



POPULATION GROWTH CHALLENGES IN SUB-SAHARAN AFRICA: ARE WE AWARE?

Sub-Saharan Africa experiences continued population growth, at a pace that poses significant challenges to socio-economic development. Rapid population growth raises challenges on employment and puts additional pressure on education systems, affects food availability and may contribute to poverty and income inequality, as well as to exacerbating conflicts and strengthening authoritarian governments.

The dominant demographic force in Sub-Saharan region for the next few decades will be the continued population growth as fertility decline in this region has been, and will probably be, very slow. This continued growth poses considerable challenges to the countries' socio-economic development, as Michailof (2016) put it in "Programmed Explosion?".

Sub-Saharan population in 2020 is estimated at 1.1 billion people and is growing at 2.65 per cent per year (UNDESA, 2019). Medium variant projections of population growth rate made by UNDESA (the United Nations Department of Economic and Social Affairs), forecasts a steady decrease of the annual population growth rate in Sub-Saharan Africa from now on, reaching around 1.8 percent in 2050 and 0.66 percent by 2100. Considering this medium growth rate variant, the population in Sub-Saharan Africa in 2050 would be approximately 2.1 billion and in 2100 it will be 3.8 billion, much less than the population reached in case the growth rate is constant (UNDESA, 2019). So far, the United Nations (UN) projections for few decades ahead have been rather accurate, while for long term they primarily serve as a scenario that may occur under certain possible conditions that may not happen exactly as predicted (Cleland and Machiyama).

However, if the present rate of population increase remains constant, by 2050 the population in the region would be 2.3 billion and at the end of the century, it would be 8.5 billion. In fact, a rate of population growth of this magnitude would double the population in around 28 years, in 56 years it would be four times and by the end of the century it would be eight times today's population. While decreases in fertility for the past decades may suggest that rates of

population increase would tend to lower significantly, the truth is that the rate of natural population increase remains almost unchangeable for the last 60 years as can be observed in Figure 1. Indeed, the Crude Birth Rate has been declining, reflecting the decrease of the number of children women have, but also mortality rates also have decreasing (particularly child mortality rates), and the Crude Death Rate also declines. Today's African women still bear 4.72 children on average during their lifetime.

The present population growth rate poses serious problems to the countries' development. The Berlin Institute for Population and Development (Sippel et al, 2011) reports that "In our study of 103 current and former development countries, we could show that no single country has developed socio-economically without a parallel decline in the birth rate." They demonstrated that there is a correlation between the degree of fertility decline and the present level of development of a country. In addition, John May's findings indicate that the 'Asian Miracle' is attributable to a large extent (40%) to rapid declines in fertility

and age structures (May, 2012). Indeed, most prevalent and severe problems today occur in Sub-Saharan Africa, where the 27 countries with the largest development problems are the ones that have the highest fertility rates (Cleland and Machiyama, 2016).

