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DEMOGRAPHY AND ECONOMIC EMERGENCE OF SUB-SAHARAN AFRICA

Foreword by Hervé Hasquin

ACADÉMIE ROYALE DE BELGIQUE
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Foreword

A synthesis that is in line with current events. Covid-19 included. No frills. Well documented. Scientifically flawless. And which therefore is without appeal and may seem cynical in its analysis and conclusions about the future of sub-Saharan Africa if nothing changes. That's 48 countries. Not included are the countries of North Africa: Algeria, Egypt, Libya, Morocco, Sudan, and Tunisia.

What has changed since the memorable Third "International Conference on Population and Development" held in Cairo in September 1994? The Programme of Action adopted included five objectives considered essential:

- Sustained economic growth within the framework of sustainable development
- Education, especially for girls
- Gender equity and equality
- Reduction of infant, child, and maternal mortality

- Universal access to reproductive health services, including family planning and reproductive health.

An obvious fact at the time, still relevant today. Economic development is related, in other words, is penalized by high fertility. There is therefore a need for family planning services that also take into account social and health concerns.

A quarter of a century later. What are the authors' conclusions? Synergies between rapid fertility decline, socioeconomic development, human capital formation, job creation, and the advancement of women are the key to economic emergence.

What are the obstacles? Difficulties in gaining acceptance for contraception. Opposition from husbands or medical staff, culture, religion... Let us recall that in 1994, the Vatican, the Islamic Republic of Iran, and some other countries had fought against the project... And then, there is especially in sub-Saharan Africa the resistance of political leaders and elites. They are opposed to family planning. As in the previous century, they remain convinced that population growth is an asset. The old adage, the number of "men" is the strength of a country and is even a source of development... A serious mistake, the available data clearly highlights this. Thirty-four countries in sub-Saharan Africa are paying heavily for their

slow fertility transition. Overall, the high rate of growth of the sub-Saharan population has a direct consequence: GNP/capita increased by only 48% between 1960 and 2018; it is currently the lowest of all regions of the world.

In short, this is a part of the world that in the 21st century will see its population multiplied by 2.5 or even 5 times, depending on whether or not future generations break free from traditional procreative behaviors. Fortunately, we are also seeing an increase in life expectancy due to a drop in infant and child mortality. High population growth is therefore inevitable. Migratory movements will also increase in scale, both within and outside the continent. It is vital that the European Union prepares for this. A book as a warning. An alert!

Hervé Hasquin
Honorary Permanent Secretary,
Royal Academy of Belgium

MAP OF SUB-SAHARAN AFRICA

Source: Communications Development Incorporated, Washington, DC, based on World Bank Group original.

Introduction

After decades of disappointing socioeconomic outcomes, a mood of optimism appears to have reenergized sub-Saharan Africa (SSA) leaders and policymakers since the early 2000s. The faster integration of most of the 48 countries of the region into the world economy and the youthfulness of SSA populations are also deemed a harbinger of better times.

However, several researchers highlight the slow increases of the GDP per capita of many SSA countries because of their high population growth. These slow GDP increases jeopardize the reduction of poverty levels and the improvement and preservation of human capital. These researchers also note that several countries continue to face challenges with governance, political stability, war, terrorism, epidemics, and climate change. As a result of these factors and the promise of greater economic opportunities elsewhere, many

migrants originate from Africa and resettle either within the continent or on more distant shores.

Today, the majority of SSA countries are at a critical stage in their development. The next decades will determine whether or not countries in the region will be able, as did many other less developed[1] (developing) countries, to accelerate their demographic transition, capture a first demographic dividend, and become emerging economies. The complexity of these issues and the diversity of the SSA region call for an in-depth examination.

Most SSA countries have started their demographic transition – the gradual shift from high death and birth rates to lower rates – but have done so later and at a much slower pace than other regions of the world. The SSA population is estimated at 1.1 billion people in mid-2020 and is expected to double between 2020 and 2050. Depending on the pace of the fertility decline, it could possibly even reach between 2.7 to 5.2 billion people by 2100.

Apart from the sheer increase in the numbers of people, the demographic transition will also result in major changes in the age structure of the SSA population. With the expected decline of fertility, the working population will grow more rapidly than the dependent population (below age 15 or 20 and 65 and above). Therefore, more workers will be

[1] We have adopted this wording, following what the United Nations do in their *World Population Prospects*.

able to generate an economic surplus, should they have access to remunerated employment.

The potential economic surplus triggered by the demographic transition is called the demographic dividend. This recent demo-economic analysis is based on an examination of the past experience of East and Southeast Asia and the "Asian economic miracle", which occurred between 1970 and 2000. A first demographic dividend took place when East and Southeast Asian economies grew rapidly, thanks to rapid fertility declines leading to relatively larger numbers of workers and smaller numbers of dependents. Consequently, East and Southeast Asian countries had additional resources to enhance the quality of their human capital, which improved the productivity of the labor force and enabled governments to invest more in their economies and infrastructure. At the same time, East and Southeast Asian countries improved the status of women, and included them in the labor force. Later, when the benefits of the first dividend had been adequately saved and invested, East and Southeast Asian countries also started to enjoy a second demographic dividend.

Nowadays, a key international public policy question is whether the capture of a first demographic dividend could be replicated in the SSA context, as the economic situation of the region has become more encouraging. However, several

hurdles remain for the region, including far less optimistic economic forecasts. In particular, the coronavirus disease 2019 (Covid-19) will have devastating effects on the global economy and will also affect very negatively the African economies. In parallel with the efforts to recover from the Covid-19 pandemic, most SSA countries and their development partners will need to face another critical challenge, namely to implement policies to trigger a rapid fertility decline, capture a first demographic dividend, and reach economic emergence. SSA countries will also need to strengthen their fragile health systems.

The first necessary condition to capture a demographic dividend is to accelerate the fertility decline. This is usually done through developing socioeconomic policies for improved economy, health and family planning programs, gender, education, and good governance, which must accompany the fertility decline process. However, such policies to bring a fertility decline are difficult to enact due mainly to cultural and religious resistances as well as other competing interests.

Today, many economists and African leaders believe that high economic growth will allow SSA countries to increase per capita income and reduce poverty. Eventually, so goes this argument, fertility decline will occur as a by-product of socioeconomic development. In reality, the relationship runs the

other way around: it is reducing fertility and decreasing the number of young dependents that foster economic growth and enable countries to capture a first demographic dividend.

This book addresses these issues and intends to provide a better understanding of SSA demographic and socioeconomic prospects, as well as their consequences for SSA and the rest of the world. The book is meant to appeal to a wide-ranging audience – from policymakers to journalists to scholars and the general public.

The volume contains six chapters. Chapter 1 presents the salient features of the demography of SSA in the world context. Chapter 2 outlines the region's population projections and socioeconomic prospects. Chapter 3 provides an overview of the complex relationships between population dynamics and development, focusing on the demographic transition, demographic dividends, and the concept of economic emergence. Chapter 4 stresses the importance of the links between fertility decline, increased contraceptive use, and reproductive rights. Chapter 5 analyzes the population and socioeconomic policies that must accompany the search of a first demographic dividend and economic emergence. Finally, Chapter 6 assesses the prospects for SSA countries to capture a first demographic dividend and become emerging economies.

