2020

United Nations
Economic Commission for Africa

Distr.: LIMITED
ECA/WA/TT&EGM/2020/1a
Document: English
Original text: English

Population Dynamics, Demographic Dividends and Sustainable Development in West Africa

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Background document of the meeting of think tanks and experts on Generational economy and structural transformation in West Africa

Contents

I. Introduction

1. The world population estimated at 7.79 billion in 2020 has more than tripled from the number reported in 1950 which was 2.5 billion people. This rapid and marked increase in global population poses a serious challenge of how to continuously secure food, water and other natural resources vital for human life and the future of the planet. Since the highest level of annual population growth of 2.1% in 1962, the evolution of world population decreased significantly with annual growth just over 1%. Despite this significant rate of decrease in the world population growth, there is still an additional 80.7 million individuals added to the world population in a year and the 10.9 billion people expected by 2100 will exacerbate humanity's impact on the environment.

2. However, the impact of population growth is not felt uniformly across the world because there exist significant differences between world regions and countries. Asia and Africa will represent 80% of the world population by 2100. But the two regions will take very different paths in the following years since Asia will see a substantial decline in the share of the world population from 60% today to 40% in 2100 while African population will soar from 17% of the global population today to 40% by 2100.

3. The problem of population growth is particularly acute in West Africa. The sub region's population growth rate is estimated at 2.6% in 2020, more than double the global rate of 1.04%. West Africa is faced with many demographic issues that may impede economic development. In comparison to other world's regions, West African countries show unique demographic patterns representing challenges and opportunities. West African countries have some of the highest population growth rates in the world, especially Nigeria that has the largest population on the continent and is now confronted with a population bulge. Despite a similar pattern of a huge decline in mortality rates around the world, the global trend masks disparities between West African countries and other regions. In West Africa, child mortality in 2020 is 85 per 1,000 live births, more than double the world average (37.57) and more than triple the under 25 deaths per 1,000 live births target set by the SDG goal 3.2.

4. With the considerable drop in mortality around the world, fertility rates remain an effective way to decelerate the rapid population growth. Although, there has been a decline in total fertility rate in West Africa where the average children per women is 5 children in 2020 and total fertility rates are projected to remain among the highest in the world with a prevalence of a long period of stagnation.

5. Consequently, demographic transition occurs at a slow pace in West Africa. While demographic transition is likely to occur in every country, accelerating its arrival and realizing the full scope of any potential associated with demographic dividend will depend largely on policy choices to steer the process. In effect, the second phase of transition characterized by a growing working age population compared to the child population growth is beneficial to the economy through a reduction of the dependency ratios.

6. Age structure transition poses significant opportunities and risks. On the one hand, the rising proportion of youth population can contribute to rapid economic growth if they are highly skilled and

employed in decent jobs. On the other hand, when a large youthful population is unskilled and unemployed, these jobless youths are likely to become an impediment to sustainable economic growth, social cohesion and secured environment. Unlike other regions of the world facing ageing population, West Africa would still have a large working population that, if well harnessed, would increase the productive capacity of the region with enormous demographic dividend.

7. At the same time, there is a pessimistic view about the capacity of West African countries to take advantage of the demographic dividend. A large proportion of youths can be a starting point for countries to create and harness demographic dividends. However, if human capital development is low and youths do not have access to decent employment, the dividends can remain a mirage and difficult to achieve. That is the reason why investments in education, health and the promotion of good governance policies are critical to an enabling environment for a demographic dividend.

8. Also, the extent to which countries are resilient to negative shocks to their economies is important. With respect to adverse shock, the socio-economic challenges posed by the current covid-19 crisis are likely to delay demographic dividends for years. These challenges are manifold including disruption to education and erosion of human capital, job losses and reduced working hours, worsening gender inequality and rising unemployment for women, deterioration in fiscal balances, weakening of foreign and domestic demand, contraction in trade and FDI.

9. The growing population in West Africa also poses a serious challenge to the realization of the Sustainable Development Goals (SDGs). Africa Agenda 2063 aspirations and the global 2030 Agenda for Sustainable Development offer a unique opportunity for Africa to achieve inclusive, transformative and sustainable development. The main objective of the SDGs endorsed by world leaders in 2015 is to "**leave no one behind**". Incidentally, the rapid population growth rate in West Africa is a major factor that can hinder a large proportion of the population from contributing to and benefitting from the development process of the region, especially if it is combined with rising youth population that are unemployed.

10. The COVID-19 crisis is expected to weigh heavily on growth prospects with the consequence that 71 to 100 million people will be pushed into extreme poverty with the majority living in African countries (Lakner et al. 2020). For many African countries, the COVID-19 pandemic will exacerbate existing challenges and make the SDGs more difficult to achieve.

11. The process for achieving the goals expressed in the two agendas needs a better understanding of the population dynamics in West Africa, the key drivers of population growth, and the potentials of the human capital embedded in the population. This is the broad objective of this study seeking to understand how demographic factors shape West African economic growth, how these factors influence sustainable development and how they can help to achieve the sustainable development goals by 2030.

12. In what follows, Section II presents the demographic dynamics in West Africa and explores demographic drivers of population change including fertility rates, natural increase rate, age structure, transition and migration. Section III investigates demographic dividend in West Africa by using the National Transfer Accounts (NTA) methodology which is one of the powerful tools for assessing and quantifying demographic dividends. Section IV discusses issues surrounding the three pillars of sustainability in West Africa. An assessment of the progress of West African countries in achieving the different Sustainable Development Goals is also presented. The last section summarizes the key findings of the study and provides policy recommendations.

II. Population Dynamics in West Africa

13. We present how population has changed over decades in West Africa and explore the main demographic drivers of population including the live births per woman, the number of deaths and births, and the age structure of the population.

A. Population size and growth rates

14. West Africa is one of the fastest growing sub-regions of the world. Unlike many regions of the world where population is decreasing, West Africa is witnessing rapid increase in its population. According to United Nations (2019), the population of West Africa is estimated to reach 402 million in 2020, accounting for 5.1 percent of world population and 30 percent of Africa's population. Population size varies across West Africa. Nigeria has the highest population accounting for 51.3 percent while Cabo Verde has the lowest population in the subregion, with 556,000 people, representing 0.14 percent of the population in the subregion. Nigeria is projected to move from being the seventh most populous nation in 2019 to the third most populous nation in the world by 2050 according to the UN World Population Prospects Report (2017). In terms of population size, Ghana and Cote d'Ivoire are ranked as the second and third largest countries in the sub-region with over 31 million and 26 million people, respectively. But the share of the two countries' population in West Africa does not exceed 15%, far below the share of Nigeria's population.

Figure II-1a Population in West African countries, 2020

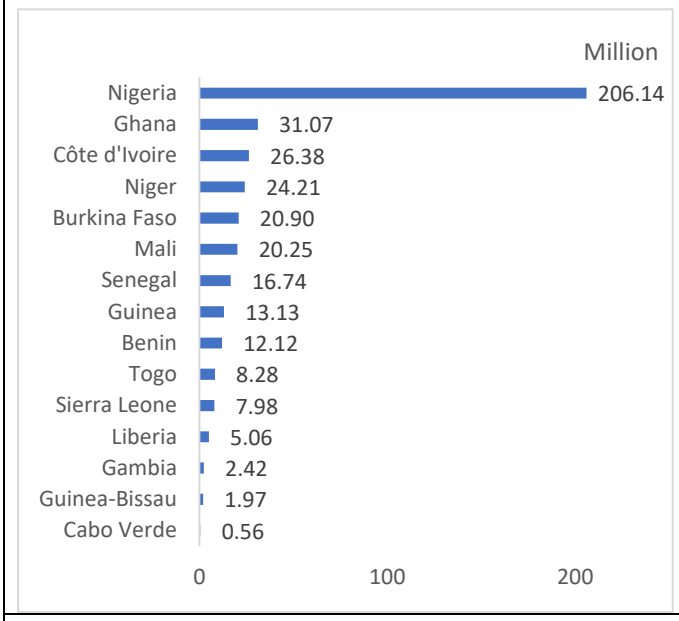
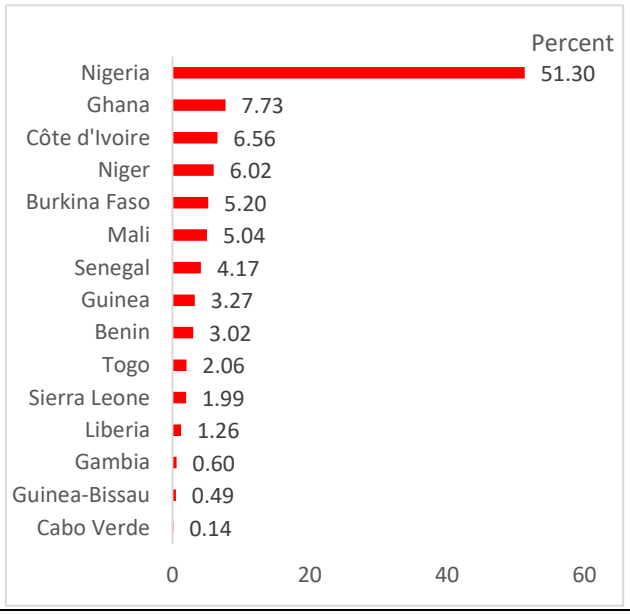


Figure II-1b Percentage share of population in west Africa, 2020



Source: ECA calculation based on World Population Prospects 2019

15. Population in West Africa is even growing more rapidly than the world's highest rate of growth in 1962 (2.1%). In 2020, West African population growth estimated at 2.6% exceeds Africa's growth rate (2.44%) and more than doubled that of the world (1.04). But there is a slow but steady decline in population over the years. Figure II-2b shows the population growth profiles of all the countries in West Africa. Overall, Sahel countries tend to have a higher population growth rate. While the growth rate of the population in Cabo Verde has reduced to well below the replacement-level fertility of 2.1, Niger has a growth rate of 3.82, one of the highest in the world. This is due largely to the stall in fertility decline in the country.

Figure II-2a Evolution of population growth (1950-2100)

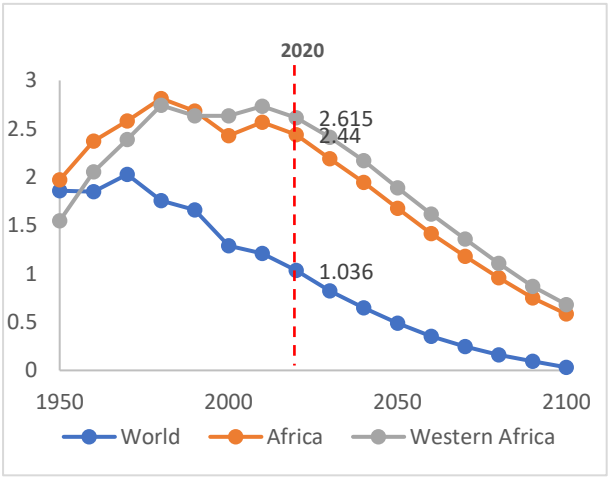
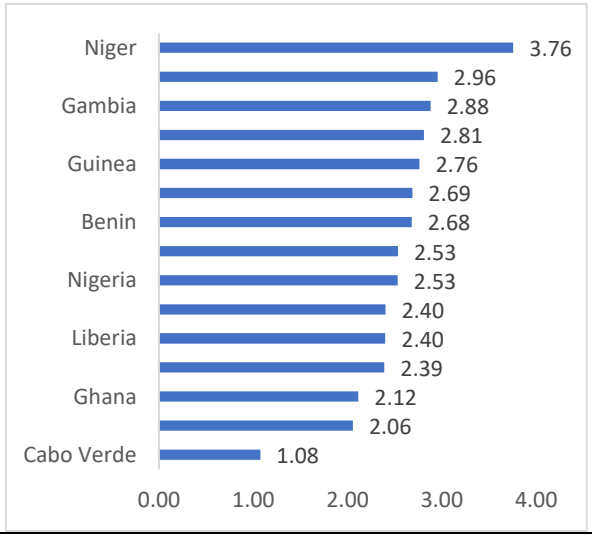


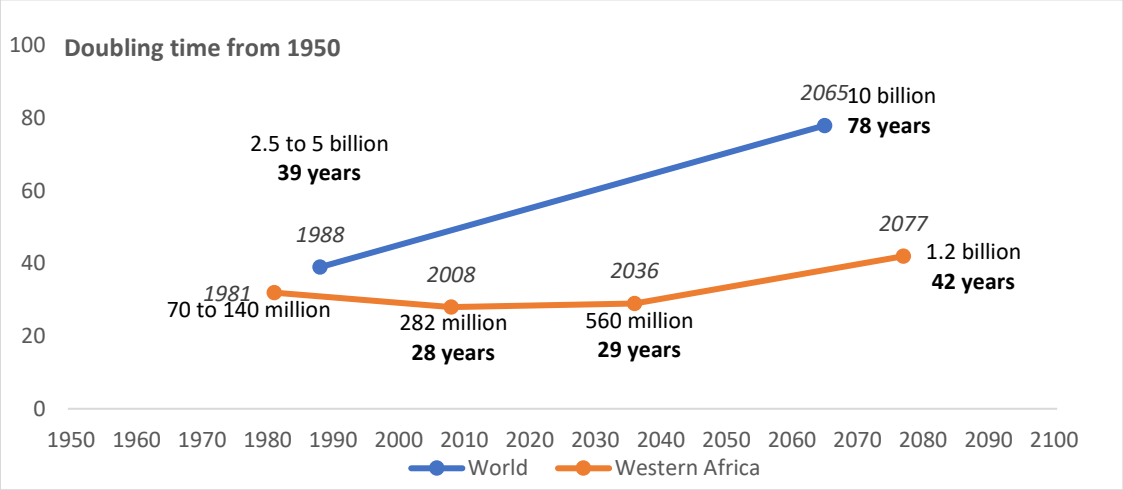
Figure II-2b Population growth in West Africa, 2020



Source: ECA calculation based on World Population Prospects 2019

16. From 1950 to 2100, West Africa is projected to experience a fourfold increase in its population. West Africa's population will double at a rapid pace averaging 30 years as it experiences the initial threefold increase, after which the doubling time will increase and will take 42 years until 2100. This increase was driven by high fertility and declining mortality rates over the period. Note that this is low compared to the time it took the world population to double. It took 39 years for the world population to double from 2.5 in 1950 to 5 billion in 1987. For the world population to double from 5 billion to 10 billion, it will take 78 years, nearly twice as long as the previous doubling time. This is due to the global decline in fertility rates.