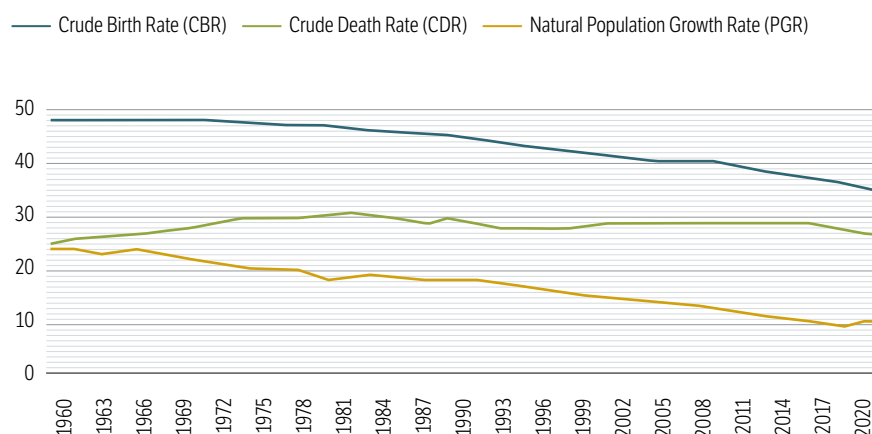
Labour force

Perhaps the most dramatic and serious challenge as consequence of rapid population growth is the increase of working age population, that can be evidenced in Figure 2, where the number of Sub-Saharan working age people in the past, current and projected in 30 years period is shown. As can be seen, every 30 years the number of working age people more than doubles, and so does the corresponding increments. Indeed, the average annual increment for people aged 15-64 years for the period 1960-1990 was 4.4 million, for the next 30-year period this average was 11.6 million and it is projected that for the period 2020-2050, it will be more than 25.6 million a year (UNDESA, 2019).

For instance in Mozambique, a country that is home to around 31 million people

FIGURE 1. NATURAL GROWTH RATE, CRUDE BIRTH RATE AND CRUDE DEATH RATE IN SUB-SAHARAN AFRICA, 1960-2022

Source: World Bank Data.



in 2020, the number of working age people that was added, on average, to the previous year's, was 453,000 people for the decade 2010-2020 and, according to medium variant UN projections, the average annual increment per year will grow steadily to 644,000 during the decade 2020-30 and will continue to grow to 923,000 yearly average in the decade 2040-2050 (UNDESA, 2019).

Because of population growth, governments are unable to guarantee employment for most of the working age population, even when they manage, with great efforts, to increase considerably the number of employed people, as the rate of population growth is just too high to keep pace with it.

Data on employment and unemployment in Africa is rare, imprecise and sometimes estimates from various UN organisations can differ significantly, essentially due to the existence of a vast and sizeable informal sector in the African economies, which is difficult to measure or even to estimate, but is an important part of a country's economic activity (UNDP, 2011). For instance, in Maputo Province, south of Mozambique, with a population of 1.8 million people in 2017, the total number of people who worked in the Census reference week (including work in the informal sector) increased around 110,000 from 2007 to 2017. Nevertheless, the percentage of people who worked decreased from 54% to 44% in the same period, and the number of working age people that does not work increased from 306,000 in 2007 to 612,000 in 2017 (INE, 2010; INE, 2019).

Of particular interest is data on young people work. Indeed, as a result of the shape of the age pyramid, a large proportion of the population is young people. In Table 1, it can be observed that around one third of total population in Sub-Saharan Africa is aged 15-34 years. Furthermore, youths suffer more the lack of employment than the older ones. Figure 3 presents the percentage of people aged 15 to 59 years who worked in the Census reference week, in Maputo Province, Mozambique, in 2007 and 2017. The percentage of youths aged 20-24 years who worked is almost half than those people aged 45-49 years. Aggravated by the shape of the age pyramid, the number of unemployed youths is much higher than the adults.

Investing in the youth, particularly through the creation of labour-intensive programmes, is a crucial strategy to transform the demographic challenge into economic opportunities, social inclusion and poverty reduction.

Education

Effects of rapid population growth on education are worrisome due to the stress it poses on school attendance and to the worsening of the quality of educational systems. Immediately after independence, most African countries set up educational systems aiming to implement universal schooling, at least at the level of primary education. Nowadays, governments struggle hard to keep this universal schooling. Rapid population increase is a great part of the problem, as every year there are many more school age children than there were in the previous year. In Table 3, the evolution of school age population in 30 years periods, from 1960 to projected 2050 in Sub-Saharan Africa is presented. For instance, the number of children aged 6-14 years, mostly primary school age children, more than doubled

from 1960 to 1990, and from 1990 to 2020 (UNDESA, 2019). This means that in these thirty years periods, in order to just maintain the quantity and quality of existing primary school services, countries should more than double schools, teachers, equipment, etc. This trend will slightly decrease for the next 30 years, but still, there will be a large increment.

FIGURE 2. POPULATION AGED 15-64 YEARS IN SUB-SAHARAN AFRICA, IN 30-YEAR PERIODS (in millions)
Source: UNDESA, 2019.

