautious to interpret its results.

6. The first part presents an analysis of population growth, fertility and mortality. Factors of demographic structure, like age distribution, its dependence and ageing including median ages have been presented in part two. Population and development implications are discussed in the third part. The last part synthesizes the discussion of the arguments.

1. Population growth, fertility and mortality.

7. During the period when both fertility and mortality levels are very high, the rate of growth of population becomes relatively very small. It gradually increases once mortality level declines faster than level of fertility which might remain high and constant. The state of zero growth of population would exist only if the level of both fertility and mortality remain equal. The negative growth of population would occur if level of fertility is lower than that of mortality. These processes form part of stages of demographic transition.⁵

8. In Africa, the rate of growth of population is largely a result of continuing high levels of fertility and declining mortality. This situation has particularly existed since the 1950s perhaps indicating that demographic transition in Africa remains in its initial stages. The data in Table 1 present population growth rates in the region.

Table 1. Population growth rates among sub-regions of ECA member states since 1950

	1950	1960	1970	1980	1990	2000
Eastern	2.3	2.7	2.7	3.0	3.3	3.2
Middle	1.8	2.1	2.7	2.9	3.1	3.3
North	2.3	2.4	2.4	2.8	2.5	2.2
South	2.3	2.6	2.4	2.3	2.3	2.1
Western	2.3	2.7	2.9	3.1	3.2	3.1
ECA	2.21	2.53	2.06	2.94	3.02	2.89

9. Population growth in the ECA member is generally high because of high levels of fertility

⁴ UN, World population Prospects 1990, New York 1991.

⁵ UN, The Determinants and Consequences of Population Trends, Volume I, pp 58-63, New York 1973

and declining mortality. According to estimates and projections for ECA member states, the rate of population growth was 2.21 percent in 1950. It increased gradually from that level to 2.53, 2.66, 2.94 and 3.02 for 1960, 1970, 1980 and 1990 respectively. The estimated rate of growth for the year 2000 is below that of 1990, at about 2.9 percent.

10. Data in Table 2 presents recent estimates of crude fertility rates for various countries in different sub-regions of the Commission.

Table 2. Crude birth rates among different sub-regions of ECA member states

	1950	1960	1970	1980	1990	2000
Eastern	50.5	49.9	49.1	48.2	47.9	43.5
Middle	46.3	46.2	46.1	45.5	45.6	43.1
Northern	48.9	47.5	43.0	40.1	34.3	28.9
Southern	43.7	42.4	37.3	34.6	32.2	28.4
Western	50.6	50.9	49.2	48.6	46.9	43.1
ECA	49.2	48.7	46.6	45.3	43.5	39.5

11. In the whole region as data above show, fertility remains high and it has changed only slightly since 1950s. The CBR which was estimated at 49.2 live births per 1000 population in 1950 has declined gradually since then and by 1990 it reached about 43.5 and it will be 39.5 by the year 2000.

12. Another demographic feature of ECA member states is the presence of high levels of mortality in the region. Table 3 presents estimates of crude death rates.

Table 3. Estimates of crude death rates among different Sub-regions of ECA member states.

	1950	1960	1970	1980	1990	2000
Eastern	26.9	23.7	20.1	18.3	14.6	11.6
Middle	28.2	24.4	20.7	17.6	14.5	11.6
Northern	24.7	20.6	16.6	12.6	9.4	7.3
Southern	21.0	17.3	14.0	11.4	9.0	7.2
Western	28.4	24.7	21.1	17.9	15.0	12.1
ECA	26.9	22.9	19.2	16.4	13.2	10.6

13. The CDR for example, was estimated at 26.9 deaths per 1000 population per year, in 1950. Estimates of CDR are 26.9, 22.9, 19.2, 16.4 and, 13.2 respectively for 1950, 1960, 1970, 1980 and 1990. It will be about 10.6 by the year 2000.⁶

14. These estimates should be interpreted cautiously because of underlying assumptions. However, data represented levels of mortality of the order of three times as severe as for more developed countries at that time. As a result, efforts have since been taken up to design programmes intended to reduce high levels of mortality. Hence the observed declining pattern since 1950s. By 1990 the level of fertility was more than thrice that for developed countries. These high rates of population growth reflect existence of high levels of fertility among people in the region. It is therefore apparent that in ECA member states levels of fertility are still associated with natural fertility practices⁷.