Figure II-3 Doubling time of the population over1950-2100



Source: ECA calculation based on World Population Prospects 2019

17. Rapid population growth often results in rapid urbanization. The proportion of population living in urban areas in West Africa has been increasing rapidly and will continue for many years to come. Around 48% of West Africans live in urban areas and the share of the population that is urbanized exceeded 50% in 7 countries in the subregion. Generally, urbanization is determined by several factors, including differences in natural population growth between rural and urban areas, rural-to-urban and international migration. In addition, insecurity and insurgency in some of the West African countries have also led rural dwellers to relocate to urban settlements where security appears to be better.

Figure II-4a Annual Percentage of Urban Population, 1950-2050

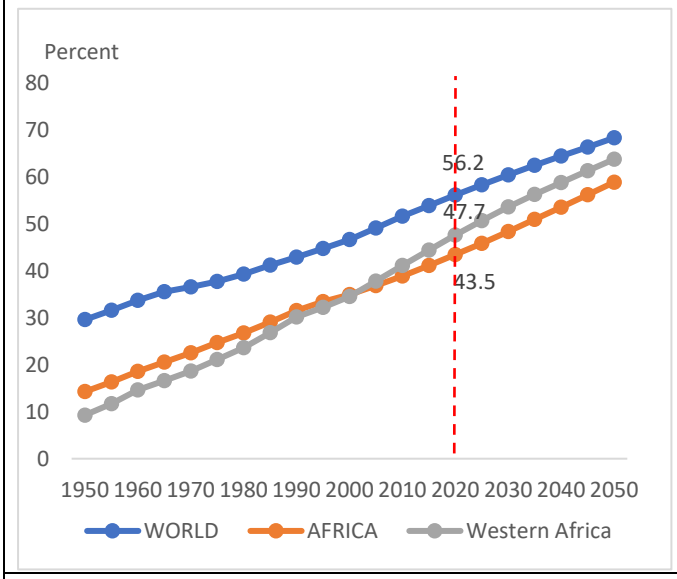
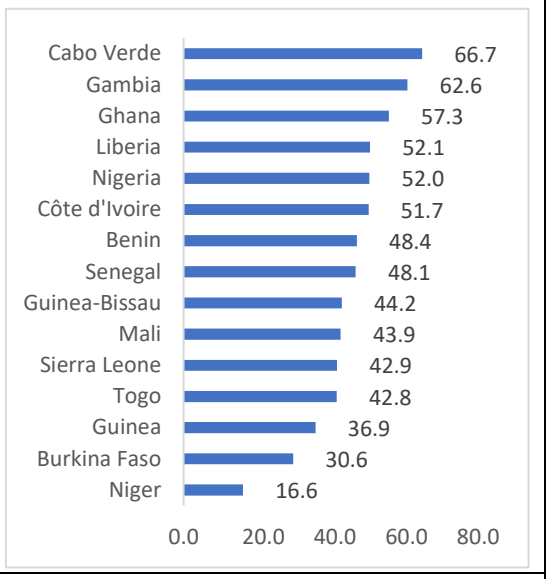


Figure II-4b Percentage of Urban Population, 2020



Source: ECA calculation based on World Population Prospects 2019

B. Population drivers in West Africa

1. Fertility levels and trends in West Africa

18. The size and trend of population is highly dependent on the path of future fertility and mortality rates with the former representing the strongest determinant since the latter keeps decreasing. This important metric1 presented in Figure II-5a for the period 1950 to 2100 reached its peak of about 6.9 in 1980 and then started to decline. But there appears to be a stall in decline in fertility rate in West Africa as the TFR has not substantially declined. Within the 20-year period (2000-2020), there has only been a decline of 0.77 in the region, showing that the decline has not been substantial. The little progress in fertility decline is also evident in Figure II-5b. Ghana and Cabo Verde have made progress in fertility reduction while the process has stalled in other countries. The case of Cabo Verde is peculiar as its TFR is significantly lower than that of West Africa. Benin, Côte d'Ivoire, Guinea-Bissau, Ghana, Senegal also have their TFR being a little lower than that of West Africa. Countries like Burkina Faso and Nigeria have TFRs that are almost replicas of that of West Africa, while Mali and Niger are the only countries whose TFRs are higher than that of Nigeria.

[1] Fertility measures the average number of children that would be born by a woman in her lifetime if she were subjected to the prevailing age-specific fertility rates and if she were to survive throughout her childbearing years

Figure II-5a Total fertility (live births per woman), 1950-2100

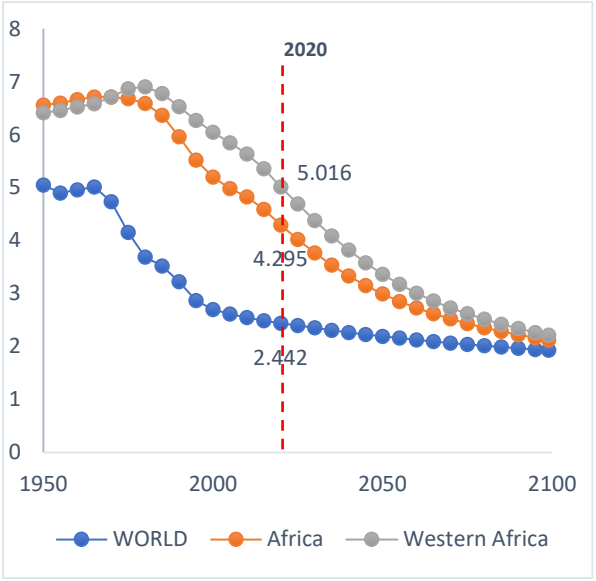
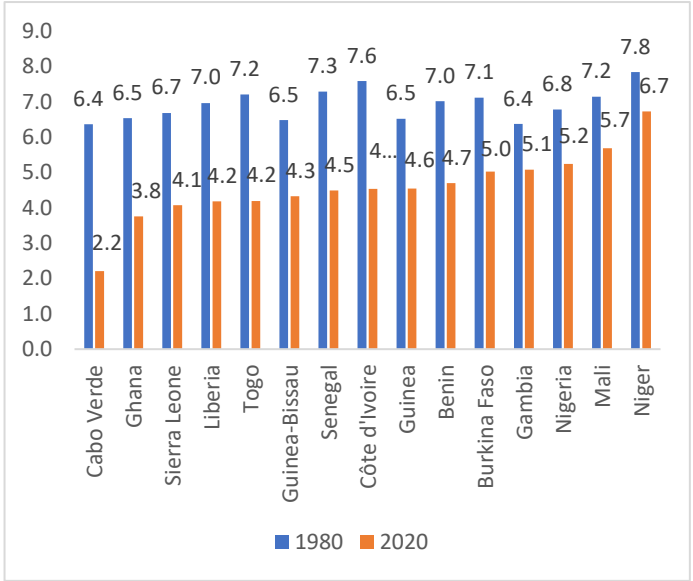


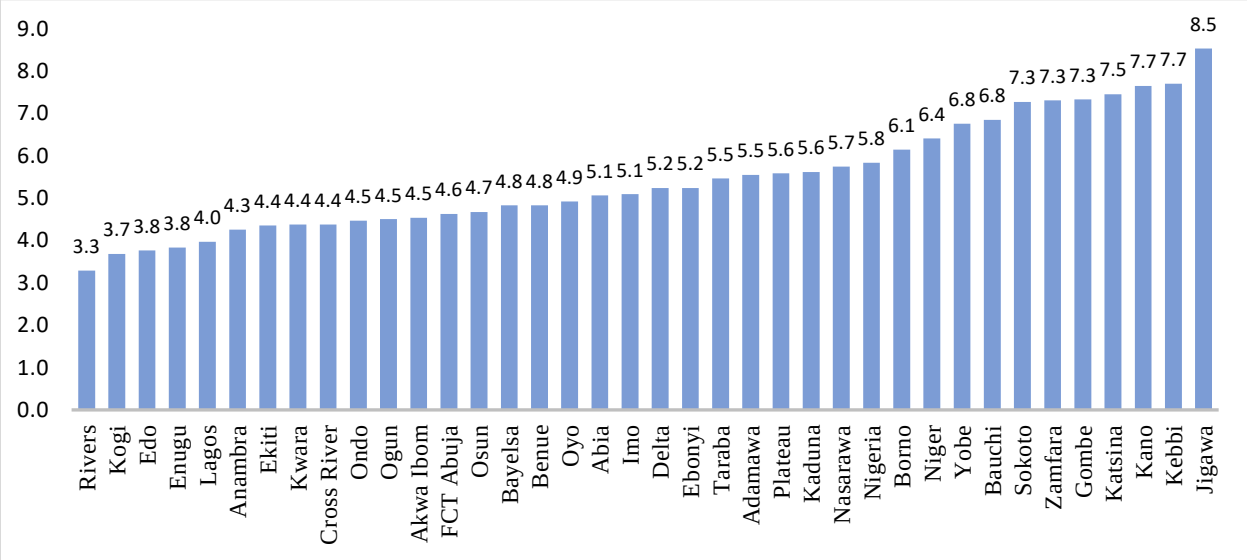
Figure II-5b Total fertility (live births per woman) in West Africa, 2020



Source: ECA calculation based on World Population Prospects 2019

19. The general TFR in West Africa might blur some important information on what happens within countries. In Nigeria for instance, the fertility rate within the country has a wide variation, with different regions of the country having different rates of fertility as can be seen in figure II-6.

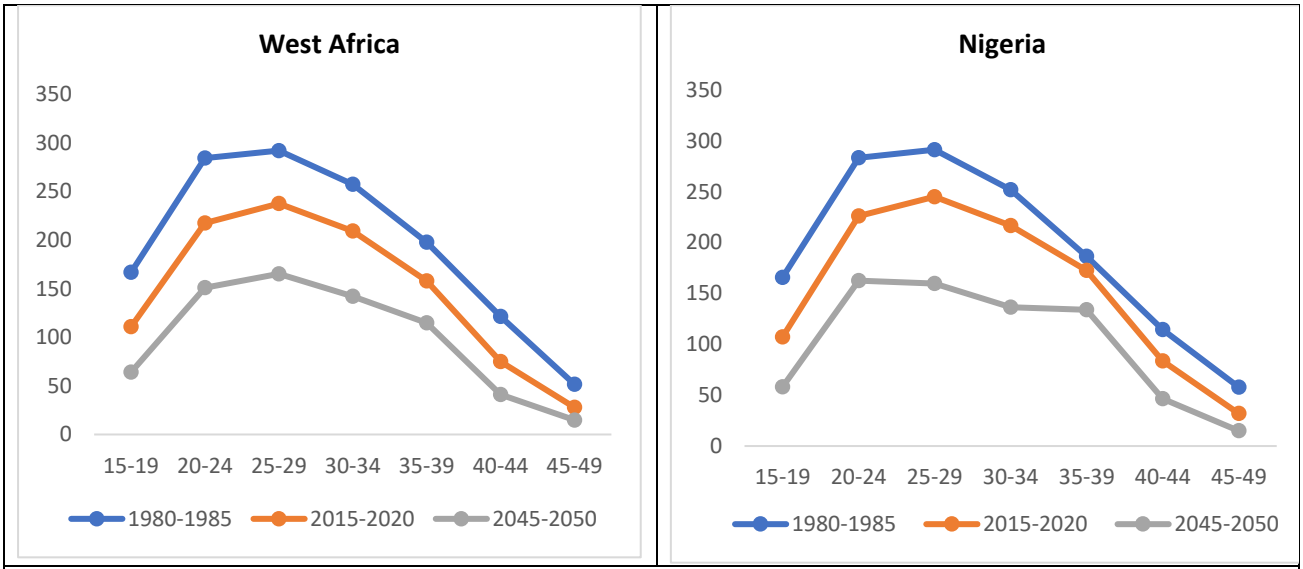
Figure II-6 Total fertility rate in Nigeria by state, 2016



Source: Olaniyan et al, 2018

20. Figure II-7 reveals that west African countries continue to experience high levels of adolescent fertility (births to mothers aged 15-19 years). The age specific fertility rates indicate a steady reduction in the coming years. However, women within the age group of 25 – 29 still account for most of the fertility in the entire sub-region of West Africa. This can have a negative effect on fertility as delay in years of having the first child tends to reduce fertility. Unfortunately, it appears that Nigeria is not making progress in this regard.

Figure II-7: Trend in Age Specific Fertility Rate (ASFR) per thousand women in West Africa, 1980-2050



Source: ECA calculation based on World Population Prospects 2019

2. Births and deaths

21. Population growth rate is composed of two main metrics namely the total number of deaths and the total number of births with the latter closely linked to the prevailing fertility rates. The crude birth rate (CBR) shows the total number of live births per 1000 population while the crude death rate (CDR) shows the total number of deaths occurring during a year per 1000 population. Crude death rate minus crude birth rate gives the rate of change in population in the absence of migration.