CHAPTER 1

The Demography of Sub-Saharan Africa

This chapter first reviews the historical evolution of the world population by region since 1500, and next focuses on the evolution of the SSA population between 1913 and 2020. Then, the chapter turns to the demographic transition of SSA and examines the various components of that process, namely mortality, fertility, and the population momentum. The chapter also summarizes the urbanization and international migration trends concerning the region.

A HISTORICAL PERSPECTIVE

Around the year 1500, the total world population was estimated to be 438 million people[1].

[1] Maddison A., *Growth and Interaction in the World Economy: The Roots of Modernity,* Washington, DC, The AEI Press, 2005.

In 1820, at the beginning of the "capitalist period", the world population was just above the one billion mark. Then, it increased to 1.8 billion in 1913, before World War I, and is estimated to be 7.8 billion in 2020. Up to the beginning of the 19th century, the world population had increased at an average rate of about 0.3% per year. Between 1870 and 1950, this rate reached 0.8% to 0.9%, and 1.9% during the "Golden Age" of the capitalist period, 1950-1973. However, after this period of growth, the population growth rate started to decline, during what Angus Maddison (1926-2010) called the "neo-liberal order" era.

The population of all regions of the world increased significantly between 1500 and 1913, but Africa's and SSA's populations increased less than in the other regions (see Table 1). Indeed, a long-term analysis of the SSA demography highlights that the population of the continent and particularly SSA grew rather slowly between 1500 and the beginning of the 20th century. Nonetheless, the SSA population may have doubled between 1500 and 1913, from 43 to 101 million. Another estimate of the SSA population in 1500 is at 78 million, leading to conclude that there was a quasi-stagnation of the population of SSA up to the beginning of the 20th century[2].

[2] Biraben J.N., "L'évolution du nombre d'hommes", *Population & Sociétés* 394, 2003.

TABLE 1: *Estimates of Population and Annual Growth Rates by Major World Region, 1500 to 2020*

Population (in millions)								
	1500	1870	1913	1950	1973	2000	2020	Ratio 2020/1913
Western Europe	57	188	261	306	357	389	425	1.6
Europe & ex-USSR	30	142	236	269	360	408	414	1.8
Asia-Japan	268	731	926	1 297	2 141	3 543	4 423	4.8
Latin America	18	40	81	169	308	522	654	8.1
Africa	47	90	125	228	393	811	1 341	10.7
-Sub-Saharan Africa (SSA)	43	77	101	179	304	640	1 094	10.8
World	438	1 272	1 791	2 536	3 928	6 143	7 795	4.4
SSA in the world	9.8%	6.0%	5.7%	7.1%	7.7%	10.4%	14.0%	

Population Growth Rate (%)						
	1500-1870	1870-1913	1913-1950	1950-1973	1973-2000	2000-2020
Western Europe	0.3	0.8	0.4	0.7	0.3	0.4
Europe & ex-USSR	0.4	1.2	0.4	1.3	0.5	0.1
Asia-Japan	0.3	0.6	0.9	2.2	1.9	1.1
Latin America	0.2	1.7	2.0	2.6	2.0	1.5
Africa	0.2	0.8	1.6	2.4	2.7	2.5
-Sub-Saharan Africa (SSA)	0.2	0.7	1.6	2.3	2.8	2.7
World	0.3	0.8	0.9	1.9	1.7	1.2

Sources: (1) 1500 to 1913, see MADDISON A., *op. cit.*; (2) 1950 to 2020, see UNITED NATIONS, *World Population Prospects: The 2019 Revision*, New York, United Nations, Department of Economic and Social Affairs, Population Division, 2019, using Maddison's definition of regions; (3) authors' estimates of SSA population in 1500, 1870, and 1913, and of population growth rates for the corresponding periods.

However, there is a consensus that the slower population growth in SSA translated into a decrease of its share of the world population, from 10% (or 17%) in 1500 to just 6% (or 8%) in 1913. This slower growth, or quasi-stagnation, has been attributed to the adverse impact of the slave trade, the spread of infectious diseases because of forced labor and migrations, and political repression during the colonial period. The magnitude of the demographic consequences of these factors is still debated among researchers.

FROM WORLD WAR I UNTIL 2020

While SSA's population growth was slow prior to World War I, the population of the region started to rise very rapidly in the 20th century and experienced a "demographic explosion"[3]. In the other regions of the world, such as Latin America and Asia, the population growth slowed rapidly after the 1970s due to the implementation of population policies and family planning programs.

In only one century, between 1913 and 2020, the SSA population has been multiplied 11-fold, compared with an 8-fold increase for Latin America, 5-fold for Asia, and less than 2-fold

3 Guengant J.-P., "Africa's Population: History, Current Status, and Projections", in Hans Groth and John F. May (eds), *Africa's Population: In Search of a Demographic Dividend*, Cham, Springer, 2017, p. 11-31.

for Europe. Thus, after four centuries of modest population growth, the 20th century was truly a period of demographic "catching up" for SSA. In addition, while population growth started to decrease in the 1970s in all other regions and reached growth of 0.4% per year in Western Europe and about 1% per year in Asia and Latin America in the 2000-2020 period, the SSA population has continued to increase by more than 2.5% per year. The late onset of the fertility decline in SSA, its slow pace, and sustained population growth rates over 2.5% per year for more than 50 years (a phenomenon never seen in human history) constitute the three features that render the SSA demographic transition unique and radically different from the transitions observed elsewhere in the world.

However, this demographic expansion of SSA was not accompanied by strong economic growth. Indeed, the increase of the GDP per capita since 1960 (only 48%) has been modest and by far the lowest of all other less developed regions. The SSA rapid population growth is expected to continue during the 21st century, in contrast to what is projected for the other regions of the world. SSA's share of the world population has doubled, from about 7% in 1960 to 14% in 2018, whereas its share of the world GDP has decreased from 2.2% in 1960 to 2% in 2018.

SUB-SAHARAN DEMOGRAPHIC TRANSITION

In the context of the ongoing demographic transition in the SSA region, this section addresses the drivers of population growth: mortality, fertility, and the population momentum. This is followed by a short summary of urbanization and international migrations trends within and outside the region.

Mortality

The mortality decline occurred later in SSA than in the other less developed regions. In addition, the mortality transition slowed in many SSA countries in the 1980s and 1990s as a result of the HIV/AIDS epidemic, social and political unrest, wars, and deteriorations of health services[4]. However, mortality levels have started to decline again in SSA, and the latest estimates of the life expectancy at birth are higher now than in the 1980s.

According to the UN 2019 estimates, the life expectancy at birth in 1960-1965 was below 40 years for 19 countries and between 40 and 50 years for 24 countries. Only five countries had a life expectancy at birth above 50 years, namely Botswana, São Tomé and Príncipe, Zimbabwe, and Mauritius (61 years) and the Seychelles (64 years). Twenty years later, in 1980-1985, before

4 GUENGANT J.-P., *op. cit.*

the increase of mortality due to the HIV/AIDS epidemic, life expectancy at birth had increased – varying from less than 60 years for 42 countries, and above 60 years for six countries (the same countries as above, plus Cabo Verde). Decreases or stagnation in life expectancies at birth for 25 countries occurred afterwards because of the HIV/AIDS epidemic. The five Southern African[5] countries and Zimbabwe were the most affected, with 9- to 17-year losses in life expectancy at birth, before the life expectancy began to increase again in the 2000s. For the 2015-2020 period, the life expectancy at birth is above the 1980-1985 levels in all SSA countries except in Lesotho. Overall, in 2015-2020 life expectancies at birth are between 50-59 years in thirteen countries, between 60-69 years in 31 countries (69% of the population of the region), and above 70 years in four island-countries (Mauritius, Seychelles, Cabo Verde, and São Tomé and Príncipe). On average, countries in SSA were able to increase their life expectancies by about 20 years since the 1960s.