15. Regional Differentials for fertility and mortality do exist among countries in Africa. Levels of fertility are highest in Eastern and Western Africa and lowest among countries in Northern and Southern Africa. Middle or Central Africa countries have intermediate levels of fertility. Provision of other social amenities including utilization of family planning programmes appear to have contributed to influence mainly in Northern and Southern Africa. Conditions of mortality varied significantly. Estimates of CDR were highest in Western and Middle Africa and relatively lowest in Southern and Northern Africa. However, it is estimated that by 2000 variation will be minimal among the sub-regions, but conditions of mortality would remain to be most severe in Western Africa. Data in tables above do illustrate these factors. Table 4 below confirms and strengthens these differentials as illustrated by estimates of life expectancy at birth.

Table 4. Estimates of life expectancy at birth among different sub-regions of ECA member states

	1950	1960	1970	1980	1990	2000
Eastern	37.0	41.4	45.4	47.9	52.9	57.0
Middle	35.8	39.4	43.5	47.6	52.0	56.2
North	41.9	46.4	51.3	56.6	61.4	65.6
South	43.9	48.9	53.1	57.3	62.2	66.5
West	35.1	38.8	42.7	46.7	50.8	54.9
ECA	37.7	41.8	45.9	49.6	54.1	58.1

16. The results of the reduction in mortality since 1950 has been the steady gain in number

⁶ UN, *op.cit*, 1990

⁷ UN, *op.cit*, 1990

of years of life expectancy at birth. It increased from 37.7 years in 1950, to about 50 years in 1980 and it has been estimated to be just less than 60 years by the year 2000. However, sub-regions like Northern and Southern Africa which had life expectancies of greater than forty years in 1950 will attain life expectancies of greater than 60 years by the year 2000. Western Africa would remain to lag behind all other sub-regions in its levels of mortality and perhaps efforts to improve its conditions⁸. Thus many countries will not achieve soon the targets set in the World Population Plan of Action.

17. The result is the rapid growth rates because of high levels of fertility and mortality, which are exclusive to Africa. Therefore demographic structure will remain to be dominated by the young age and will largely remain to determine structure of population which will be dominated by young age.

2. Population Median Age, Distribution, Structure, Dependence and Ageing

A. Population Median Age

18. The median age of population is also a measure of ageing in a population. Median age trends show that African population has been growing young during the period between 1950 and beyond. The median age reduced from 18.6 years in 1950 to 18.1 in 1960, 17.6 in 1970, 17.5 in 1980 and 17.4 years in 1990. The median age is expected to start rising and will reach 17.7 by 2000. As expected median ages for Northern and Southern Africa kept increasing while elsewhere they reduced. Thus ageing in Africa will begin in these two regions because of lower levels of fertility and higher proportions of working age and those 65+ of age. By the year 2000 median age for more developed countries would have reached 35.5 years which is twice as much for Africa. Therefore the population of ECA member states will still be of very young age because of high levels of fertility. However, further demographic research about changing structure of African population is needed.

⁸ UN, op.cit, 1990

Table 5. Distribution of median age by region for period between 1950 and 2000

	1950	1960	1970	1980	1990	2000
Eastern	18.1	17.7	17.1	16.7	16.4	16.3
Middle	19.4	19.0	18.5	17.6	17.2	17.0
Northern	19.3	18.4	17.6	18.5	19.1	20.6
Southern	20.6	19.6	19.1	20.0	20.9	21.7
Western	17.9	17.7	17.2	16.9	16.6	16.6
ECA	18.6	18.1	17.6	17.5	17.4	17.7

19. The proportions of broad age groups 0-14, 15-64 and 65+ provide better knowledge about structure of population. Between 1950 and the year 2000, child population remained high and increasing slowly from 42.5 percent in 1950 to 45.0 percent by 1990 and it will drop slightly to 44.4 percent by 2000. Similarly, working age population dropped gradually from 54.2 percent in 1950 to 52.0 percent in 1990 and increasing barely to 52.6 percent by 2000. The population among people aged 65 and above remaining almost constant at about 3 percent between 1950 and 2000.

B. Population Age Structure

20. The African age structure is largely determined by fertility and mortality because effect of migration is negligible in the region as a whole. Furthermore African age structure facilitates many kinds of demographic research and analyses. However its structure has the largest proportion of child population at the base because of high fertility in Africa.

21. The interrelationships of both fertility and mortality on the African age distribution is demonstrated by estimates and projections, thus one should be cautious in interpreting these results. Age distribution of population changed only slightly between each of the ten year periods between 1950 and the year 2000. Table 6 presents estimates of proportions of young age distribution.

Table 6. Percentage distribution of age group 0-14 years for different sub-regions of ECA member states.