Figure II-8a Crude birth rate (births per 1,000 population), 1950-2100

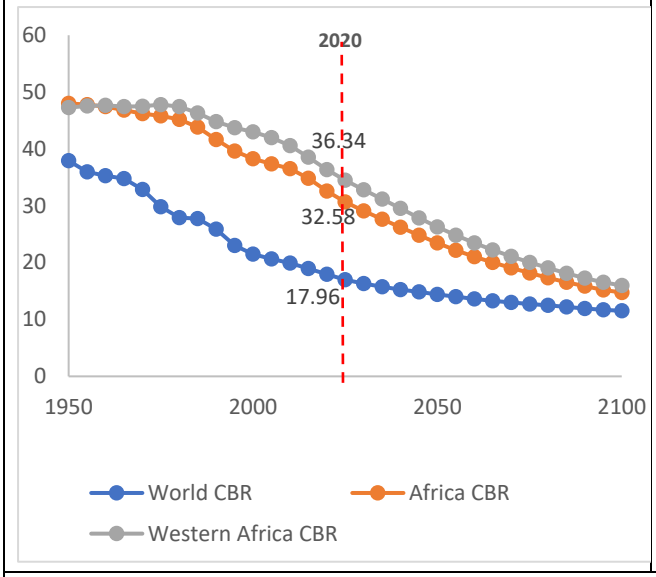
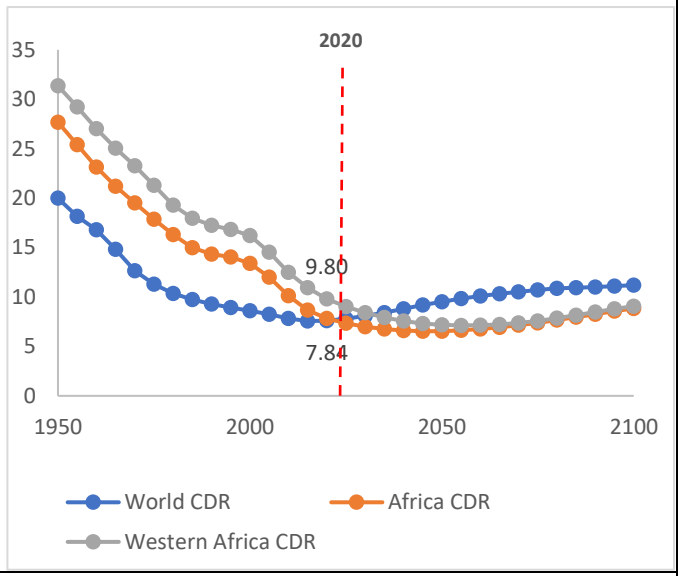


Figure II-8b Crude death rate (deaths per 1,000 population), 1950-2100

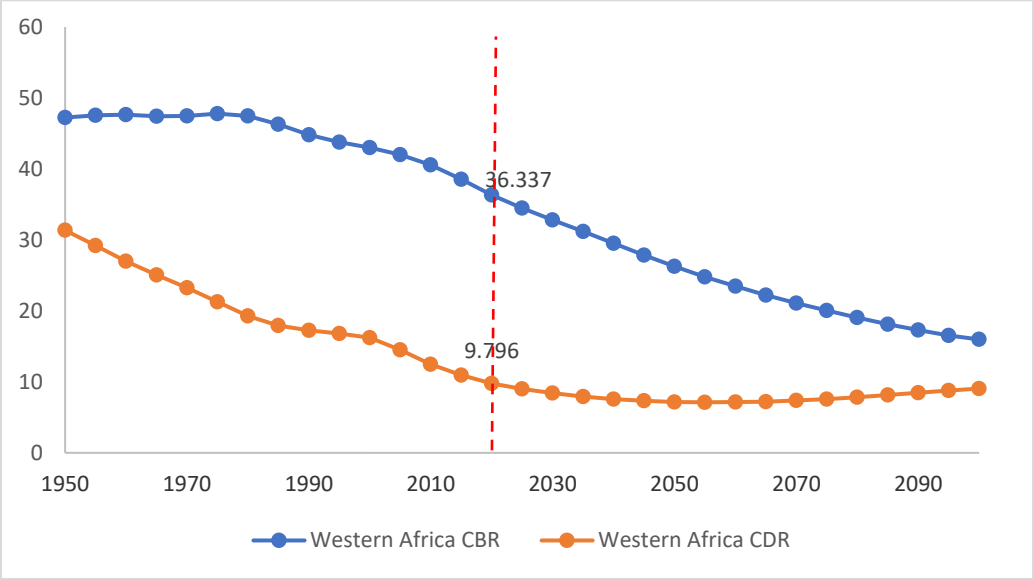


Source: ECA calculation based on World Population Prospects 2019

22. Figure II-8a presents the birth rate in terms of crude birth rate (CBR) and reveals a decreased trend in CBR in West Africa but at a slow pace compared with the World trend. In 2020, crude birth rate in West Africa (36.34) is twice that of the world (17.96). Figure II-8b shows that the death rate in terms of crude death rate (CDR) has significantly reduced and the gap between West Africa and the world has decreased dramatically over the past decade. In 2020, the crude birth rate is 9.80 in West Africa compared to 7.84 in the world.

23. Figure II-9 depicts the process of demographic transition by presenting both the crude birth rates (CBR) and the crude death rates (CDR) in West Africa as a whole for the period 1950-2100. Demographic transition is the movement from periods of high birth rates and high death rates to high birth rates and low death rates and further to lower birth rates and death rates. Population growth will increase as long as the birth rate remains higher than the death rate. The gap between the two metrics suggests that it will take some time before the demographic transition is completed in West Africa given its young population.

Figure II-9 Trend of Demographic Transition in West Africa, 1950-2100



Source: ECA calculation based on World Population Prospects 2019

24. Overall, infant mortality rates are declining across West African countries. Figure II-10a shows considerable decline in under-five mortality rates from 1950. It is obvious that progress in reducing under-five mortality in West Africa has been substantial and far-reaching in recent years, yet gap remains compared with Africa and the world levels. The under-five mortality rate in the world fell to 38 in 2020, less than half of the 85 reached by West Africa in 2020.

Figure II-10a Under-five mortality (deaths under age 5 per 1,000 live births), 1950-2100

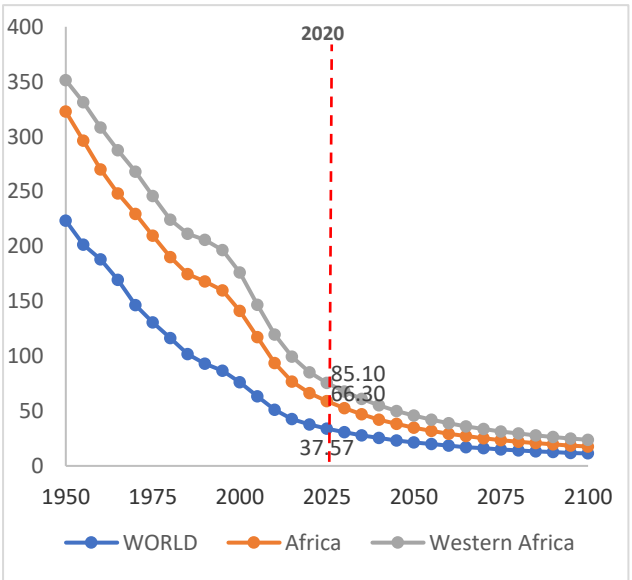
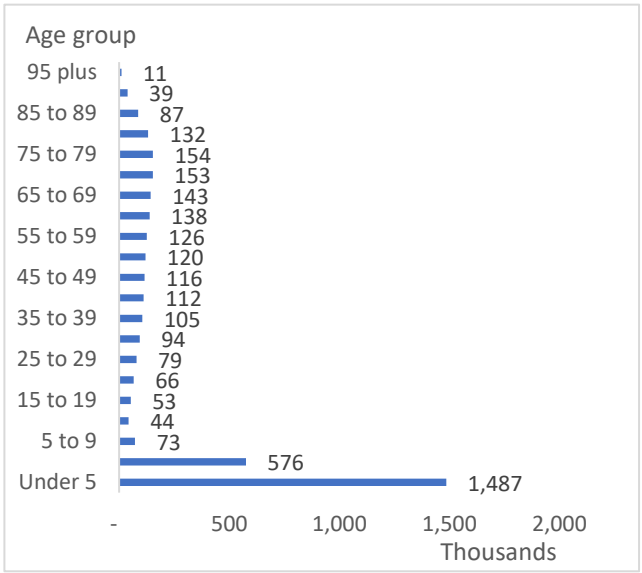


Figure II-10b Deaths by age group, 2017



Source: ECA calculation based on World Population Prospects 2019 and Global Health Data Exchange

25. Figure II-10b shows all deaths in West Africa by age in five-year age groups, starting with the youngest on the left towards the oldest age group (95+ years) on the right. What stands out is the death toll for the very youngest age-group. children died before they reached their fifth birthday. Under-five mortality is 1.49 million in 2020, making it, by far, the major driver of mortality rate in West Africa. This contributes to population growth as child mortality is a major impediment to low fertility rate in west Africa. In effect, under-five mortality rate exerts positive influence on population growth which started by its positive correlation with total fertility rate as shown in figures II-11a and II-11b. But with many West African countries experiencing a rapid increase in health, there is optimism that decline in child mortality will contribute to low fertility rate.

Figure II-11a Fertility rate vs child mortality in West Africa, 2020

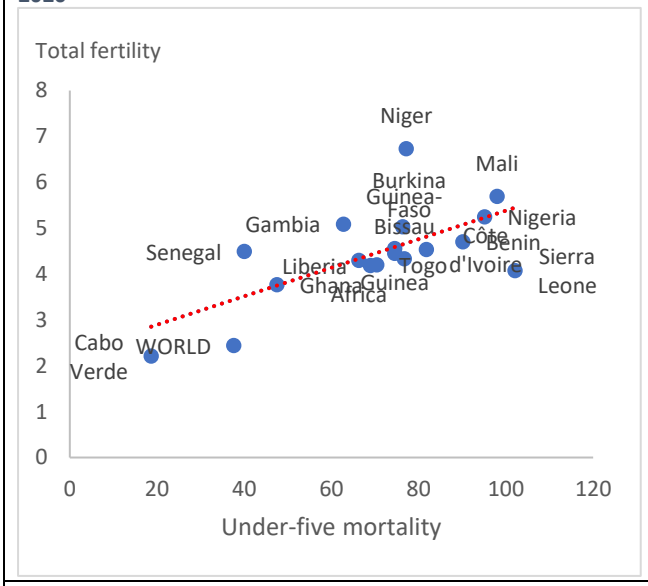
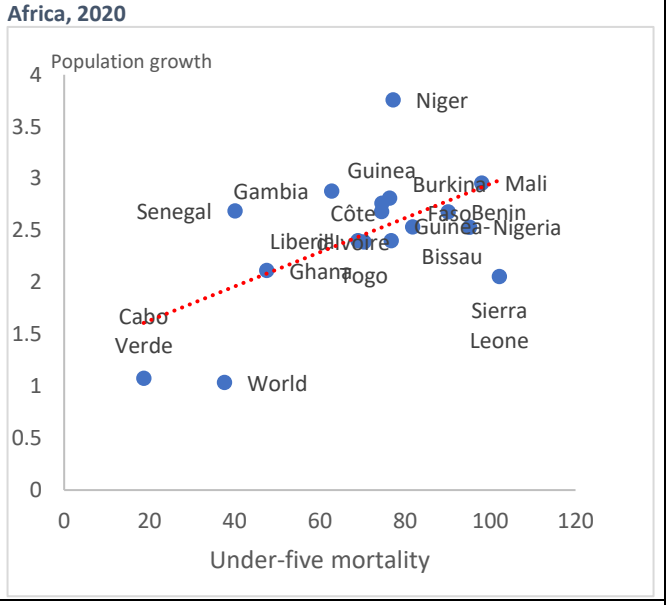


Figure II-11b Population growth vs child mortality in West Africa, 2020



Source: ECA calculation based on World Population Prospects 2019

3. Life expectancy

26. As the population worldwide is getting healthier, life expectancy which has doubled in every region in the world contributes to the growing population. As a measure of the average age of death, the increase in life expectancy decreases mortality, thereby increasing the total population. Besides, the state of health at every point in time is a critical determinant of the level of productivity of individuals and the number of years they are expected to live. Life expectancy at birth has been increasing for all the regions of the world and reached 72.8 years in 2020 (Figure II-12a). This is an additional eight years compared to the estimates in 1990. This is because many countries have performed better on child survival and have improved adult health. This is also complemented by increase in school enrolment in some of the countries. Life expectancy at birth has increased over the years in West Africa. However, the region still has one of the lowest life expectancies at birth with Sierra Leone and Nigeria recording the lowest level (figure II-12b). In fact, out of the 10 countries with the lowest life expectancy at

birth in 2015-2020, 4 are from West Africa namely Nigeria, Côte d'Ivoire, Sierra Leone and Guinea Bissau[2].

27. The consideration of gender parity in life expectancy reveals that women outnumber men in the older ages owing to their longer average life expectancy, although the overall numbers of males and females globally are nearly equal. The gender gap in life expectancy in West Africa shows a margin of 2 years between males and females. Many reasons have been given to explain this gap including the fact that men are more susceptible to risk-taking than women.

Figure II-12a Life expectancy at birth, both sexes, 1950-2100

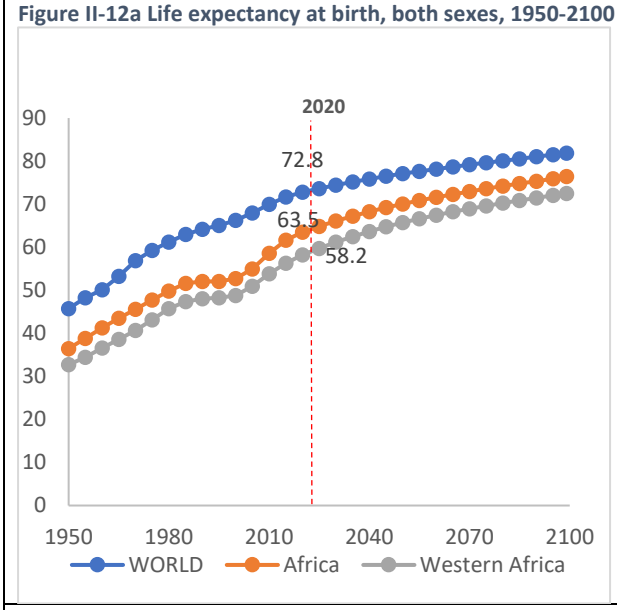
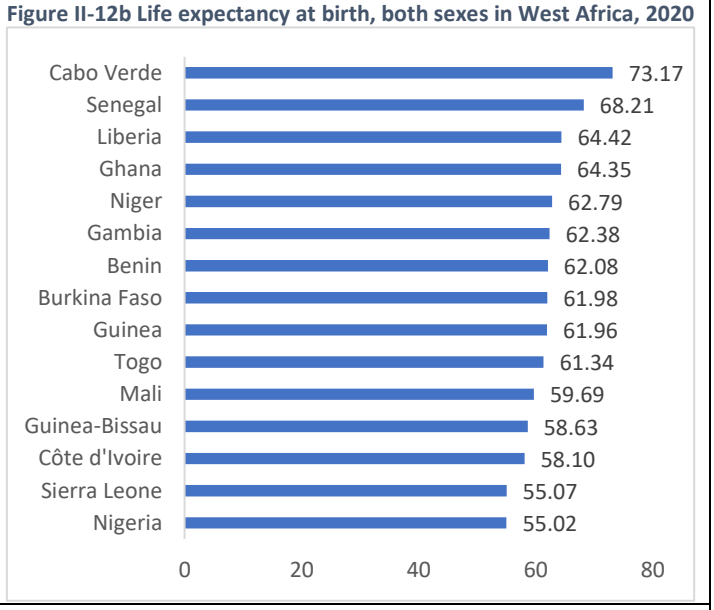


Figure II-12b Life expectancy at birth, both sexes in West Africa, 2020



Source: ECA calculation based on World Population Prospects 2019

4. Age structure

28. The population of West Africa is one of the youngest in the world and in many countries, the proportion of people in the working ages is growing faster than in other age groups, creating a window of opportunity for rapid economic growth known as the "demographic dividend3".