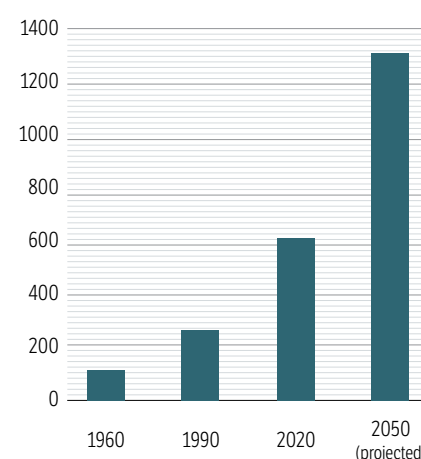
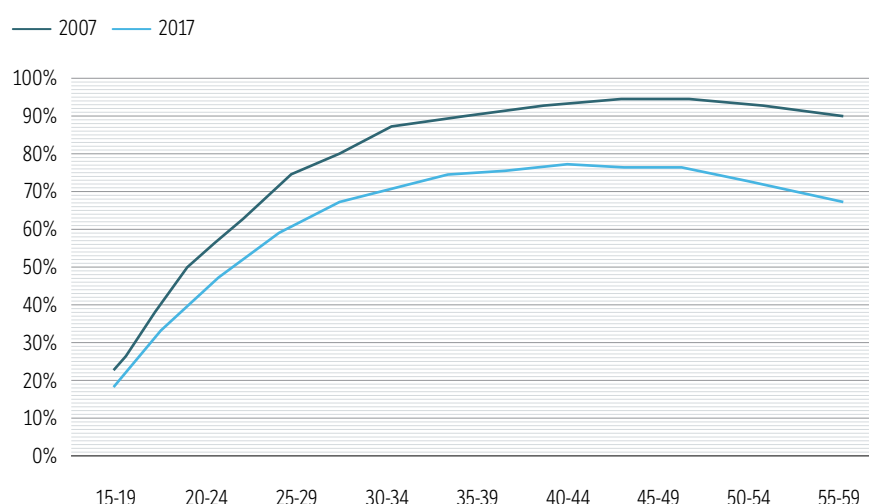


TABLE 1. SIZE OF YOUTH AGED 15-24 YEARS, AGED 15-34 YEARS, AND TOTAL POPULATION IN SUB-SAHARAN AFRICA, 2010-2025 (in millions)
Source: UNDESA, 2019.

Year	Youth aged 15-24 years	Youth aged 15-34 years	Total population
2010	172 (20%)	296 (35%)	854
2015	193 (20%)	336 (35%)	964
2020	217 (20%)	380 (35%)	1,084
2025 (projected)	243 (20%)	426 (35%)	1,212

FIGURE 3. PERCENTAGE OF PEOPLE AGED 15-59 YEARS WHO WORKED IN THE CENSUS REFERENCE WEEK, MAPUTO PROVINCE, MOZAMBIQUE, 2007 AND 2017
Source: INE (2010; 2019).





Educational systems have to manage this situation by increasing the number of schools, teachers, books, etc. Often, when a country's revenues don't allow for an appropriate increase of the education budget, education managers resort to other solutions such as increasing the number of children per class, diminishing the number of hours in school, giving classes under trees. Between 2005 and 2011, school attendance rose from 59 to 96 per cent in Burundi, but the average number of students per class is estimated at 83. In Niger, Burkina Faso and Mali, more than half of young people aged 15-19 years did not finish primary school. Among the young people aged 20-24 years a large proportion has no schooling at all (for instance, more than 50% in Burkina Faso and Mali, more than 30% in Chad and Ethiopia). In general, girls' school enrolment is lower than boys', more so in the rural areas (UN, 2019).