	1950	1960	1970	1980	1990	2000
Eastern	43.6	44.6	45.7	46.3	47.1	47.2
Middle	41.2	42.1	43.1	44.8	45.5	45.9
Northern	41.3	43.5	44.6	42.7	41.5	38.0
Southern	39.1	41.2	41.5	39.4	38.4	37.1
Western	44.2	44.5	45.6	46.0	46.8	46.6
ECA	42.5	43.7	44.8	44.7	45.0	44.4

22. The age structure of population varied significantly among the different five sub-regions. The proportion aged 0-14 was highest in Eastern and Western Africa where it reached at about 47 percent, by 1990. The lowest was in Northern and Southern sub-regions. The working age proportion of population was highest in Northern and Southern sub-regions especially for the 1980, 1990 and 2000 periods.

23. The working age population relatively declined in Eastern and Western sub-regions as well as in Middle Africa. The number of persons aged 65+ showed an increasing trend in Northern and Southern Africa. In other sub-regions particularly Eastern and Western Africa, the proportions of older people declined⁹. Table 7 presents proportions of working age group.

Table 7. Percentage distribution of working age group 15-64 years for different sub-regions of ECA member states.

	1950	1960	1970	1980	1990	2000
Eastern	53.3	52.6	51.5	51.0	50.2	50.1
Middle	55.0	54.7	53.8	52.2	51.5	51.1
Northern	55.2	53.2	51.5	53.6	54.9	58.6
Southern	57.3	55.0	54.8	56.7	57.5	58.6
Western	53.1	52.9	51.8	51.4	50.5	50.7
ECA	54.2	53.2	52.1	52.3	52.0	52.6

⁹ UN, *op.cit.*, 1990

24. The rise in proportion of older people in Northern and Southern Africa is indicative of a demographic process of ageing being a result of declining levels of fertility and rising life expectancy.

25. The increase in proportion of working age groups in both sub-regions is also a feature of ageing because it is the adjacent to older population. Table 8 has estimates of proportions of older population in various countries of the ECA.

Table 8. Distribution of proportions of estimates of age group 65 + years for different sub-regions of ECA member states.

	1950	1960	1970	1980	1990	2000
Eastern	3.1	2.8	2.8	2.7	2.7	2.7
Middle	3.8	3.2	3.1	3.0	3.0	3.0
Northern	3.5	3.3	3.9	3.7	3.6	3.8
Southern	3.6	3.8	3.7	3.9	4.1	4.3
Western	2.7	2.6	2.6	2.6	2.7	2.7
ECA	3.3	3.1	3.1	3.0	3.0	3.0

C. The Labour Force

26. In demographic terms, the working population aged 15-64 is expected to provide economic support to the young and old population. The dependence ratio therefore measures the extent of dependence in the population. Among the ECA member states, the total dependence ratio has been rising since 1950. It was 84.5 percent in 1950, rising to 91.9, 91.6, 92.5 and 90.3 respectively in 1970, 1980 and 1990. The data suggest a possible decline will be observed by 2000 when it will be 90.3. During the same period child dependence ratios also increased. However it will drop from 86.7 in 1990 to 84.4 by 2000, according to available data. Therefore an economically active person in Africa has himself and another person to look after, indicating presence of large child population.

Table 9. Total, Child age and Old age Dependence Ratios among different sub-regions of ECA Member states.

a. TOTAL DEPENDENCE RATIOS

	1950	1960	1970	1980	1990	2000
Eastern	87.5	90.4	94.0	96.4	99.5	99.4
Middle	81.8	82.9	85.8	91.6	94.0	95.9
Northern	81.0	87.8	94.1	86.5	82.0	71.9
Southern	74.4	81.8	82.5	76.2	73.5	70.6
Western	88.2	89.1	92.8	94.5	97.8	97.5
ECA	84.5	87.9	91.9	91.6	92.5	90.3

b. CHILD AGE DEPENDENCE RATIOS

	1950	1960	1970	1980	1990	2000
Eastern	81.8	85.0	88.6	91.1	94.0	94.0
Middle	74.9	77.0	80.0	85.9	88.1	90.1
Northern	74.8	81.7	86.5	79.6	75.5	65.3
Southern	68.1	74.9	75.7	69.3	66.5	63.2
Western	83.0	84.2	87.8	89.4	92.5	92.1
ECA	78.6	82.3	86.0	85.8	86.7	84.4

c. OLD AGE DEPENDENCE RATIOS

	1950	1960	1970	1980	1990	2000
Eastern	5.7	5.4	5.4	5.4	5.5	5.4
Middle	6.9	5.9	5.8	5.7	5.8	5.9
Northern	6.3	6.1	7.6	6.9	6.5	6.6
Southern	6.3	6.9	6.8	6.9	7.0	7.4
Western	5.2	4.9	5.0	5.1	5.3	5.4
ECA	5.9	5.6	5.9	5.8	5.8	5.8