[2] The ten countries are Central African Republic (52.7 years); Lesotho (53.5 years); Chad (53.8 years); Sierra Leone (54.1 years); Nigeria (54.2 years); Somalia (56.9 years); Côte d'Ivoire (57.2 years); South Sudan (57.4 years); Guinea-Bissau (57.8 years) and Equatorial Guinea (58.2 years).

[3] The concept of demographic dividend will be addressed extensively below.

Figure II-13a Median age, 1950-2100

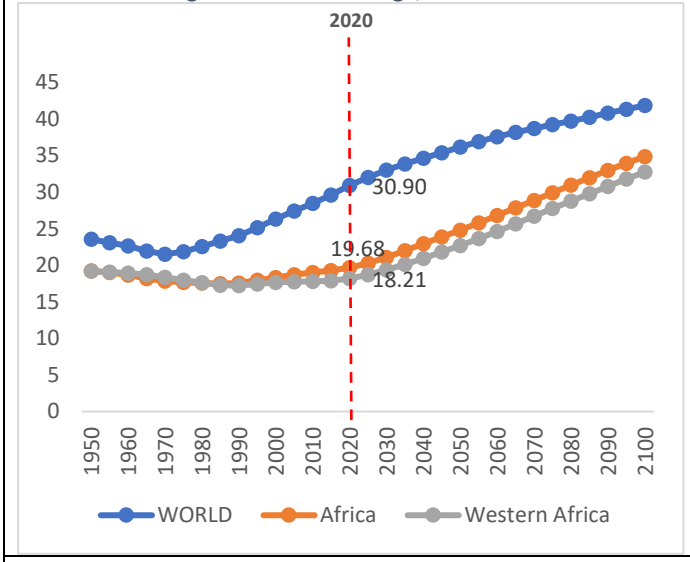
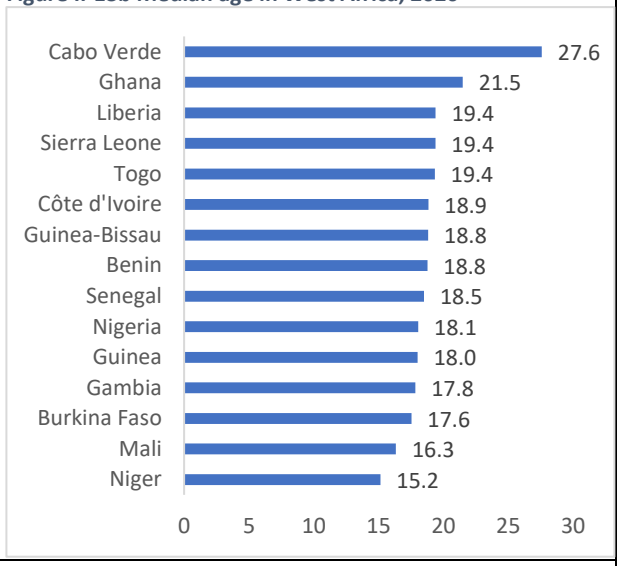
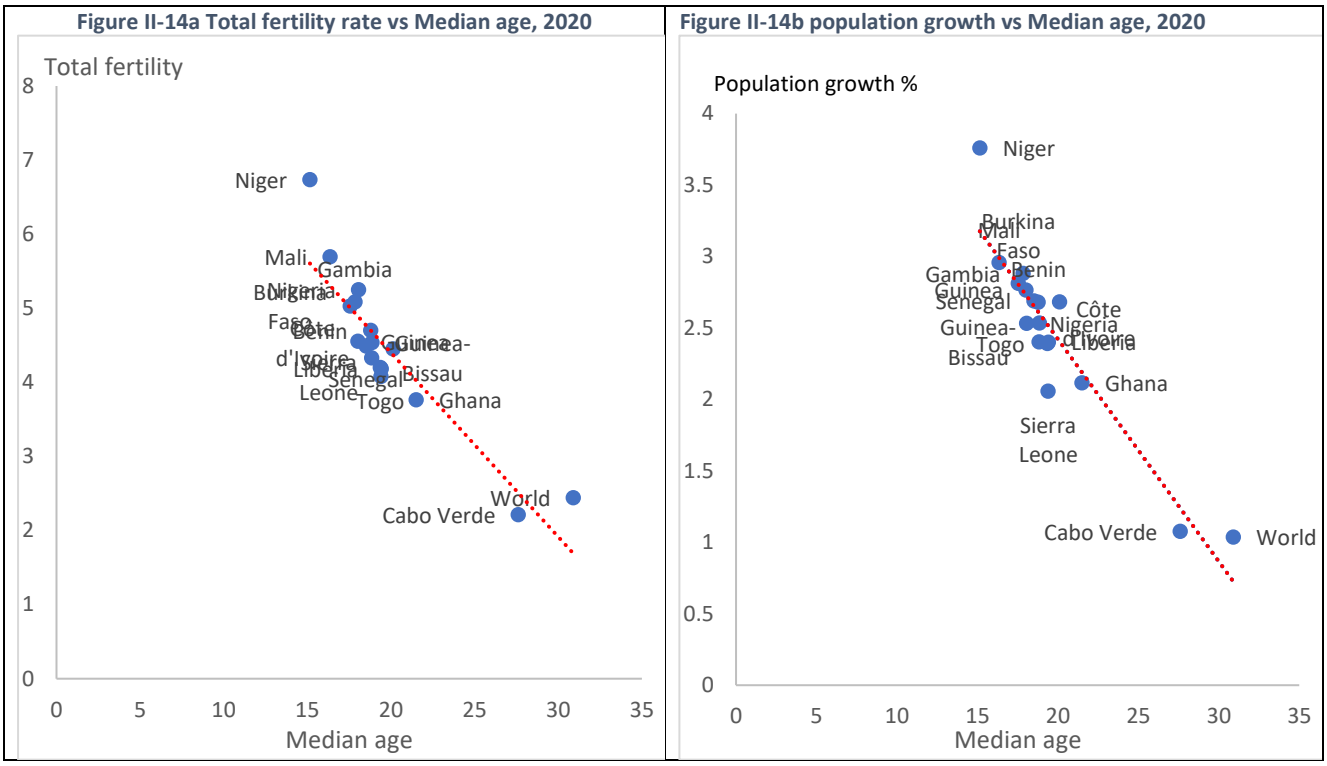


Figure II-13b Median age in West Africa, 2020



Source: ECA calculation based on World Population Prospects 2019

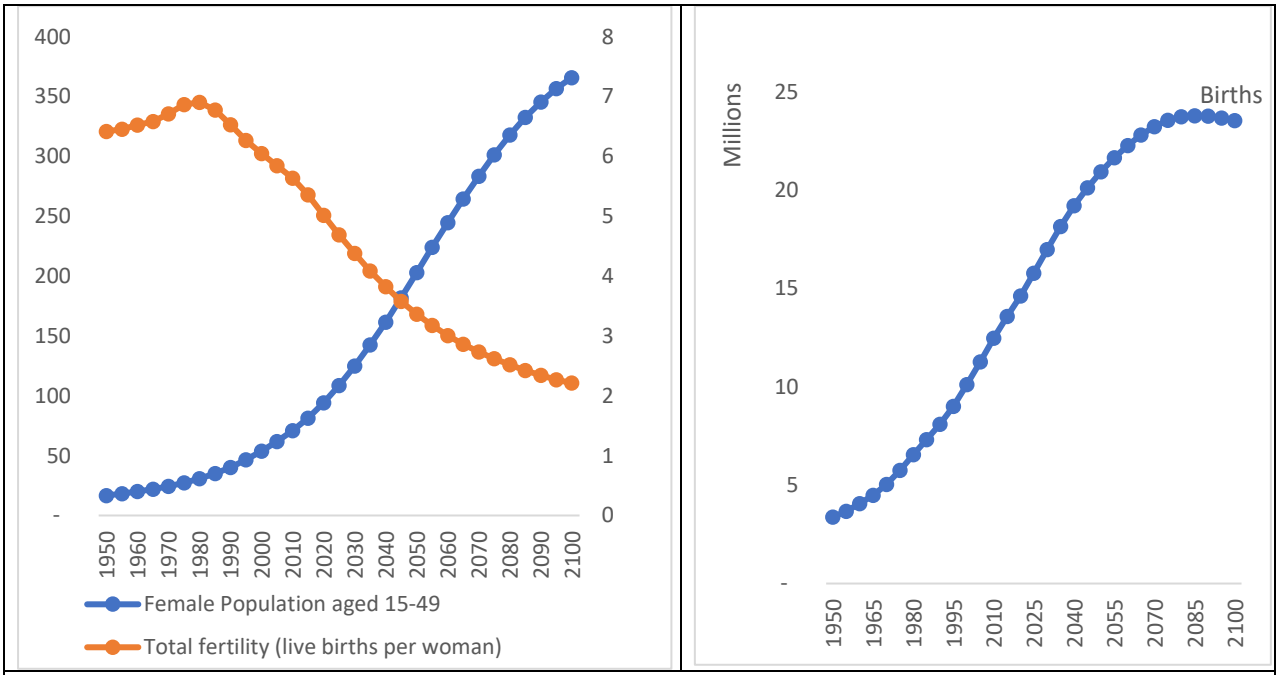
29. Median age is an important metric of the age distribution of a population. Average median age of the west African population is around 18 years in 2020 (figure II-13a) and this shows that youth make up a large proportion of the West African population. Figure II-13b shows that Niger has the youngest population with a median age of 15.2, meaning that half of the population is younger than 15.2 years. Most of the countries in West Africa have their median population around 18 years; only Ghana and Cabo Verde have median ages above 20 years. Such a young population in West African countries is conducive to rapid population growth given that the proportion of the population at the reproductive age is more important. It can be seen from figure II-14b a negative correlation between population growth and the median age suggesting that the lower the median age, the more important the rate at which population grows. In addition, figure II-14a shows that the correlation between population growth and the median age is explained by the fact that a low median age tends to increase fertility rates, which in turn is positively associated with population growth.



Source: ECA calculation based on World Population Prospects 2019

30. **Population momentum** impedes efforts to control population in West Africa. In effect, in addition to the total fertility rates, population momentum, driven by the large increase in cohorts of women entering the reproductive age bracket, is central to population growth. In effect, figures II-15 show that the number of births will not decline rapidly following a decreasing fertility rate because of the increasing share of women entering the reproductive age bracket (15-49 years). It's only when both the fertility rate and the number of women level off that population momentum stops. And this is when global population growth will come to an end. In 2020, as many as 94 million females are in the reproductive age. With a slow decrease in the total fertility rates (5.02), births continue to increase, totaling more than 14 million in 2020.

Figure II-15 Total fertility rate, number of women in the reproductive age and total births in West Africa, 1950-2100



Source: ECA calculation based on World Population Prospects 2019

5. Migration

31. While population changes at the global level are determined by the balance of only two variables (the number of people born each year, and the number who die), there is a third variable to consider at country level. Population growth rate is the change in population as determined by births, deaths plus migration flows. In comparing the natural population rate to population growth, figure II-16a shows that the two metrics are almost equal indicating that the contribution of migration to population growth in Africa is low. In 2020 for example, population growth rate is 2.62% while the natural population rate with zero migration is 2.65. This goes to show that even if migration is an important phenomenon across west African countries as depicted in figure II-16b with Cote d'Ivoire and Nigeria recording the highest number of migrants, it decreases the population growth in West Africa slightly because migration outflows are more important than migration inflows.

Figure II-16a Population growth rate and Rate of natural increase in West Africa, 2020

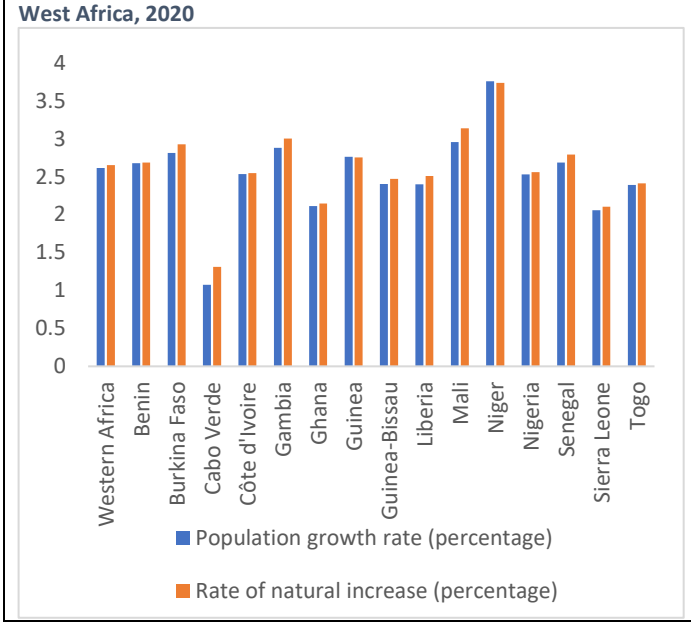
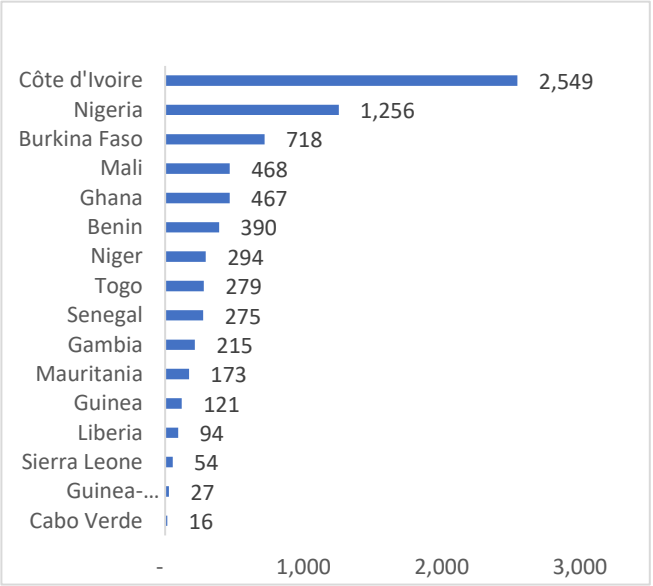


Figure II-16b Migration inflows by country in West Africa, 2020



Source: ECA calculation based on World Population Prospects 2019

C. Implications of COVID-19 for Demographic Dynamics

32. From a demographic perspective, the effects of the COVID-19 pandemic will not be materialized in the short term. The pandemic is likely to decelerate the pace of fertility reduction. Evidence suggests that education especially at the secondary level helps delay marriage and first pregnancy (Gribble and Bremner, 2012). With school closures and increased school dropout rates caused by the COVID-19 pandemic, there is a concern that early marriage and adolescent pregnancy will increase. If this trend continues, the COVID-19 pandemic could slow the speed of the demographic transition.