Poverty and Food Availability

Rapid population growth affects poverty in diverse ways and levels. Various studies point out that the probability of a family with large number of children to be poor is higher than a family with a small number of children. In this case, high fertility not only increases the number of poor but also increases the percentage of poor and tends to reproduce poverty rapidly. Furthermore, at national level, economic improvements are not translated into significant per capita revenues in high fertility settings. High population growth in the rural areas exacerbates the rural-urban migration. In an interview at the Woodrow Wilson School, Princeton University, Eliya Zulu (2011) from AFIDEP (the African Institute for Development Policy) stated that rapid urbanisation is one of Africa's biggest challenges. Indeed, as he said, "Africa is the least urbanised region of the world now, but it's growing at the highest rate... If the economies are not going to develop the capacity to absorb this population and create enough jobs for them, there's going to be chaos, because you can't have all these young people without having jobs for them." In 2009, Sub-Saharan Africa countries were producing less food per head than at any time since independence (Evans, 2009). Furthermore, since the 1970's

TABLE 2. SCHOOL AGE POPULATION IN 30 YEARS PERIODS, FROM 1960 TO PROJECTED 2050, SUB-SAHARAN AFRICA (in millions)

Source: UNDESA (2019).

Age groups	1960	1990	2020	Projected 2050	Increment 1960-1990	Increment 1990-2020	Increment 2020-2050
6-14	48.9	119.1	254.4	408.2	70.2	135.3	153.8
15-17	13.5	32.0	72.7	126.3	18.5	40.6	53.6

Sub-Saharan Africa has been a net importer of food and between 1980 and 2007, net imports in real terms grew 3.4% a year (Rakotoarisa et al, 2011). Studies attribute population growth to account for a large part for this increase. While enough food is produced worldwide, it is not always produced where it is needed, and in countries with rapid population growth there are barely yield increases through modern farming methods. So, food insecurity tends to grow.

Rapid population growth may exacerbate the income inequality and strengthen authoritarian governments. Indeed, as Nancy Birdsall (1994) mentions, the massive availability of labour often provokes a reduction of salaries, which in turn increases wealth inequalities.

With Africa facing a large increase in population for the next decades, food availability should grow proportionally just to maintain the existing levels of malnutrition. However, big questions arise. First, as the rural population continues to grow, the amount of arable land will decline in inverse proportion. Second, 95% of Sub-Saharan Africa agricultural production is rainfed, thus extremely subject to climate change. Third, farm sizes are already very small, and will continue to decrease with rural population increase, and thus the output will less and less be able to feed the subsistence farmers. For instance, in Mozambique at least 25% of the farmers control less than half hectare (Cleland and Machiyama, 2016).

The Intergovernmental Panel on Climate Change (IPCC) considers that Africa will be the continent hardest hit by the consequences of climate change. Indeed, experts think that large extensions of land will become dry, millions of people will be thirsty, and livestock will suffer considerably (Sippel et al, 2011). Evans (2009) reports that the outlook for global food security over the coming decades will be characterised by turbulence, uncertainty and risk.

Political Strife

Most of the poorer countries are in Sub-Saharan Africa, and the most prevalent and severe problems today occur in the region. A likely trend between now and mid-century is increased intra-regional migrations, probably involving millions of people as people in the poorer countries will tend more and more to migrate to others more well off, and the incapacity of controlling borders efficiently will not prevent these movements. When common culture and language are present in both migrants and host communities, the prospects may be good, but the key question is whether this cross border migration will bring widespread violence.

It is well known through human history that high competition for scarce resources has often led to political instability and war. The rapid population growth without a corresponding socio-economic development can exacerbate existing conflicts that otherwise may not be as significant. This includes disputes between countries, armed rebellions, civil conflicts. More and more scholars attribute to rapid population growth part of the responsibility of conflicts in the past three decades, such as Rwanda (King, 1996).

Rapid population growth may exacerbate the income inequality and strengthen authoritarian governments. Indeed, as Nancy Birdsall (1994) mentions, the massive availability of labour



often provokes a reduction of salaries, which in turn increases wealth inequalities. This increase in inequality prevents the policies on economic development to become as effective as it was projected. Indeed, a society where the majority of people is poor and poorly educated has difficulty in creating wealth. Meanwhile, the creation of an elite in contradiction with a vast and poor majority – so poor that their subsistence is not guaranteed – leads governments to use strong measures and restrict freedom and basic rights to curb a majority revolt. In addition, this situation stimulates corruption. Moreover, young adults, particularly young men, tend to resort to violence if they are denied any prospects such as education and jobs. Some studies show that countries with disproportionately high percentage of adolescents are much susceptible to political unrest and armed conflict, and fragile governments will not be able to guarantee peace.