27. Because of low level of development and lack of job creating opportunities, most African countries have very low crude activity rates. For example, the activity rates for 1989 for both sexes were less than forty percent for the whole Africa region at 37.90 percent. The highest was in Eastern and Southern Africa with 43.06 percent followed by Central Africa at 40.54 percent. The lowest was in North Africa at 27.96 percent. However, these activity rates are higher for males than females, which implies that there are more males than females actually working in all sub-regions in Africa¹⁰. This is another population structure characteristic of less developing countries of Africa.

28. Dependence ratios varied between different sub-regions. They are directly linked to levels of fertility. Thus Eastern and Western Africa had highest dependence ratios which rose to about 100 by 1990. Both Northern and Southern Africa, with relatively lower levels of fertility had comparatively smaller dependence ratios than Eastern, Western or Middle Africa.

3. Population and Socio-economic Development.

29. During the latest population inquiry among African countries nearly all of them cited rapid population growth as a major obstacle to their development process. For many countries, the rapid rate of population growth was an obstacle to improving upon socio-economic status by raising the standard of living and therefore increasing the life expectancy of people in their countries. Development would therefore change demographic structure and its growth. For example, about 68.5 percent of governments that responded to the inquiry stated that they had a policy of integrating population variables into development process.

30. Other measures of achieving socio-economic development were the efforts taken to restructure their economies and political institutions by putting emphasis on rural development and democracy. In this region the concern shown by many governments was the high influx of people from rural to urban areas, a process that has altered distribution pattern of population of most ECA member states. The high rates of urbanization in many countries has contributed to slackening of agriculture and manufacturing so much so that they are dependent on imports. The share of agriculture to the GDP is varies significantly among African countries. Generally, the least of the less developing countries are associated with a greater percentage of GDP from agriculture. For example, the share of GDP from agriculture was as low as 12.7 percent in Zimbabwe followed by Zambia at 14.6 percent. The highest share was in Tanzania where agriculture contributed about 62.9 percent to the GDP, followed by Equatorial Guinea with 45.4 percent and Ethiopia with 43.1 percent. A similar deduction is that countries with a larger share of GDP from agriculture had comparatively low per capita income and therefore such countries were relatively less developed in terms of socio-economic advancement. The GDP for Tanzania was only US\$ 110 of which 62.9 percent was from agriculture compared to Zimbabwe with a

¹⁰ ECA, African Socio-economic Indicators, 1989, p14, Addis Ababa 1992

GDP of US\$ 631 whose 12.7 percent came from agriculture ¹¹. It may be necessary to repeat here that GDP is not the best comparative indicator of socio-economic development between countries.

31. Contraception has been recognised as one of means to reducing fertility hence growth rates. However, ECA member states have very low rates of contraceptive usage. Despite the improvement in knowledge, contraceptive prevalence remain lower in sub-saharan Africa than elsewhere.¹² Family planning programmes together with those of maternal and child health would be necessary in order to contribute to socio-economic development of ECA member states. Reduction of high levels of fertility and mortality would set the way to development for benefit of the people like improved standard of living and increased life expectancy.

CONCLUSION

32. The demographic structure and its rate of population growth in ECA member states has for the past half a century been associated with high and constant levels of fertility. These high levels of fertility of 6 or more children per woman exist in populations that do not practice modern methods of contraception. Therefore efforts should be mounted and directed at influencing the reduction in levels of mortality particularly among infants, children and their mothers in order to bring about reduction in levels of fertility and changed structure.

33. The demographic structure of population in ECA member states appears to be still far from the entering initial stages of processes of demographic transition. Therefore ageing among ECA member states will start only when life span increases significantly and majority of population are contracepting. Social and economic development programmes designed to reduce fertility and mortality like packages of family planning with maternal and child health, provision of education especially for girls, employment and social security as well as enhancing status of women would contribute to changing demographic patterns and rates of growth of population in the ECA region. Although the ageing process is not an issue for the African countries, the expanding numbers of old people require attention of protection by communities and their governments.

¹¹ ECA, Correlation of changing Infant and Child Mortality and Fertility in relation to Development programmes in selected ECA Member states. Addis Ababa 1993

¹² ECA, Strategies to improve Contraceptive use to influence Demographic trends in African countries, ECA/POP/TP/92/1(2(b)), Addis Ababa, 1992, UN, Concise Report on the World Population Situation in 1991, New York 1991.