33. The COVID-19 pandemic could also limit women decision-making power in terms of desired family size. By reducing the opportunities for women to work outside home and get higher-paying jobs, the COVID-19 crisis constitutes a hindrance to women empowerment and their ability to influence the choice of the family size by means of contraceptive method.

34. As the COVID-19 is occurring during a period of heightened debt vulnerabilities, government finances are placed under pressure with the risk of diverting attention away from the efforts needed to put excessive population growth under control.

III. Harnessing Demographic Dividend in West Africa

35. The West African working-age population (15 to 64 years) is growing faster than other age groups and this can yield an opportunity for accelerated economic growth known as the “demographic dividend”. The concept of demographic dividend prescribes that in the developing world, the rise in the share of the working ages and related changes can provide a strong impetus for economic

development (Bloom and Williamson, 1998; Mason and others, 2015). This is because countries with heavy concentrations of population in the working ages have an inherent advantage to produce high levels of per capita income (Mason 2005: 82). To make the most of the opportunity of a demographic dividend, countries need to invest in human capital and create an enabling environment so as to position skilled labor force to take on higher-level jobs in the formal sector.

A. Metrics for a Demographic Dividend

1. Age-dependency ratio

36. The age-dependency ratio refers to the ratio of people in the dependent ages (under age 15 and 65 years above) to the economically productive segment of the population (15 to 64 years). The age-dependency ratio is a useful indicator to assess the economic burden of the productive segment of the population. Figure III-1a compares the evolution of the age-dependency ratio between West Africa, Africa and the World. By 2020, the age-dependency ratio in West Africa is projected to be 85. A ratio of 85 dependents per 100 people aged 15-64 years means that 1.2 persons within the working age have to support each dependent person. It is projected to reduce to 64.26 in 2050 and further to 52.26 in 2100.

Figure III-1a Annual total dependency ratio, 1950-2100

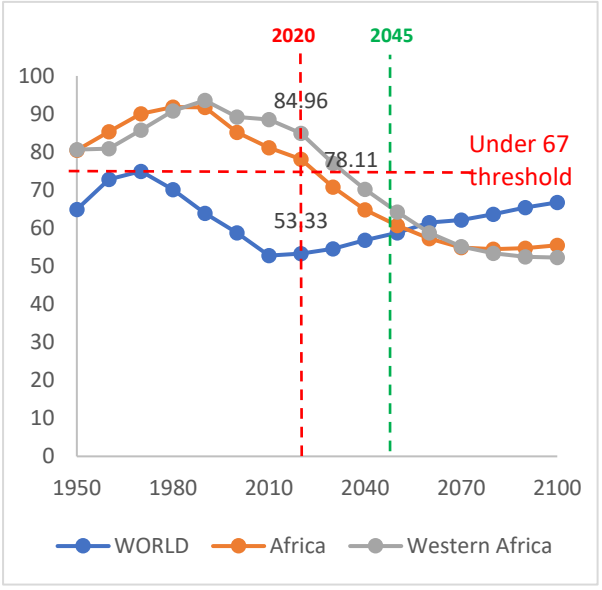
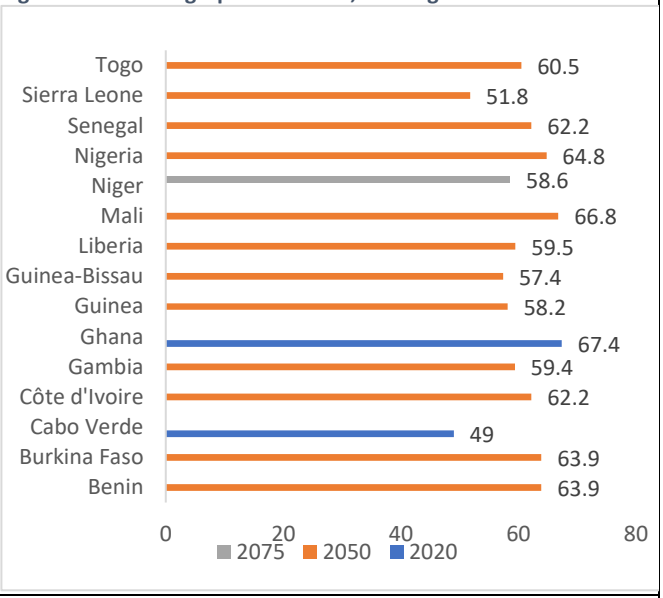


Figure III-1b Demographic dividend, starting date in West Africa



Source: ECA calculation based on World Population Prospects 2019

37. Some studies have argued that demographic dividend occurs when the total dependency ratio is not higher than 67 dependents per 100 population in the working ages, in which case, there are at least 3 people of working age for every 2 dependents (Hayes and Setyonaluri, 2015). One can therefore deduce that the window of opportunity for West Africa will open from year 2045 when

the dependency rates are projected to have reduced to 67. Figure III-1b show that Ghana and Cabo Verde are already experiencing demographic dividend while most West African countries will be ready in 2050. By comparison to most countries in West Africa, it will take 25 additional years to reach the starting date of demographic dividend in Niger.

38. Concentration of population in the working ages may not translate into a concentration of those who are working (Bloom et al., 2003). This is because of the increasing large proportion of out of labour population within the age group and especially among young adults aged 16 – 30 years. In addition, unemployment rates mean that even when the labour participation rate is high, there could also be a large proportion of this age group not employed in decent jobs. The crux of the matter of demographic dividend has to do with the balance between production and consumption. The economic support ratio, computed using the approach of the National Transfer Accounts (NTA), provides a convenient method for understanding the relation between changing age structure and economic growth.

2. Economic Support Ratio Using the NTA Methodology

39. The life cycle comprises the different stages an average individual passes through during a lifetime. Whether labour income is earned or not, the individual consumes at all the stages of life. Using the National Transfer Accounts methodology, the economic life cycle can be summarized into age profile of labour, income, and consumption to consider not only the working age population but also the effective producers within the country. The support ratio is the ratio of effective producers to consumers calculated by holding the shape of the age profiles of consumption and labor income fixed.

- Age Profile of Consumption Expenditure and Labour Income

40. The per capita age profiles of labour income and consumption are summarized in Figures III-2a and III-2b and the values are expressed relative to the average values of per capita labour income and consumption respectively, for those aged 30-49 years. The figures present the age profiles of mean consumption in West Africa and Nigeria. The age profiles of consumption show that consumption is lower for children than for adults, reflecting the lower material needs of children. It is interesting to note that the consumption expenditure of Nigeria and that of aggregate West Africa follows a similar pattern.

Figure III-2a Age profile of consumption expenditure in West Africa and Nigeria, 2016

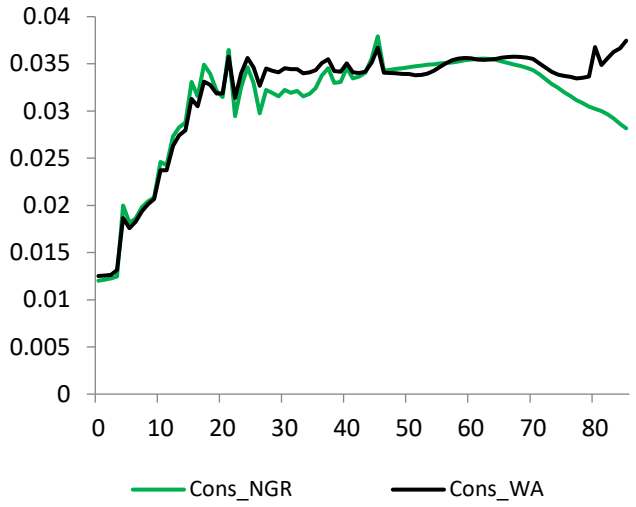
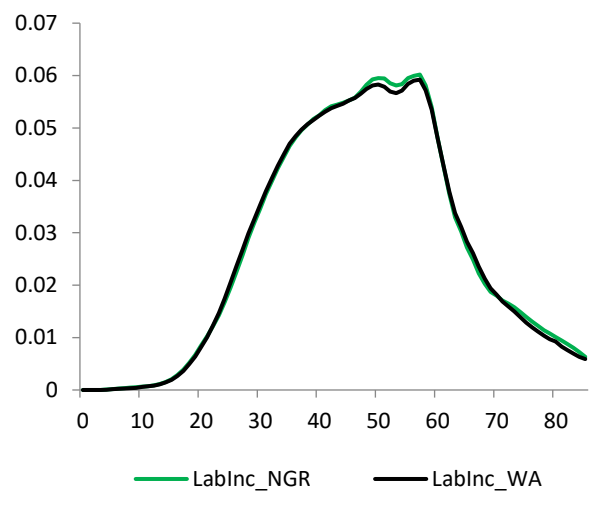


Figure III-2b Age profile of labour income in West Africa and Nigeria, 2016



Source: Olaniyan, et al (2018)

41. The consumption expenditure of the working age is higher than that of the children and quite similar to that of the older population. However, beyond age 72, consumption expenditure became higher than that of the working age in West Africa in contrast to the decreasing trend in Nigeria. In sum, children have the lowest consumption expenditure, while that of the working age population is high, but largely stable over time and that of the elderly is relatively low and then experiences a sharp rising tail. Figure III-2b reveals that the age profile of labour income has an inverted U-shape. The Nigerian labour income profile follows the pattern of aggregate West Africa with very little labour income for young people, a later peak and a steep decline.

- Life Cycle Deficit

42. Economic life cycle deficit (LCD) measures the difference between labour income and consumption at each age, reflecting a surplus when labour income exceeds its consumption expenditure and a deficit in the opposite case. Figures III-3a and III-3b show the per capita age profiles of consumption and labour income for Nigeria and West Africa in 2016. The importance of the figures is that they show explicitly the actual years of dependency in various economies. The results show that consumption expenditure exceeds labour income at ages 0-28, whereas, beyond this period, surplus commences and lasts about 33 years. Thus, by age 63, the surplus ends in West Africa and the deficit prevails again as a result of old age dependency.

Figure III-3a Per capita age profile of consumption and labour income for West Africa subregion, 2016

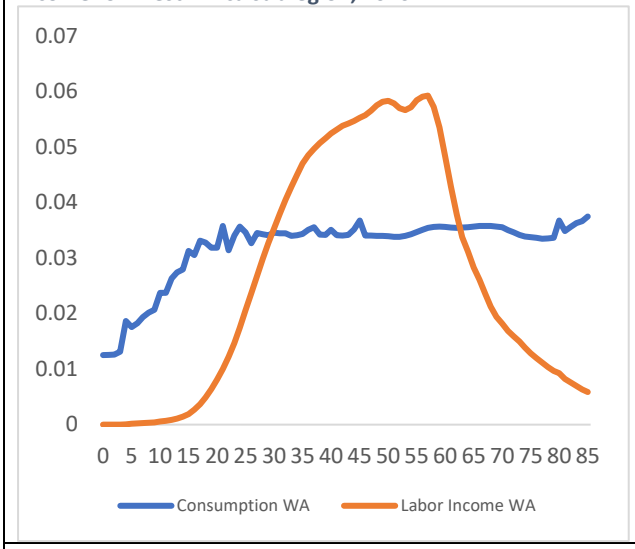
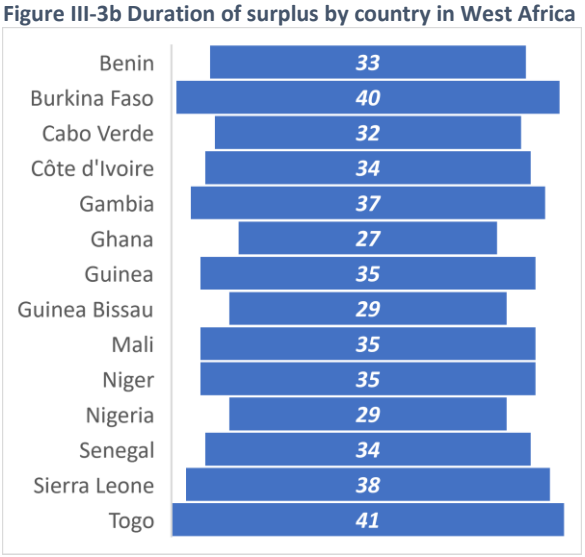


Figure III-3b Duration of surplus by country in West Africa



Source: ECA-CREG calculation, 2020

43. An examination of the aggregate profile of labour income and consumption reveals that there is large child consumption relative to income leading to a very high life cycle deficit (Figure III-4a). The period of surplus for the groups commences between ages 28 and 35 and terminates between ages 63 and 64. Thus, the window of opportunity in West Africa is open for 33 years wherein the surplus can be well harnessed. Figure III-4b presents the life cycle deficit in West Africa. Total consumption for 2016 was 428 billion PPP USD while total labour income was 270 billion PPP USD, leaving the region with a lifecycle deficit of 158 billion PPP USD. The large youth population means a huge deficit of 213 billion PPP USD for those aged 0-30 years.