These considerable gains are largely the results of major reductions in infant and child mortality rates. As life expectancy at birth is the average number of years that a newborn would live under the current mortality conditions, the higher the

5 According to the United Nations definition of the four sub-regions of sub-Saharan Africa.

infant and child mortality, the lower the life expectancy at birth. In all SSA countries, major reductions in infant and child mortality have occurred since the 1960s, with more rapid declines in several countries since the 1980s. ln 1960-1965, under-five mortality rates ranged from 250 to 400 per thousand in 26 countries, meaning that at least 25% of children died before reaching their fifth birthday. In 1980-1985, under-five mortality rates ranged from 250 to 300 per thousand in only seven countries, from 100 to 250 per thousand in 34 countries, and below 100 per thousand in seven countries (the Seychelles, Mauritius, Botswana, South Africa, Cabo Verde, Zimbabwe, and São Tomé and Príncipe). For the 2015-2020 period, under-five mortality rates vary from 100 to 130 per thousand in only seven countries (including Chad, Mali, Nigeria, and the Democratic Republic of the Congo), and they are below 100 per thousand in 41 countries. This means that, in most countries, fewer than one out of ten children is dying before their fifth birthday. In this context, the preference for high fertility among couples to ensure they will have enough surviving children to take care of them during their old age is far less valid than it was in the 1960s. Overall, compared to the 1960-1965 levels, the under-five mortality rates in 2015-2020 appear to have been reduced at least 4-fold in 22 countries, and between 2- and 4-fold in the 26 remaining countries. These impressive

declines are due to various interventions such as improved prenatal and postnatal care, better delivery conditions, improved immunization campaigns, oral-rehydration therapy programs, large-scale distribution of impregnated bed-nets to prevent malaria, expanded access to nutritional supplements, comprehensive sanitation programs, and improved efforts to combat the HIV/AIDS epidemic.

Despite these improvements, the estimated under-five mortality rate for SSA in 2015-2020 is still 78 per thousand. This number remains substantially higher than the rates estimated for Asia and Latin America, namely 31 and 19 per thousand, respectively. Consequently, the SSA life expectancy at birth is lower and stands at 60.5 years, compared with 73.3 years for Asia and 75.2 years for Latin America. In fact, in most SSA countries (32 out of 48), more than 50% of the causes of death are still attributable to communicable diseases and maternal, prenatal, and nutrition conditions, which are to a large extent a consequence of persistently high fertility levels. However, because of the growing numbers of people aged 50 years or older, the percentage of deaths attributed to non-communicable diseases (e.g., diabetes, cancer, stroke, and heart diseases) is increasing rapidly. Therefore, health systems in SSA need to allocate resources to address both communicable and non-communicable diseases.

Tackling this "dual burden of disease" will be a daunting task because most SSA governments presently allocate about 30 USD per year per capita to the health sector.

Fertility

Fertility declines have been slow and uneven in the 48 SSA countries. The slow pace of the fertility transition can be attributed to three main factors: a) low levels of development; b) a resilient pronatalist attitude in many societies in SSA; and c) weak and dysfunctional family planning programs[6].

According to the UN 2019 estimates, fertility levels reached their maximum in most SSA countries either in the 1970s or in the 1980s. Fertility began to decline more rapidly in the 1980s and 1990s (and later in some cases), that is 30 to 35 years after what was observed in most other less developed countries. Only in Mauritius and South Africa, fertility started to decline in the late 1960s. However, in some countries, results of recent surveys indicate that fertility is declining less rapidly than suggested by the UN 2019 estimates (e.g., the Democratic Republic of the

6 Bongaarts J., "Africa's Unique Fertility Transition", in John B. Casterline and John Bongaarts (eds), *Fertility Transition in sub-Saharan Africa. Population and Development Review* 43 (Suppl.), New York, The Population Council, 2017, p. 39-58.

Congo), or that fertility levels are higher than in previous surveys (e.g., Mali and Benin).

SSA fertility levels of the early 1980s can be considered representative of pre-fertility transitional levels for most countries. In 1980-1985, 40 countries, in which lived 90% of the population of the region, had total fertility rates (TFRs) of six children or more per woman. Among the remaining eight countries with TFRs below six children per woman, fertility started to decline only in Mauritius, the Seychelles, and South Africa (with 2.3, 3.5, and 4.9 children per woman, respectively). The decline was incipient in Lesotho, where the TFR was 5.4 children per woman. High prevalence of sexually transmitted infections resulted in lower levels of fertility (5.7 to 5.9 children per woman) in Gabon, Congo, Equatorial Guinea, and the Central African Republic.

In 2015-2020, according to the UN 2019 estimates and other recent surveys, fertility levels were about six or more children per woman in only four countries (Niger, Somalia, the Democratic Republic of the Congo, and Mali), between four and six children per woman in 33 countries, and below four children per woman in twelve countries. The decline of fertility between 1980-1985 and 2015-2020 was, on average, a reduction of one child or more per decade in only five countries (Botswana, Cabo Verde, Kenya,

Djibouti, and Rwanda – 7% of the population of the region). The reduction was less than 1 to 0.5 child less per decade in 27 countries, accounting for 49% of the population of the region, and below 0.5 child per decade for 16 countries, accounting for 44% of the 2020 population of the region. By contrast, between 1965-1970 and 2000-2005, or for slightly different periods depending on the countries, but for the same length of time (i.e., 35 years), the average declines per decade were higher in many other less developed countries. For instance, the declines were between 1.4 and 1.2 children per decade in (by decreasing order): Tunisia, Iran, South Korea, Viet Nam, China, Bangladesh, Thailand, Morocco, and Mexico, and about one child per decade in Hong Kong, Taiwan, Turkey, Colombia, Egypt, and Brazil, that is two to three times more rapidly than what had been observed in most SSA countries. This means that in these countries, the fertility transition from six to seven children per woman to around two children per woman or less, occurred in 30 to 40 years. On the contrary, the fertility decline for SSA was only of two children in 35 years, from its maximum of 6.8 children per woman in 1975-1980 to 4.7 children in 2015-2020. In fact, if present trends continue, the fertility transition might take between 60 to more than 100 years in many SSA countries.

Population Momentum

The phenomenon of the population momentum is linked to the youthfulness of the age structure of the population. High fertility in SSA countries over the past decades have translated into growing numbers and percentages of youth in their population. This has created youth bulges, situations in which a high proportion (40% or more) of the population is 15-29 years old, relative to the adult population (above age 15)[7].

In SSA in 2020, 62% of the population is below age 25, compared with 40% in Latin America, 33% in East and Southeast Asia[8], and 26% in Europe. However, this average does not represent the full picture. In 31 countries, more than 60% of the people are aged less than 25, including Niger at 69%. There are only five countries with 50% or less of the population in this age range, and they also have the lowest levels of fertility (i.e., Mauritius and Djibouti).