Conclusion

As mentioned at the beginning, the dominant demographic force for the next few decades will be continued growth as fertility decline in sub-Saharan Africa has been very slow.

This analysis suggests that Malthusianism may not be only a vision of the future, somehow some countries are already experiencing some of its features. Population growth has a physical limit, but the main problem in sub-Saharan Africa population growth is its speed, which is overwhelming. Even large decreases in fertility would not solve immediately all problems arising from the rapid population growth, but they would slow that growth and support the development process. Nevertheless, strategies for development and preventing large scale Malthusian turmoil are urgently needed to put in place.

Many Asian countries had a similar situation a few decades ago. Strong policies to curb high fertility were put in place and fertility declines were fast and at the same time strong, while sound economic policies were also implemented.

Improving agricultural output is urgent but needs strong investments. Complementary, long-term development will not prevail without a rapidly growth industrial base. Investing in the

youth, particularly through the creation of labour-intensive programmes, and providing them with quality education are crucial strategies to transform the demographic challenge into economic opportunities, social inclusion and poverty reduction. ●

References

- Birdsall, Nancy (1994). Government, Population, and Poverty: Win-Win Tale. In *Population and Development: Old Debates, New Conclusions*, Transaction Publishers, New Brunswick (USA) and Oxford (UK), 1994, Ch.9.
- Cleland, J. and Machiyama, K. (2016). The Challenges Posed by Demographic Change in sub-Saharan Africa: A Concise Overview. In *Population and Development Review* 43(2). October 2016.
- Evans, Alex (2009). The Feeding of the Nine Billion, Global Food Security for the 21st Century. Chatham House, Royal Institute of International Affairs, UK, pp.6-10.
- INE (2019). Resultados Definitivos do Censo 2017 (por Província). Instituto Nacional de Estatística, Mozambique.
- INE (2010). III Recenseamento Geral da População e Habitação 2007, Resultados Definitivos. Instituto Nacional de Estatística, Mozambique.
- Haub, Carl; Sharma, O.P. (2006). India's Population Reality: Reconciling Change and Tradition. *Population Bulletin*.
- King, M. (1996). The Population Wolf and Demographic Entrapment in Rwanda. *American Journal of Public Health*, 1996 Jul; 86(7): 1030-1.
- May, John (2012). *World Population Policies: Their Origin, Evolution, and Impact*. Springer.
- Michailof, Serge (2016). Programmed Explosion? International Reports. Konrad-Adenauer-Stiftung. <https://www.jstor.org/stable/pdf/resrep10104.6.pdf>
- Rakotoarisa, Lafrate and Pascali (2011). Why has Africa become a net food importer? Rome, FAO, Trade and Markets Division.
- Sippel, Lilli; Kiziak, Tanja; Woellert, Franziska and Klingholz, Reiner (2011). *Africa's Demographic Challenges: How a Young Population Can Make Development Possible*. Berlin: Berlin Institute for Population and Development.
- UNDESA (2019). *World Population Prospects 2019, Volume 1: Comprehensive Tables*. United Nations Department of Economic and Social Affairs (UNDESA) Population Division.
- UNDP (2011). *Assessing progress in Africa toward the Millennium Development Goals*. United Nations Development Programme, New York, pp.11-17.
- United Nations (2012). African schools keep an eye on the prize. *Africa Renewal*, August 2012. <http://www.un.org/africarenewal/magazine/august-2012/african-schools-keep-eye-prize>
- Zulu, Elya. (2011). Population Growth, Family Planning, and Urbanization in Africa. *New Security Beat*, Wilson Center. <http://www.newsecuritybeat.org/2011/02/elya-zulu-on-population-growth-family-planning-and-urbanization-in-africa/>