Figure III-4a Age Profile of Aggregate Consumption and Labour Income for West Africa, 2016

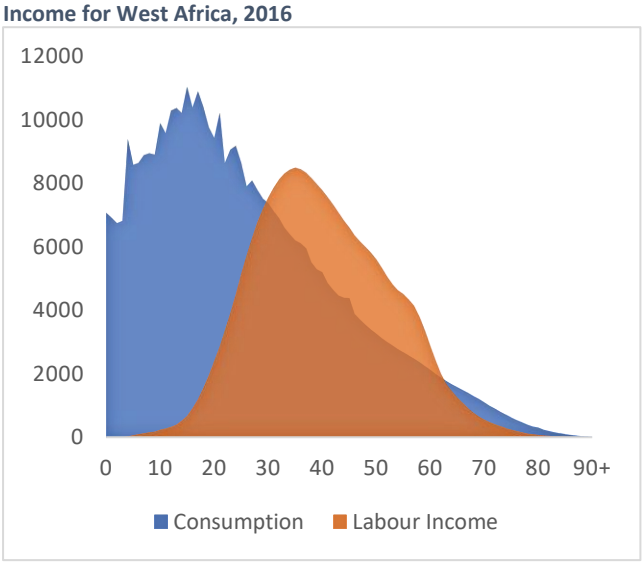
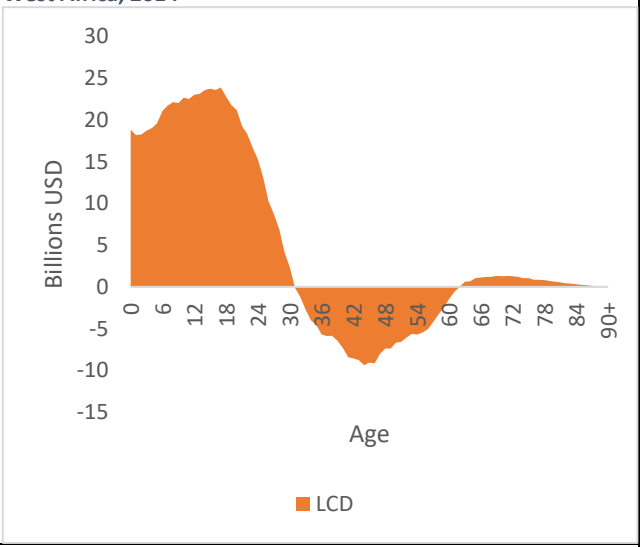


Figure III-4b Composition of Aggregate Life Cycle Deficit in West Africa, 2014

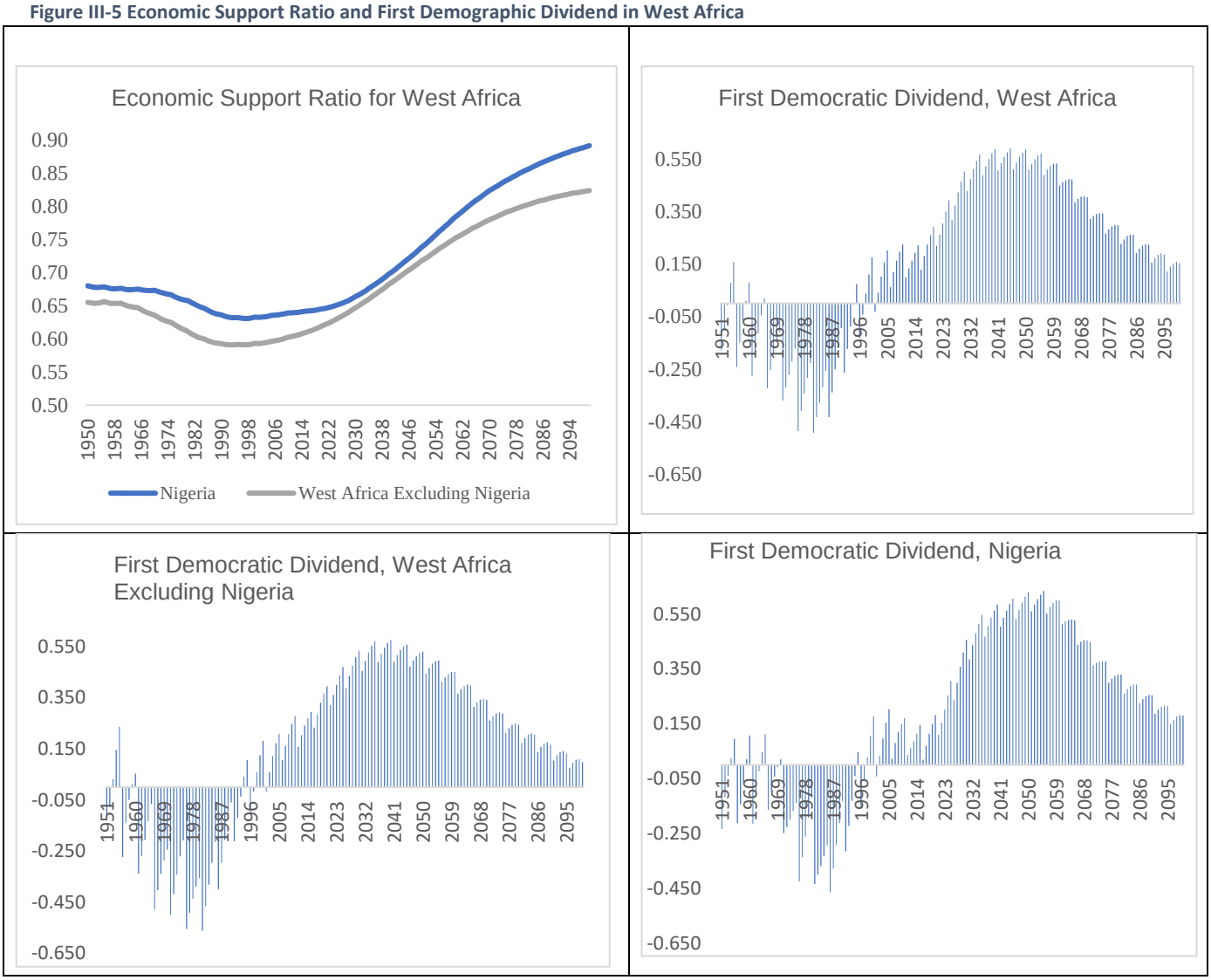


Source: ECA-CREG calculation, 2020

- Economic Support Ratio and First Demographic Dividend

44. The support ratio and first dividend for West Africa and Nigeria are presented in figures III-5 using estimates and projections (the medium variant projection) from world population prospects and NTA estimates of the normalized consumption and labour income profiles.

Figure III-5 Economic Support Ratio and First Demographic Dividend in West Africa



Source: ECA-CREG calculation, 2020

45. Nigeria has the highest support ratio in West Africa. The profile of demographic dividend indicates that the sub-region had entered the period of first demographic dividend since year 2002. However, the period when the first DD will peak is determined by the pace and pattern of fertility in the respective countries. While on the average for West Africa, the DD is projected to reach its peak by

year 2045, for Nigeria, which has a higher fertility, the DD will reach its peak at a later period (i.e. 2050).

B. Implications of COVID-19 for Key Drivers of Demographic Dividend

46. A precondition for demographic dividend is a population age structure characterized by an important working-age population share resulting from fertility decline. Because demographic dividend is not automatic and requires investment in education and health to develop human capital as well as governance policies conducive to business and job opportunities, there is a risk that the COVID-19 pandemic impedes efforts made so far by African countries in terms of policy commitments.

47. The likely adverse impact of the pandemic on education is the erosion of human capital. As part of social distancing measures to limit the spread of the covid-19 pandemic, schools and universities have been closed for some period posing serious learning conditions challenges. This is particularly damaging to African countries characterized by unequal access to the internet and limited information and communication technologies (ICT) infrastructures to support virtual learning.

48. Unhealthy labor force caused by the COVID-19 pandemic combined with mitigation efforts such as lockdown and workplace closures reduce the labor supply and disrupt the functioning of the labor market. One immediate consequence is that working hours drop during the pandemic. The latest ILO estimates (June 2020) report the total working-hour loss of 12.1 per cent, or 45 million full-time equivalent (FTE) jobs in the second quarter of 2020 compared to 2.4 per cent, or 9 million FTE jobs in the first quarter. In western Africa, the percentage hours lost is slightly higher (2.5 per cent) in the first quarter but lower (11.6 per cent) in the second quarter in comparison with the Africa's average. Note that the job losses induced by the covid-19 pandemic will have a disproportionate impact on own-account workers and workers in the informal sector.

IV. Status of Sustainable Development Goals in West Africa

A. Population Dynamics and SDGs

49. According to UNECA (2015), the status of countries on the achievement of SDGs is assessed on three dimensions, which include economic sustainability, social sustainability, and environmental sustainability. In this context, issues of population dynamics are critical to the achievement of the SDGs. For instance, current estimates show that about 95 million people live in extreme poverty in Nigeria (World poverty clock, 2019). This figure is larger than the population of an average West African country multiple times, and more than half of the total population of the rest of West Africa. This may be a pointer to the relevance of addressing population dynamics in the quest for sustainable development. We will discuss issues surrounding the three pillars of sustainability in West Africa.

B. Economic Sustainability

50. The role of demographic dividend in the economic sustainability of West African countries cannot be overemphasized, considering the huge potential and associated benefits of the large young

working population. The concept of economic sustainability is to have a production system that produces optimally while taking into consideration, the social and environmental dimensions of sustainable development. The production process must however be inclusive by making sure that all relevant sections of the population participate and contribute to the production system. Hence, inclusive economic growth is needed to support a growing global population. Per capita income in most West African countries followed an increasing trend in the past few decades, with growth in GDP of around 5% in recent years. Despite improving economic performance and growing potential for investment, which are key to sustainable development in West Africa, sustainable development continues to evade the sub-region as evident in the various economic, social and environmental concerns that dominate policy debates across all the countries in the sub-region.

51. The West African economy is dominated by 4 countries, namely: Nigeria, Ghana, Côte d'Ivoire and Senegal. They jointly account for 90% of the region's GDP. Nigeria is the biggest economy, and alone it accounted for over 70% of regional GDP for most part of the last decade. The implication is that the economic prosperity of the region depends on the activities in these countries. The growth prospects of the region are also dependent on these four countries. Between 2012 and 2015, many of the West African countries experienced high growth. However, in 2016, the growth of the region slowed, averaging about 0.5 percent, caused largely by the negative economic growth in Nigeria. Although many countries in the region, such as Côte d'Ivoire, still experienced robust economic growth of about 9 percent, the size of the Nigerian economy impacted negatively on the economic growth of the region. The gradual recovery of the Nigerian economy in 2017 and 2018, helped by the rebound of oil prices, has restored economic growth to more than 3% since 2018 in the region. However, the economic outlook in West Africa is gloomy due to the severe adverse shock of the COVID-19 pandemic.

1. Domestic Savings and Capital Formation

52. Domestic savings are an important source of investment in innovation, infrastructure and structural transformation (SDG 9) in any economy.

Figure IV-1a Domestic Savings and Capital Formation in West Africa (Gross: % of GDP)

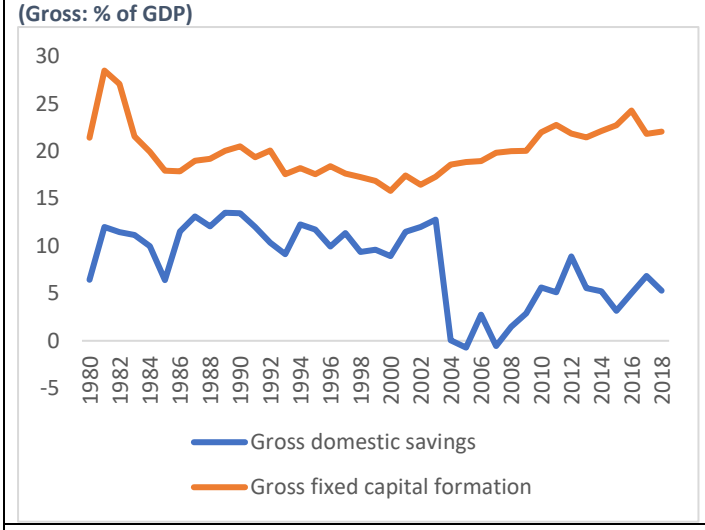
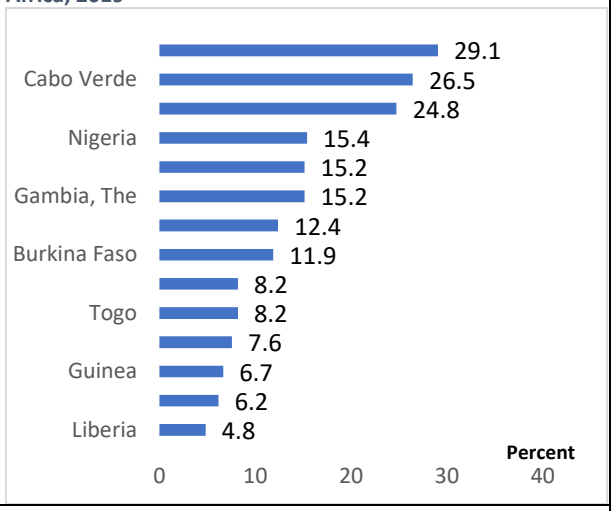


Figure IV-1b Progress towards Achieving SDG9[4] in West Africa, 2019



Source: ECA compilation using WDI and Sachs et al, (2019)

53. Countries with large working age populations and smaller dependent populations tend to generate larger savings critical in financing various household and government activities, programmes and projects aimed at reducing poverty (SDG 1), providing affordable and clean energy (SDG 7) and decent work (SDG 8) among others. In the case of West Africa, the gap between domestic savings and capital formation, which are key aspects of economic performance, appears wider in the last decade than in the past two to three decades. Average gross fixed capital formation remained higher than average gross domestic savings for all the years during the period 1980-2018, with increasing trend of gross fixed capital formation witnessed in the most part of the last two decades (Figure IV-1a). For instance, average gross fixed capital formation was lowest (15.84% of GDP) in 2000 but rose to about 24.31% in 2016, whereas gross domestic savings, which fluctuated between 6.40% and 13.54% of GDP for most part of the period 1980 and 2003, fell to about 0.72% in 2005 before settling at 5.29% in 2018. The fall in domestic savings in the mid-2000s reflects the loss of confidence in West African economies following the civil crises in some of the countries especially in Liberia and Sierra Leone. This indicates that domestic savings is grossly insufficient to finance the investment needed for sustained economic growth and development in West Africa. In terms of industry, innovation and infrastructure, all progress among West African countries is far below average (Figure IV-1b). For instance, Ghana, which appears to have made the most progress recorded 29% while Liberia (5%) made the least progress.