The magnitude of the population momentum has been estimated by the UN in 2019, assuming that fertility falls abruptly at replacement levels from 2020-2025 (at 2.3 children per woman), until

7 May J. F., *World Population Policies: Their Origin, Evolution, and Impact*, Dordrecht, Springer, 2012.

8 We adopted here the region's definition of the United Nations, which is slightly different from the World Bank's definition (see Ch. 3, note 6). East and Southeast Asia here does not include Japan.

2095-2100 (at 2.1 children per woman). Under this hypothetical scenario, the SSA population will continue to increase by 40% from about 1.1 billion in 2020 to 1.5 billion in 2050, and by 55% to 1.7 billion in 2100, because of the initial youthfulness of the population.

Urbanization

The SSA population living in urban areas has increased 14-fold between 1960 and 2020, from 15% of the total population in 1960 to 41% in 2020[9]. Initially, internal migration from rural to urban areas played a key role in the rapid growth of SSA cities. Today, however, the natural increase of urban areas (the difference between births and deaths) makes up nearly 75% of SSA urban growth. In addition, many rural villages have been reclassified into urban centers because of their rapid expansion, especially in countries with high fertility. This has also contributed to the increase of the population living in "urban areas" in many countries. That said, the percentages of the urban population vary greatly from one country to another depending on the history of each country and the definition of urban areas.

9 United Nations, *World Urbanization Prospects: The 2018 Revision,* New York, United Nations, Department of Economic and Social Affairs, Population Division, 2018.

The annual growth rate of the urban population is estimated at 3.8% in 2020-2025, against 1.6% for the growth rate of the rural population. SSA is currently the region *urbanizing* the fastest. But it is also the only region with still a high growth rate of the rural population. In both cases, there are tremendous challenges to tackle these population growth rates. According to the UN 2018 *World Urbanization Prospects*, the SSA urban population is expected to triple by 2050 and to account for 58% of the population of the region. In 2050, 34 countries would have more than half of their population living in urban areas, and only four countries would have less than a third of their population living in urban areas (Malawi, Rwanda, Niger, and Burundi).

Due to this rapid urbanization, the region might have four mega-cities (of more than ten million people) by 2035: Kinshasa and Lagos, with about 25 million people each, and Dar es Salaam and Luanda, with nearly fifteen million each. There might be also 17 cities of between five and ten million people (including Addis Ababa, Nairobi, Abidjan, and Johannesburg), and 81 cities with populations between one and five million people. Among these 102 cities with populations of more than one million people, nearly half would be concentrated in three countries: Nigeria (26 cities), the Democratic Republic of the Congo (eleven cities), and South Africa

(eight cities). Overall, by 2035, these cities might represent 44% of the urban population and 22% of the total population of the SSA region.

This trend is likely to be accompanied by the expansion of slums. In fact, the population of informal settlements has doubled in Africa since 1990. Two of the greatest challenges of urban planning in Africa are the integration of the so-called "informal" districts within the rest of the cities and the anticipation of the urban housing needs. To respond to this situation, some countries have created or planned new cities, but these are mainly intended for the middle classes. Although the emergence of large cities might favor the economic dynamism, there is a considerable risk of civil unrest if young urban people do not have access to decent jobs and acceptable living conditions.

International Migration

With respect to international migration, the recent surge of migrants, refugees, and asylum seekers attempting the risky voyage to Europe across the Mediterranean has brought international migration issues to the front pages of newspapers. This has fueled public anxiety about uncontrolled inflows from SSA and the Middle East and brought up questions on how the European Union should respond to this rising influx.

The UN Population Division provides global, five-year estimates of the stocks of migrants and refugees, through a matrix of country of destination and origin from 1990 to present[10]. These estimates are based on the figures of people born outside their country of residence, using data from population censuses to which are added refugees' data from the UNHCR (the UN Refugee Agency)[11]. Despite the fact that these data may be limited because they probably underestimate the number of migrants and are not timely estimations of migration flows, they do provide a global overview of international migration and movements of refugees.

The total number of SSA migrants and refugees residing *in any country* of the world nearly doubled between 1990 and 2019, from 15.3 million to 28.2 million. They represent now 2.6% of the region's population and 10% of the world total of migrants and refugees, which is estimated at 271.6 million (i.e., 3.5% of the world population).

The number of SSA refugees *residing in an SSA country* different from their country of birth increased from 4.5 million in 1990 to nearly

[10] International migrants are defined as people living for at least one year in another country than their country of birth.

[11] United Nations, *International Migrant Stock 2019*, Database, New York, United Nations, Department of Economic and Social Affairs, Population Division, 2019.

six million in 2019[12]. However, their share in the world total decreased from 24% to 21%. These refugees are concentrated in a few SSA countries located in conflict areas. In 2019, 75% of these refugees (i.e., 4.5 million) were living in seven countries (by decreasing numbers), i.e., Uganda, Ethiopia, the Democratic Republic of the Congo, Kenya, Chad, Tanzania, and Cameroon. In these receiving countries, they represented about 50% to 80% of the estimated total stock of "refugees and immigrants".

The migrants only (i.e., excluding the refugees) residing in an SSA country different from their country of birth were estimated at 17.4 million in 2019. Half of them are found in South Africa (four million), Côte d'Ivoire (2.5 million), Nigeria (1.2 million), Burkina Faso, and Angola. These immigrants are generally from neighbouring countries with lower income, looking for better job opportunities. They represent 10% of the resident population of Côte d'Ivoire and 7% of the population of South Africa, but much more – 13% to 19% – in countries with relatively smaller populations, like Gabon, Equatorial Guinea, and the Seychelles.

But the UN matrix of destination and origin of stocks of migrants and refugees allow also to have an idea of the SSA migrants and refugees residing

[12] These figures do not include the numerous Internally Displaced Persons (IDPs), the result of internal conflicts and civil wars.

outside SSA, mostly in the more developed regions. Their number increased rapidly from 2.2 million in 1990 to 7.8 million in 2019, a 3.5-fold increase. In 2019, there were 4.9 million people born in an SSA country residing in Europe (64%), 2.4 million in the United States and Canada (30%), and 0.5 million in Australia and New Zealand (6%) (and some also in Asia and Latin America and the Caribbean). In 2019, 17 SSA countries had more than half of their diaspora living in a more developed region. The more important SSA diasporas in 2019 were (by decreasing numbers): Nigeria (772,000), South Africa (708,000), Ghana (489,000), Ethiopia (442,000), Kenya (384,000), Senegal (355,000), and Zambia (298,000).

Although the SSA migrants in the more developed regions represent only 0.7% of the SSA population, they are the main source of the remittances for their countries of origin. Remittances increased from 32 billion USD in 2010 to an estimated 46 billion USD in 2018[13]. In 2018, half of these remittances went to Nigeria (52%), and a quarter to Ghana, Kenya, Senegal, and Zimbabwe. For these countries, remittances represent between 3% to 9% of their GDP. For the whole SSA region, the remittances were in

[13] World Bank, *Migration and Remittances: Recent Developments and Outlook*, Migration and Development Brief 31, Washington, DC, World Bank, Migration and Remittances Team, Social Protection and Jobs, 2019.