[4] Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

2018 Global Sustainable Development Goal (SDG) Index: Methodology and construction

The SDG index is developed annually since 2016 and aims at assessing the performance of countries regarding the 17 SDGs adopted in September 2015 by all 193 UN member States.

The 17 SDGs consist of 169 specific targets and 230 global indicators suggested by the UN Statistical Commission to track progress. However, the construction of the SDG index rests on the assumptions that indicators may evolve with new evidence, that experts are important to address overlapping indicators and goals, and that non-official data from universities, civil societies and others are essential to supplement official government statistics. In addition, preference is given to absolute country performance rather than performance relative to other countries and to a choice of method easily accessible for a wide audience.

Measurable indicator targets are essential to construct the SDG index. But if unspecified, the methodology of the SDG index resorts to the 'leave no one behind'' principle to set sustainability targets or to the average level of the top 3 or five performing countries or finally to targets set by scientists. In so doing, the 2018 SDG index consists of 12% explicit targets in the SDGs, 44% of top five performers criteria, 26% of science-based optimums and 19% on the of leave no one behind criteria.

The SDG index by goals represent a score from 0 to 100 measuring a percentage of achievement with 0 indicating the worst performance (2.5th percentile) and 100 denoting the sustainability targets.

The global SDG index is a composite index derived from weighted and aggregated SDG index by goals. Equal weights are used given that all SDGS are of equal importance and the uneven number of indicators from one goal to another will therefore determine the weigh accorded to each goal.

2. Labour Force

54. The ability of an economy to utilize its working age population at full capacity can be observed from the labour force participation rate. The UN world population prospects 2019 revision shows that within Africa, West Africa has some of the highest population growth rates with five countries having annual growth rates of 2–3 percent between 2000 and 2005. Virtually all West African countries have unemployment problems.

Figure IV-2a Unemployed and Vulnerable Jobs[5] in West Africa, 2000-16 (Percent of labour force)

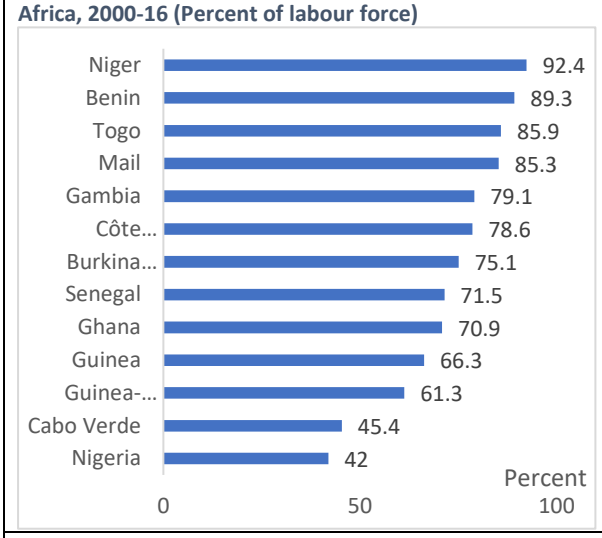
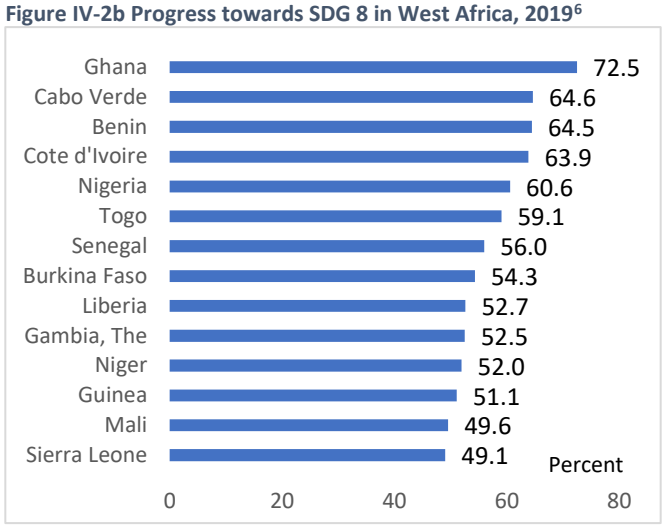


Figure IV-2b Progress towards SDG 8 in West Africa, 2019[6]



Source: ECA calculation using data from African Development Bank (2018) and Sachs et al, (2019)

55. While UN Population data indicates that the working-age population is increasing, there is no corresponding increase in the level of labour force participation. The explanation for this is the level of inactive population that is increasing. Average labour force participation rate declined marginally in all the major zones in West Africa, including Nigeria. As at 2019, an evaluation of the progress towards achieving the SDGs reveals that almost all West African countries have made over 50% progress towards providing full decent work that propels economic growth (Figure IV-2b). While Ghana (73%) appears to have made the most progress in this respect, Sierra Leone (49%) has made the least progress.

C. Social sustainability

1. Poverty

56. Aggregate estimate shows that about 43 percent of West Africans live below the international poverty line even if there are important variations across countries (figure IV-3a). The issue of poverty has been positively related to different insecurity problems that threaten many countries of the sub-region. Even with the Nigerian recession of 2016, West Africa's economy grew rapidly. Unfortunately, the growth has not been inclusive. This has led to high inequality within some of the countries. For example, Guinea-Bissau, Gambia, and Cabo Verde have the highest inequality (in that order), and Mali, Sierra Leone, Niger, and Guinea have the lowest, but the differences are not pronounced. As at 2019, evaluation of progress made in achieving zero hunger among West African countries shows that

[5] Vulnerable jobs are the self-employed and contributing family members.
[6] Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

progress ranged from 32.7% in Niger to 55.1% in Ghana, with only Ghana and Senegal recording progress above average (Figure IV-3b).

Figure IV-3a Poverty Status of West African countries, 2016

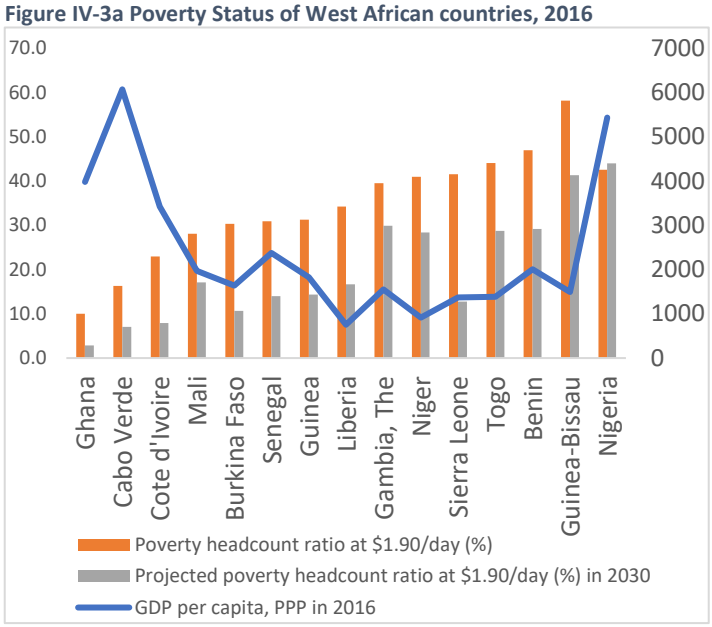
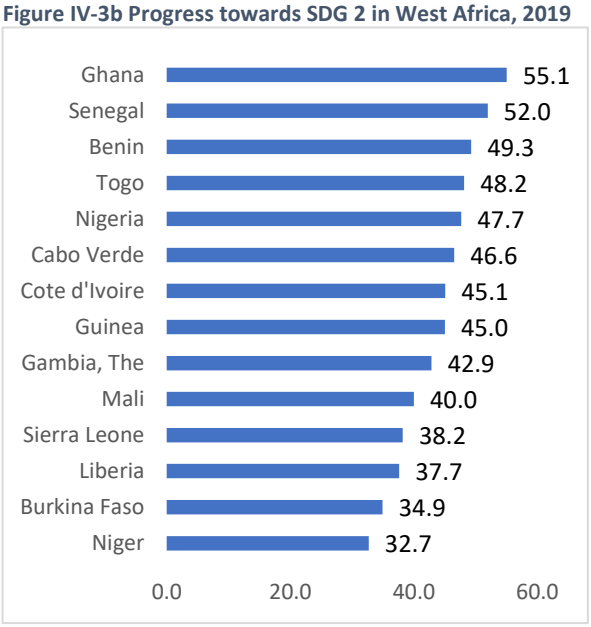


Figure IV-3b Progress towards SDG 2 in West Africa, 2019



Source: ECA, based on data from the Sachs et al, 2019

2. Education

57. Significant improvement in average primary school enrolment is noticed across most West African countries. In terms of net female enrolment, Sierra Leone (95%) and Carbo Verde (92%) had the highest average enrolment rates in West Africa during 2010-2018, and they were also among the leaders in terms of net male enrolment with 95% and 94% respectively. Net school enrolment was consistently the least in Liberia, where net female and male enrolment rate stood at 42% and 43% respectively during the same period. It was also observed that net enrolment rate was higher for male than female in almost all the countries, except Gambia, Senegal, Ghana and Sierra Leone. Moreover, as revealed in figure IV-4a, adult literacy rate was below 50% between 2014 and 2018 in many countries in West Africa. This poor literacy status may prove to be a hindrance to sustainable development in the sub-region.

Figure IV-4a Literacy rate, adult total (% of people aged 15 and above: 2010-2017)

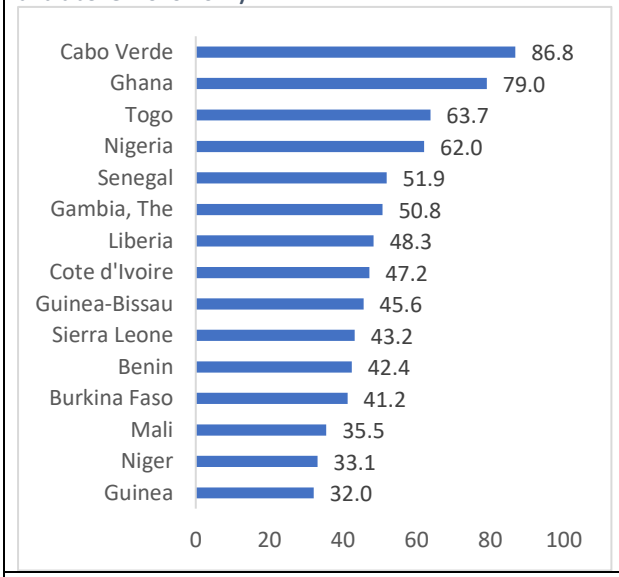
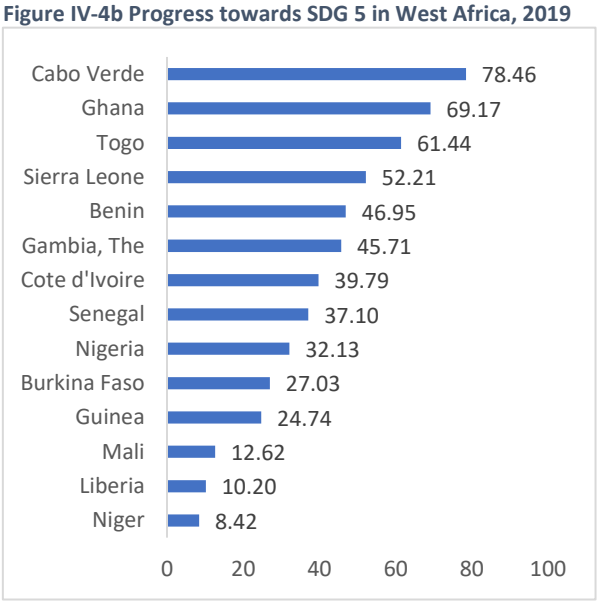


Figure IV-4b Progress towards SDG 5 in West Africa, 2019



Source: ECA, based on data from WDI and Sachs et al, 2019

58. Educating the young population is top priority for sustainable development as it represents a great step in preparing for the sustainability of current developmental efforts. However, while some West African countries have managed to keep all their children in school, many others in the sub-region have over 20% of children of primary school age out of school.

3. Health

59. The spread of COVID-19 reveals how the provision of health care can be challenging even in countries with a large number of hospitals and other health-care providers. There is therefore a concern about the capacity of countries in West Africa to efficiently respond to the pandemic. Using the number of physicians as a proxy for the quality of health systems, figure IV-5a shows that the proportion of physicians per 1000 of the population is very low in West African countries compared to developed economies like Italy and France with an estimated 4 and 3 physicians per 1000 people respectively. Except for Cabo Verde, with approximately 0.8 physician per 1000 people, figures are very low ranging from 0.4 in Nigeria to 0.025 in Sierra Leone. This is indicative of the huge dependency and burden on health systems, which are already constrained in quantity and quality of infrastructure and financial resources. The covid-19 pandemic not only weighs on the low quality of health systems in West African countries but also disrupts the public finances and thereby jeopardizing countries' efforts to harness demographic dividends.