2018 slightly below the Official Development Assistance (ODA) received, but higher than the net inflows of Foreign Direct Investments (FDI). Currently, remittances are mainly used to improve living conditions of relatives still in the country of origin, but they have also the potential to increase local investments.

The migration of African qualified workers to the more developed regions has been portrayed as a brain-drain for the sending countries. However, more people perceive it today as a "win-win" relationship. First, the more developed countries, where the labor force is shrinking and the population aging, need additional manpower. Second, in many SSA countries there are not enough job opportunities for semi-qualified and qualified people. However, a wider opening of the more developed countries to SSA immigration remains presently unlikely. Finally, it should be noted that overseas migration from SSA, although increasing, is not really affecting the population dynamics of the SSA region.

CHAPTER 2

Population Projections and Socioeconomic Prospects

The results of three different fertility scenarios or variants of the UN 2019 projections indicate that SSA is the only region of the world where the population is projected to increase dramatically in the 21st century. Meanwhile, the populations of the other regions are expected either to increase moderately or even decrease significantly, depending on the variant.

This chapter first examines the assumptions and results of the population projections for SSA. Then, it turns to the socioeconomic prospects of the continent, which will be disrupted by the very rapid population growth.

ASSUMPTIONS OF POPULATION PROJECTIONS

The UN 2019 projections give a picture of the population of the 235 countries and territories of the world during the 21st century. Detailed results by sex and age according to several variants are calculated and published for the 201 countries or territories with 90,000 inhabitants or more in 2019[1].

The underlying hypothesis of these projections is that the demographic transition (see Chapter 3) will continue in most less developed countries. Several projections variants are built for each country. As fertility is the main determinant of future demographic trajectories, variants are constructed with different paths of fertility decline and combined with only one assumption for mortality and one assumption for international migration.

For fertility, countries that still have a net reproduction rate above one are anticipated to converge in the future to replacement level fertility (about 2.1 children per woman). The Medium variant projection takes into account past fertility trends and the experiences of countries, which have completed or are completing their fertility transition. The Low variant projection is defined

[1] United Nations, *World Population Prospects: The 2019 Revision*, New York, United Nations, Department of Economic and Social Affairs, Population Division, 2019.

as 0.5 child less than the Medium variant, and the High variant, as 0.5 child more than the Medium variant. These variants are intended to illustrate the impacts of more rapid and less rapid fertility declines. Contrary to what many users of the UN projections believe, the Medium variant is not the most probable scenario because future trends (especially those pertaining to fertility) are uncertain. This is one of the reasons why the population projections are updated every two years. Moreover, the UN has recently developed probabilistic projections, which depict the uncertainty of future demographic trends for all countries up to the year 2100.

Regarding fertility, the assumptions made in the Medium variant for SSA countries posit a decrease of the region's TFR from 4.6 children per woman in 2020 to four children in 2030. This year is the deadline for the completion of the Sustainable Development Goals (SDGs). Thereafter, fertility decreases to 3.1 children in 2050, 2.7 children in 2063 (the year to achieve the African Union's vision "Africa 2063: The Africa We Want"), and 2.1 children in 2100. This corresponds to the moderate decline observed per decade since the 1980s: 0.6 child less per woman between 2020 and 2030, then 0.4 child less per decade between 2030 and 2050, and less afterwards. The regional TFR for the Low variant (0.5 child less than the Medium variant), is

3.5 children in 2030, 2.6 children in 2050, 2.2 children in 2063, and 1.6 children in 2100, which corresponds to an acceleration of the fertility decline in the next ten years. By contrast, the regional TFR for the High variant is 4.5 children per woman in 2030, 3.6 children in 2050, 3.2 children in 2063, and 2.6 in 2100. The latter scenario corresponds to a slowing down of the fertility decline in the coming years, a trend consistent with protracted fertility stalls observed in several SSA countries in recent years[2].

Some researchers have projected much faster fertility declines for SSA than those of the Low variant of the 2019 UN projections. In their view, major improvements in education, particularly for women, and more rapid urbanization could trigger faster fertility declines[3]. While the scenario of a faster fertility decline in the region is not out of the question, current data and evidence do not suggest that the ongoing fertility decline in SSA will be faster in the near future than the current UN Medium variant. In fact, the demographic trajectories of many SSA countries appears currently to be closer to the High variant of the UN projections.

2 Howse K., "What is fertility stalling and why does it matter?", *Population Horizons* 12 (1), 2015, p. 13-23.

3 Lutz W., Butz W.P. and KC S., *World Population and Human Capital in the Twenty-First Century*, Oxford, Oxford University Press, 2014.

For mortality, it is assumed that life expectancy at birth will continue to increase in all countries. The mortality assumptions made for each country posit an average life expectancy for the SSA region of 60.5 years in 2020, 69.0 years in 2050, and 75.2 years in 2100 (a 15-year increase in 80 years), against 89 years for the more developed regions.

For international migration, the most difficult demographic component to project, it is assumed that the recent levels of net in- or out-migration (depending on the countries) will not change dramatically in the future. Given uncertain levels of migration and present tighter immigration policies around the world, it is assumed that international migration movements will remain more or less stable. For SSA, it is estimated that around 300,000 migrants leave the continent every year. However, the demographic dynamics of the SSA region would remain similar even with much higher estimates of international migration.

POPULATION PROJECTIONS

The population and annual rate of growth for SSA and the world from the Low, Medium, and High variants of the UN 2019 projections are presented in Table 2.

TABLE 2:
Projected Population and Annual Growth Rate of Sub-Saharan Africa and the World, according to the UN Low, Medium, and High Fertility Variants for 2020, 2030, 2050, 2063, and 2100

	Variants	2020	2030	2050	2063	2100
Population	Low	1.094	1.370	1.944	2.270	2.683
Sub-Saharan	Medium	1.094	1.400	2.118	2.609	3.775
Africa (billion)	High	1.094	1.430	2.296	2.977	5.169
Population	Low	7.795	8.363	8.907	8.837	7.322
World (billion)	Medium	7.795	8.548	9.735	10.254	10.875
	High	7.795	8.734	10.588	11.819	15.600
Rate of Growth	Low	2.5	2.1	1.4	0.9	0.0
Sub-Saharan	Medium	2.6	2.3	1.8	1.4	0.6
Africa (%)	High	2.7	2.6	2.1	1.8	1.2
Rate of Growth	Low	0.9	0.5	0.1	-0.2	-0.8
World (%)	Medium	1.0	0.8	0.5	0.3	0.0
	High	1.1	1.1	0.9	0.8	0.7

Source: UNITED NATIONS, *World Population Prospects: The 2019 Revision*, New York, United Nations, Department of Economic and Social Affairs, Population Division, 2019.

These projections give very different future populations depending on the variant used. For the SSA region, its population is likely to double by 2050, but it could double or triple by 2063, and even increase 2.5- to 5-fold by 2100. By contrast, the world population is expected to start to decrease in the 2050s under the Low variant (with a TFR of 1.7 children in 2050 and 1.4 in 2100), or to continue to grow slightly and double between 2020 and 2100 under the High variant (with a TFR of 2.7 children in 2050 and 2.4 in 2100). With the Low variant, the SSA population will continue to increase by more than 2% per year up to the early 2030s, but will decrease thereafter to zero-population growth around 2100. However, with the High variant, the SSA population will continue to increase by more than 2% per year up to the late 2050s. Overall, given the low fertility rates in the other regions, the future course of the world population in the 21st century will be largely dependent on the SSA population dynamics. The SSA region will represent a growing percentage of the world population: from 14% in 2020 to about 25% in 2063, and between 33% and 37% in 2100, depending on the projection variant used.