Figure IV-5a Physicians (per 1,000 people)

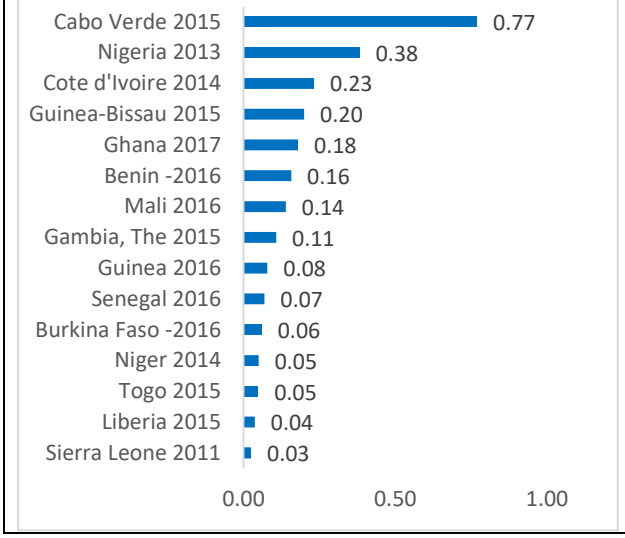
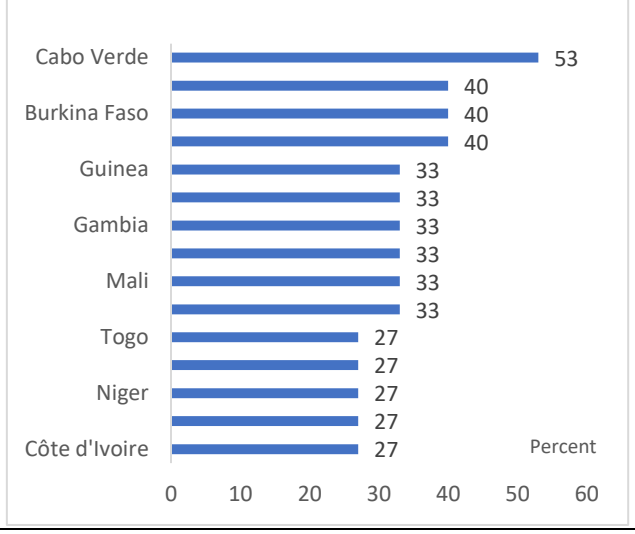


Figure IV-5b Progress towards Health Service Provision, 2019



Source: ECA based on WDI and International Health Regulations data

D. Environmental sustainability

60. Mitigating environmental degradation continues to dominate policy debates around the world, as it appears to be a major threat to sustainable development. This challenge is also recognized by the United Nations which identified sustainable cities and communities (Goal 11), responsible consumption and production (Goal 12) and climate action (Goal 13) among the SDGs. Carbon emission per capita, which is a major factor mitigating against the achievement of these goals, was particularly higher in Nigeria during 1980-2014.

61. Consumption of fossil fuel energy such as coal, petroleum and natural gas is a major contributor to environmental pollution which has serious implication for climate change and sustainable development. Consumption of fossil fuel among West African countries appears to follow dissimilar patterns over the period 2000-2014. During this period, average share of fossil fuel energy consumption out of total energy rose in West Africa from 28% to 35% (Figure IV-6a). Specifically, Ghana, Benin, Togo and Niger increased the share of consumption of this energy from 28%, 25%, 15% and 14% in 2000 to 54%, 37%, 19% and 24% in 2014 respectively. In Nigeria, this share revolved around 18% during 2000 and 2014, reaching a peak of 21.7% in 2005 and a minimum of 15.8% in 2009.

62. Figure IV-6b reports the evaluation of the progress towards achieving affordable and clean energy among West African countries. A huge gap is observed among the countries with only Cabo Verde (79.7%) and Ghana (52.4%) recording progress that is above average. Liberia (0.0%), Sierra Leone (2.2%) and Niger (2.3%) have made the least progress in achieving affordable and clean energy.

Figure IV-6a Fossil fuel energy consumption (% of total)

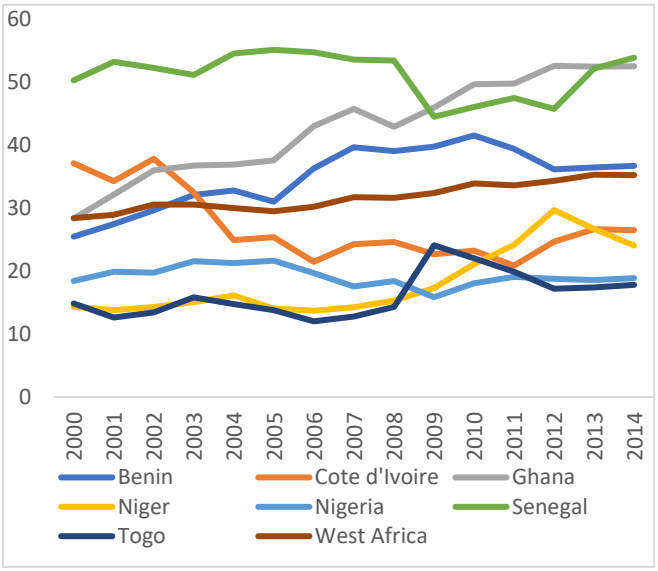
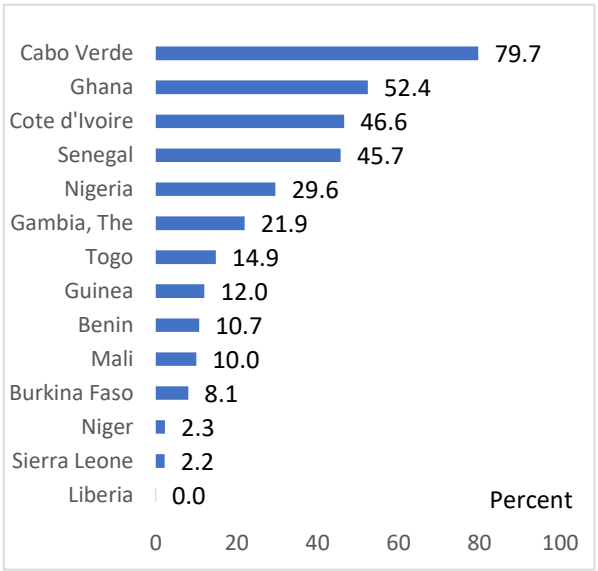


Figure IV-6b Progress towards SDG 7 in West Africa, 2019

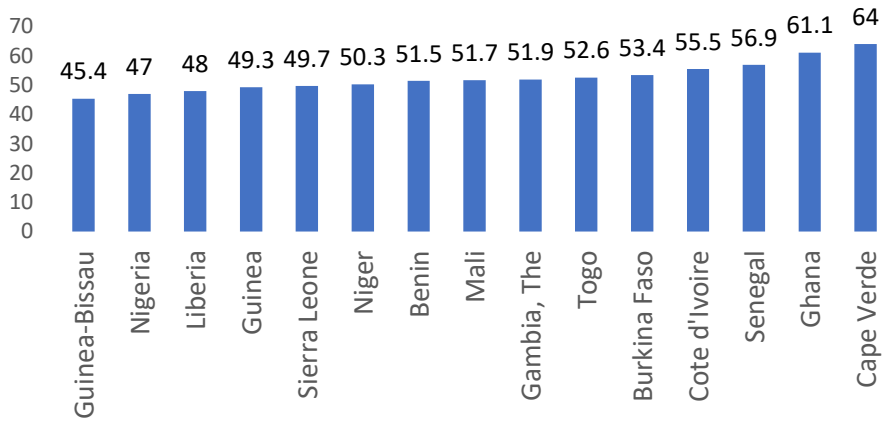


Source: ECA, based on data from WDI and Sachs et al, 2019

E. Progress towards Achieving the Sustainable Development Goals by 2030

63. West Africa as a key region in Africa has signed into both the African Union Agenda 2063 and the SDG 2030 Agenda for the progress of all the countries in the region. After five years of the implementation of the SDGs, there are indications that many African countries are lagging and are not on track for achieving the goals; most of these countries are actually in the West African subregion. The 2019 Africa SDG Index, which ranks African countries using 97 indicators across all 17 goals, indicates that most West African countries scored around 50%, with indices that ranged from 45.4 to 64 (Sachs et al., 2019). This indicates that most of these countries are just halfway to achieving the sustainable development goals. Specifically, Guinea-Bissau (45.4), Nigeria (47) and Liberia (48) are farthest away from full attainment of the SDGs in West Africa, while Cabo Verde (64) and Ghana (61.1) lead the ranks (Figure IV-7). It therefore implies that a large population, as in the case of Nigeria, may not be enough for sustainable development while investment to enhance the quality of the population is a worthy commitment towards achieving the SDGs as observed in the case of Cabo Verde.

Figure IV-7 Progress towards the Achievement of the SDG Index for West African Countries (2019)



Source: ECA, based on data from the Sachs et al, 2019

64. Most West African countries still have a long way to go in achieving sustainable development. The rate of progress towards full achievement of the sustainable development goals in West Africa may be enhanced by harnessing demographic dividends.

F. Implications of covid-19 for SDGs: challenges and opportunities

65. Even if African countries are a long way off achieving the sustainable development goals, progress made so far could be damaged by the lasting impacts of covid-19. The Sustainable Development Report 2020 examined the likely effect of the covid-19 pandemic on the sustainable development goals and classified these effects by severity: highly negative, moderately negative and unclear. Table 1 shows the negative impact (either high or moderate) of the pandemic on the sustainable development goals except for the environmental and biodiversity goals (SDGs 12-15) for which the impact is unclear.

Table 1: impact of Covid-19 on the sustainable development goals

Highly negative impact	Mixed or moderately negative impact	Impact still unclear
SDG 1: no poverty SDG 2: Zero hunger SDG 3: Good health and well-being SDG 8: decent work and economic growth SDG 10: Reduced inequality	SDG 4: Quality education SDG 5: Gender equality SDG 6: Clean water and sanitation SDG 7: Affordable and clean energy SDG 9: Industry, innovation and infrastructure SDG 11: Sustainable cities and communities SDG 16: peace, justice and strong institutions SDG 17: partnerships for the goals	SDG 12: Responsible consumption and production SDG 13: Climate action SDG 14: Life below water SDG 15: Life on land

Source: sustainable development report 2020

66. On a positive note, West African countries can capitalize on covid-19 induced technology and youth innovations in response to the pandemic. The rapid adoption of new technologies especially ICTs resulting from the covid-19's shock will support virtual learning which is critical to educational continuity. The pandemic also underscores the need for digital skills if African countries want to take advantage of the growing digital economy. There is also a renewed interest in investing in health system. Such an investment comes in many different forms such as increased number of skilled health workers, improvement in health infrastructure, provision and affordability of essential medicines.

V. Key Findings and Policy Recommendations

67. **West Africa has one of the youngest populations in the world**. The achievement of both the 2030 Sustainable Development Goals and the African Union Agenda 2063 will depend on the capacity to promote inclusive growth that benefits to the whole West African populations. This study revealed that the structure of population and its dynamics have far-reaching impact on the welfare and economic prospects of countries. The West Africa region is still in the middle of demographic transition and this is a good opportunity for the region to benefit from the ensuing demographic dividend. Although the countries are at different stages of demographic transition, the most important consideration is that all the countries will eventually experience the transition.

68. **It is imperative to put in place policies and actions that will accelerate and help realise the promise of the potential dividend.** The starting point is for the countries to create the necessary conditions to harness the demographic dividend. This often happens through reduction in fertility, which will eventually reduce the level and rate of child dependency. It is

only when child dependency is reduced that the proportion of working population and the support ratio of the countries can increase, thereby leading to the demographic dividend. Fertility rates are still high in most of the West African countries. There is the need to set policies that will reduce fertility across countries in West Africa to reap the demographic dividend which is crucial to sustainable development. As the covid-19 pandemic brought severe disruption to drivers of demographic dividend such as a skilled labor force, investing in digital connectivity to increase online schooling is an important policy goal.

69. **Jobs are vulnerable, and productivity is very low in West Africa.** The demographic dividend can be harnessed when the productive section of the population is skilled and has decent jobs. Given west African countries are already entering into the period of demographic window of opportunity, improving the quality of human capital in the sub-region should be a priority. Children and young people will be the driving force behind demographic transition and human development in the next few decades. Deliberate measures and scaled-up investments need to be in place to enhance their education, health and passage from school to work, as underlined in Agenda 2030. In this regard, there should be substantial increase in investment in quality education and health due to a large out of school population in West Africa. Although, many countries have made significant progress towards primary education for all and towards gender parity in education, considerable actions are still required for the secondary and tertiary levels of education.

70. Once the human capital has been built and strengthened through quality health and education, it is important that the young population has a smooth transition from school to work. The labour market needs to be as flexible as possible to absorb the large cohort entering the working ages in the next 25 years. Policies must also be formulated to enhance the environment that will give opportunities to young people to have decent jobs. Among other things, policies to provide job-matching assistance, and offer training and mentoring aligned with current labour, should be put in place. West African countries must prioritize job creation in national development strategies.

71. Private sector can be the engine of decent and productive work. Hence, governments need to encourage private sector development as the backbone of economies. The support can include simplifying business regulations, increasing trade and market access, and probably revisiting tax codes. Although agriculture is the mainstay of most economies in West Africa, government policies should promote structural transformation and greater productivity. Prosperity of the countries will depend on a structural shift from low-productivity agricultural activities to high-productivity activities in other sectors in order to improve competitiveness and stimulate productivity.

72. **Child survival and the health status of individuals are improving, but a slow pace.** This therefore calls for improvement in the provision of access to quality health services in different

countries. The consensus is that quality of health in terms of provision of universal health services and nutrition will improve the quality of the individuals that form the population of the region. Specific mention must be made of access to quality reproductive health as this will assist couples in having children as a matter of choice. It is important for families to make personal decisions about family size with special consideration for physical, financial and social factors which help to develop responsible attitudes towards decision making about family size regardless of the prevailing cultural and religious norms. There should also be access to quality immunization, and child health including reduction in infant mortality, and malnutrition. The key issue is to make health services available to everyone, as well as affordable, efficient and of good quality. They should be comprehensive, covering not only physical and mental well-being, but also social, economic and cultural factors that influence health.

73. **Regional integration is needed in response to increasing migration dynamics in the sub-region.** The issue of migration within and out of the West African sub-region can be both an opportunity and a challenge to the region's capacity to harness the demographic dividend. Policies can be put in place to emphasise quality migration and discourage the predatory form of migration where migrants are worse off. Demographic differences among sub-regions could be harnessed by enhancing financial and labour integration thereby increasing prospects for all countries in the region to capture demographic dividends. Since all countries will pass through demographic transition, which will happen at different periods, there are opportunities for learning from one country to another. As transition proceeds quickly, policy and institutional structures to manage it must evolve in such a way to guide and direct the transition to make it beneficial.

74. **National development plans and strategies should integrate population policies pertaining to demographic changes.** This is fundamental because better and quality economic management depend on the understanding and utilisation of the power embedded in the population structure of countries. The integration of population in development policies will only be beneficial if there are credible population data. There are currently challenges to availability of quality data in many countries. This calls for a data revolution that will make planning easier, not just for harnessing the dividend but also as part of understanding and planning for the achievement of the Sustainable Development Goals.

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