At the country level, future population size and growth will depend largely on the initial levels of fertility and the projected fertility decline. By 2030, under the Low variant only

eight countries are anticipated to still have TFRs above four children per woman, and none by 2050. But under the High variant, 28 countries are anticipated to still have TFRs above four children per woman by 2030, and three by 2050 (Niger, Angola, and Somalia). As a result, by 2050 and with the Low variant, only eight countries could see their populations more or less double with average population growth of 2% to 3% per year. The other countries would see their populations increase by 50% to 90%, with an average demographic growth of 1.5% to 2% per year. But with the High variant, 32 countries could see their populations almost double by 2050, with a population growth of 2% to 3% per year. The other countries would see their populations increase from 50% to 90%, and their population growth would be less than 2% per year, and even less than 1% per year for the countries with already low levels of fertility.

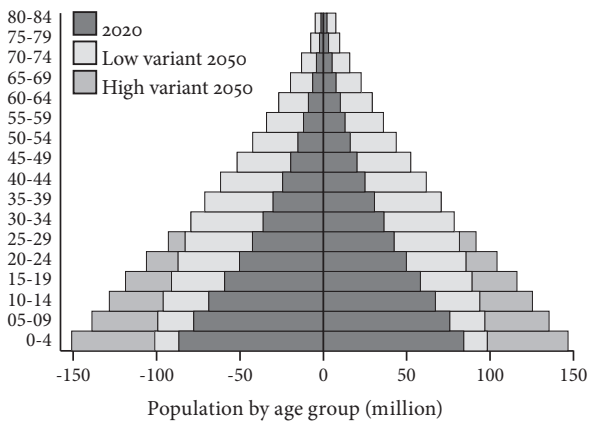
CHANGES IN AGE STRUCTURE

As there is only one assumption for mortality and one assumption for international migration, the difference between the population size under the Low and the High variants results from the different paths of fertility decline being assumed. Because of a more rapid fertility decline in the

Low variant, the increase in the annual number of births of the region is slowing down (from 38 million in 2020 to 41 million in 2050, starting to decline slightly thereafter). Conversely, under the High variant, the slower fertility decline and the effect of the population momentum give a continued increase of the annual number of births in the region, from 38 million in 2020 to 64 million in 2050 and to nearly 100 million in 2100.

The 352 million people difference in 2050 between the projected populations under the High and the Low variants (2.296 and 1.944 billion, respectively) is just the result of the difference between the surviving children born between 2020 and 2050 (aged less than 30 years in 2050) under these variants (see Figure 1). The smaller population pyramid represents the population in 2020. The next larger pyramid shows the projected population in 2050 under the Low variant. The largest pyramid represents the projected population in 2050 under the High variant.

FIGURE 1:
Population Pyramids of Sub-Saharan Africa in 2020 and 2050, According to the UN Low and High Variants



Source: UNITED NATIONS, *World Population Prospects: The 2019 Revision*, New York, United Nations, Department of Economic and Social Affairs, Population Division, 2019.

The less numerous 0-14 years old under the Low variant can be a source of savings in mother and child health as well as primary education expenses, compared to what would be needed for twice as many 0-14 years old under the High variant. These savings could be used to invest in better quality of services, and to do more investment in the secondary, tertiary, and vocational education of the 15-29 years old. Access

to a better education, easier employability, and jobs for the numerous youths entering the labor market in the next 30 years is a pre-requisite to capture a first demographic dividend. In 2020, the number of young people arriving on the job market is estimated at fourteen million. By 2050, it could be 24 million under the Low variant and 29 million under the High variant.

SOCIOECONOMIC PROSPECTS

After the weak economic growth of the 1980s and 1990s, SSA experienced sustained economic growth of over 5% per year between 2000 and 2014. Unfortunately, between 2015 and 2019, due to the drop in the price for oil and raw materials, this growth halved to 2.3% on average, lower than the population growth of 2.7%. The Covid-19 pandemic might further reduce future economic growth.

The slow GDP growth and unrelenting population growth lead to an insignificant increase of the region's average GDP per capita. Before the outbreak of the Covid-19 pandemic, a timid recovery was projected by the World Bank in January 2020 for the years 2020, 2021, and 2022, with economic growth of 2.9%, 3.1%, and 3.3%,

respectively[4]. But these growth rates remained insufficient to reduce the continent's high levels of extreme poverty because they correspond to an extremely low per capita income growth (0.3% in 2020 and 0.7% in 2021-2022[5]). The International Monetary Fund (IMF) also projected a rebound of the SSA economic performance, with medium-term stabilization of economic growth around 4% per year, although with very marked differences between countries[6]. According to these IMF projections for 2020-2024 for 45 countries published in October 2019, a dozen countries whose economic performance is not too dependent on exports of oil and raw materials could record growth rates of 6% to more than 8% per year. However, because of the high demographic growth in most of these countries, only three countries: Rwanda, Senegal, and Ethiopia with lower population growth rates were deemed able to increase their GDP per capita to around 5% per year. The projected economic growth for South Africa, Angola, and Nigeria was weak and close to their demographic growth, which would have led to a stagnation of their GDP per

4 World Bank, *Global Economic Prospects, January 2020: Slow Growth, Policy Challenges,* Washington, DC, World Bank, 2020.

5 Beegle K. and Christiaensen L. (eds), *Accelerating Poverty Reduction in Africa*, Washington, DC, World Bank, 2019.

6 International Monetary Fund, *Regional Economic Outlook: Sub-Saharan Africa. Navigating Uncertainty,* October 2019, Washington, DC, International Monetary Fund, 2019.

capita. Because these three countries (South Africa, Angola, and Nigeria) account for half of the region's GDP, this was pulling down the SSA regional growth projected in October 2019. For most of the other countries, their still high demographic growth was expected to substantially reduce their economic growth, and their GDP per capita growth was projected to be between 0.5% and 2.5% per year. Finally, for six countries (Eswatini[7], Congo, Zambia, Liberia, Burundi, and Equatorial Guinea), the projected economic growth for 2020-2024 was lower than their population growth, and therefore their GDP per capita is expected to decrease.

In March 2020, however, the UN Economic Commission for Africa estimated that the economic impact of the Covid-19 will lead in 2020 to a decrease of Africa's economy growth from 3.2% to 1.8%, that is again below the rate of population growth[8]. But the June 2020 IMF update anticipates a negative growth of minus 3.2% in 2020 and a decrease of the GDP per capita of minus 5.4%[9]. This update also notes that "*the crisis impact is set to wipe out almost*

7 Formerly Swaziland.

8 United Nations, *Economic Impact of the Covid-19 on Africa*, Addis Ababa, United Nations, Economic Commission for Africa, 2020 (March).

9 International Monetary Fund, *Regional Economic Outlook: Sub-Saharan Africa June 2020 Update*, Washington, DC, International Monetary Fund, 2020.

10 years of progress in development" in SSA. All the countries but two (Ethiopia and South Sudan) are expected to experience a decrease of their GDP per capita in 2020, the higher decrease been expected in countries where the economy is dependent on tourism and oil and mineral products exports. In 2021, growth is projected to recover only gradually to 3.4%, with a GDP per capita modest increase of 1.1%, if the pandemic abates, and lockdowns ease further in the second half of 2020. However, in the region's largest economies (Angola, Nigeria, and South Africa), real GDP is projected to return to pre-crisis levels only by 2023 or 2024. These results are not surprising. Indeed, as Africa is increasingly interconnected with the rest of the world, the devastating effects of the Covid-19 crisis on the global economy are being transmitted to African economies through reduced trade links with China, Europe, and the rest of the world, as well as less remittances and tourism activities. It is also likely that there will be a decline in Foreign Direct Investment (FDI) flows to Africa and a possible capital flight from the region.

In such a context, it is more than ever hazardous to project the economic growth of the region for the next decades. The objective of the African Union's Vision 2063 is to attain a collective GDP proportionate to Africa's share of the world population, i.e., about 25%

for SSA[10], against about 2% in 2018 (which is in fact the proportion since the 1960s). Such an overambitious goal seems impossible to reach, because it requires two conditions: 1) a very high regional average rate of economic growth between 2013 and 2063 (at 8% per year); and 2) a quite low average rate of economic growth of the world (at 2% per year). China is the only country of the world to have had an average rate of economic growth of 8.3% per year between 1960 and 2010. However, its share in the world GDP was estimated to be 14% in 2019, against its share of 19% in the world population. But it should be noted that the high economic growth in China is largely the result of its One Child Policy which led to a dramatic slowdown of its population growth (from 2.7% in the late 1960s to 0.5% in recent years). So, the China's GDP per capita increased markedly and reached 75% of the average world GDP per capita in 2019, against a mere 5% in 1960. In SSA, among the countries which had a sustained economic growth above an average of 6% per year between 2000 and 2019, only five countries, i.e., Ethiopia, Rwanda, Tanzania, Uganda, and Ghana might have an average growth above 6% per year up to 2063, and join the group of upper middle-income per capita countries, according to the World Bank

[10] African Union, *Agenda 2063: The Africa We Want,* Addis Ababa, African Union, 2015.

classification[11]. But this might be also the case of Côte d'Ivoire and Senegal, which experienced high economic growth in recent years.

[11] The World Bank ranks the economies of the world into four groups, according to their levels of income (Gross National Income per capita). For 2016-2017, the low-income economies were defined as those with a GNI per capita, calculated with the World Bank Atlas method, of 1,025 USD or less in 2015; the lower middle-income economies were those with a GNI per capita between 1,026 USD and 4,035 USD; the upper middle-income economies were those with a GNI per capita between 4,036 USD and 12,475 USD; and, finally, the high-income economies were those with a GNI per capita of 12,476 USD or more; see https://blogs.worldbank.org/opendata/new-country-classifications-2016, accessed on March 12, 2020.

CHAPTER 3

Population Dynamics and Development

This chapter presents the three concepts that link demographic trajectories and socioeconomic development. First, it offers a description of the demographic transition. Then, the chapter summarizes the current research and knowledge on the first and second demographic dividends. Finally, it reviews the current definitions of emergence and the various classifications of emerging countries.

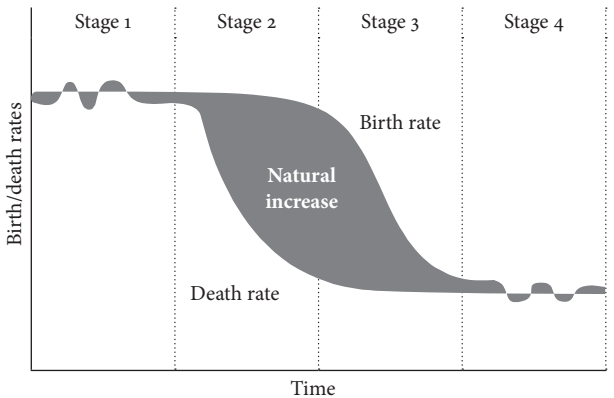
DEMOGRAPHIC TRANSITION

The demographic transition is defined as the change from a traditional demographic regime of high crude death and birth rates in quasi-equilibrium, to a modern demographic regime of low crude death and birth rates, reaching a new quasi-equilibrium at lower levels. This trans-

formation process started in Britain and France in the 18th century and subsequently spread to the rest of Europe, the territories of European settlement, and, finally, in the mid-20th century, to the so-called developing countries. However, this demographic transformation has started at different times and has taken place more or less rapidly in the less developed regions.

The demographic transition process is frequently split into four stages, with countries usually first experiencing a decline in mortality, followed by a decline of fertility. The first stage is defined by high crude death and birth rates and insignificant population growth. The decline of mortality occurs in the second stage of the transition, whereas the decline of fertility occurs usually during the third stage. In the course of the demographic transition, the rate of natural growth (the arithmetic difference between the crude birth rate and the crude death rate) increases significantly as does the size of the population. However, this occurs at different speeds depending on the country. Thereafter, during the last and fourth stage, low crude death and birth rates lead again to insignificant population growth, and even to negative growth if fertility remains below replacement level for many years (see Figure 2).

FIGURE 2:
The Classic Stages of Demographic Transition



Source: Population Reference Bureau.

The demographic transition does not occur without profound transformations in society and the economy, such as shifts from agricultural production to industrialization, manufacturing, and the services economy. Often, this is accompanied by urbanization and improvements in education, health, and gender equality.

The shape of the population pyramid, which represents the population age and sex distribution, also changes during the demographic transition. Step by step, the young people (below age 15 or 20) become relatively less numerous at the bottom of the pyramid. Working-age adults (aged 15 or 20 to 64) become more numerous in the middle of the pyramid. Eventually, the group of older

people (age 65 and above) starts to increase as well at the top of the pyramid. In short, from truly pyramidal at the beginning of the demographic transition the population pyramid becomes gradually rectangular. These changes and the different weights of the various age groups over time have important consequences for the countries' prospects of socioeconomic growth.

Today, most SSA countries have yet to complete these major demographic and age structure transformations. While half of the world's population live in countries where women have 2.1 children or less, about 85% of the SSA population live in countries where women still have four children or more. The corresponding countries, all located in Western, Middle, and Eastern Africa, are far from having achieved their fertility transition. Moreover, one of the striking demographic features in SSA is that rapidly decreasing mortality rates, especially for infants and children, did not translate into substantial fertility declines as was observed elsewhere in the less developed countries.

DEMOGRAPHIC DIVIDENDS

The demographic dividend is an economic surplus resulting from an expansion of the working population with respect to the dependent

population (particularly the young dependents). This concept was formulated after a closer examination of the Asian "economic miracle". In order to explain the rapid economic growth in that region between the 1960s and 1990s, demographers, economists, and social scientists examined the significant shifts in age structures triggered by rapid and significant fertility declines. Approximately 45% of the economic growth observed in East and Southeast Asia is attributable to these demographic shifts, which increased the number of working adults relative to their young dependents (see Chapter 6, Table 3)[1].

Most countries that have harnessed a first demographic dividend have undergone similar processes. First, the decline in infant and child mortality leads to large increases in the number of young people. Then, when fertility declines, the number of births stabilizes or even decreases, and there are relatively fewer dependent children. At the same time, the working population is growing faster, and if most of the workers have a remunerated job, the per capita income also increases faster. Households and governments can then free up resources to invest in economic development. The corresponding period of declining dependency ratios opens up a window of demographic opportunity of about 30 to

[1] Lee R. and Mason A., "What is the Demographic Dividend?", *Finance and Development* 43 (3), 2006, p. 16-17.

50 years, which allows, under certain conditions, the country and society to benefit from a first demographic dividend. Finally, when the previous numerous cohorts of workers reach retirement age, the number of older dependents starts to increase. With the perspective of longer retirement periods, the incentives for workers to save and accumulate more assets become stronger. If these new retirees have accumulated assets that are saved or invested in the economy, a second demographic dividend is possible.

When applied to SSA, the concept of the demographic dividend raises two important questions. First, this concept was discovered and studied after its recognition in Asia. The available studies inform on a historical process that is nearing completion in a particular context[2]. The possibility of capturing a demographic dividend in SSA countries – the fertility transition is far from completed in most of them – will be dependent on the rapidity of the fertility transition, which is not guaranteed, as well as other factors. Current estimates actually suggest that the SSA transition will be slower than in Asia or Latin America[3].

[2] Bloom D.E. and Williamson J.G., "Demographic Transitions and Economic Miracles in Emerging Asia", *World Bank Economic Review* 12 (3), 1998, p. 419–455.

[3] Eastwood R. and Lipton M., "Demographic transition in sub-Saharan Africa: How big will the economic dividend be?", *Population Studies* 65 (1), 2011, p. 9-35.

Second, there is a debate about the timing of the opening of the demographic window of opportunity[4]. One approach is to consider that the window of opportunity opens when the percentages of those aged less than 15 years reach below 30% of the population and those aged 65 years remain below 15%. Using the UN 2019 population projections, this definition leads to different results for the Low and High variants. As of 2020, only five countries meet the two age criteria above. Of the remaining 43 SSA countries, two countries will enter the demographic window of opportunity before 2030 under the Low variant, eleven in the 2030s, twelve in the 2040s, and the remaining 18 countries after 2050 (up to the 2070s). With the High variant, however, only three countries will enter the demographic window of opportunity as defined above before 2050, 20 countries between 2050 and 2080, and 18 countries between 2080 and 2100.

A second approach argues that the window of opportunity opens when the demographic dependency ratio (the number of persons aged less than 15 years and 65 years and more, divided by those aged 15-64 years) becomes equal or less than 0.6. According to the UN 2019 population projections, six SSA countries already have

4 Parant A. and Hommel T., "La fenêtre démographique en Afrique de l'Ouest : une ouverture différée", *Futuribles International* 220, 2019, p. 1-18.

such a dependency ratio. With the Low variant, seven of the 42 remaining countries will enter the demographic window of opportunity before 2030, 30 countries between 2030 and 2050, and five countries after 2050. With the High variant, only two countries will enter the demographic window of opportunity before 2030, six between 2030 and 2050, 20 countries between 2050 and 2080, and fourteen after 2080, of which nine countries will still have dependency ratios above 0.6 by 2100. However, it would be more appropriate to consider a dependency ratio for those aged 20 to 64 years because many young people enrol in secondary, vocational, and higher education and so remain dependents beyond the age of 15. There are also high unemployment and underemployment rates among the young people aged 15-19. If we consider a dependency ratio for those aged 20 to 64 years, with the UN Low variant, only a handful of countries approach a dependency ratio of 0.6 before 2050, whereas many countries in East and Southeast Asia have already dependency ratios of 0.6 or even less.

The third approach posits that the window of demographic opportunity opens when the working population is growing faster than the total population. As all SSA countries started their fertility decline, this implies that all SSA countries have already entered the demographic

window of opportunity, whereas most of them still have high dependency ratios.

Along with this crucial debate, it is important to note that the demographic dividend must be understood as an economic surplus resulting from a window of opportunity created by the demographic transition. This surplus (in the classical economic connotation) is generated by two elements: (i) more resources due to decreased dependency ratios; and (ii) increased GDP because of increased human capital and productivity in the labor market. These additional resources might result in additional GDP later, depending on their utilization. For example, if these resources are: (i) used productively; or (ii) consumed in local products, with the additional consumption triggering additional investments, then one can expect an increase in GDP. In addition, the increased number of workers with decent jobs may quickly translate into added growth (i.e., increased GDP).

The economic surplus from a first demographic dividend is an important booster for the socioeconomic development of all countries, especially those in the early stages of development. Accordingly, the World Bank and the International Monetary Fund[5] have developed a classification that categorizes a country's

5 World Bank and International Monetary Fund, *Global Monitoring Report 2015/2016: Development Goals in an Era of*

position to benefit from a first demographic dividend. This classification covers 192 countries and territories and is based on fertility levels and per capita income. Using the framework of the first demographic dividend, the World Bank and the IMF have identified four groups of countries.

"Post-demographic-dividend countries". Most of these countries have high incomes per capita and their fertility has fallen below replacement level. This group encompasses 38 countries having completed their demographic transition, including 31 more developed countries according to the UN classification. Seven less developed countries/territories are among this group, including South Korea, Hong Kong, Singapore, and Cuba. These countries have an average total fertility rate (TFR) of 1.6 children per woman and gross secondary and tertiary school enrolment rates of 108% and 78%, respectively.

"Late-demographic-dividend countries". These countries are mainly upper middle-income per capita countries, where fertility rates may be higher than 2.1 children per woman. Their fertility transition occurred later than in the previous group but is now completed or close to completion. This group encompasses 54 countries of which 40 are less developed countries, including Brazil, China, Chile, Colombia, Malaysia, Thailand, Viet

Demographic Change, Washington, World Bank and International Monetary Fund, 2016.

Nam, Morocco, Mauritius, and the Seychelles. These countries have an average TFR of 1.7 children per woman and gross secondary and tertiary school enrolment rates of 91% and 51%, respectively.

"Early-demographic-dividend countries". These countries are low-middle-income per capita countries, where fertility is less than four children per woman. Their fertility transition started even later than in the previous group, but is well underway and is expected to continue. In these countries, the share of the working population is increasing very rapidly, and the percentage of young people under 15 is decreasing. This group includes 62 less developed countries/territories, including India, Indonesia, Bangladesh, Egypt, Iran, Mexico, Pakistan, Peru, the Philippines, Turkey, Venezuela, and twelve SSA countries, namely Botswana, Cabo Verde, Djibouti, Ethiopia, Gabon, Ghana, Lesotho, Namibia, Rwanda, South Africa, Eswatini, and Zimbabwe. These countries have an average TFR of 2.5 children per woman and gross secondary and tertiary school enrolment rates of 75% and 30%, respectively.

"Pre-demographic-dividend countries". These are low income per capita countries, whose main indicators rank them in the "low human development" countries, and where fertility is generally higher than four children per woman. This group includes 38 countries of which 34 are

in SSA (where live about 85% of the population of the region). All "pre-demographic-dividend" countries account for 12% of the world population. They have an average TFR of 5.1 children per woman, and gross secondary and tertiary school enrolment rates of 41% and 9%, respectively.

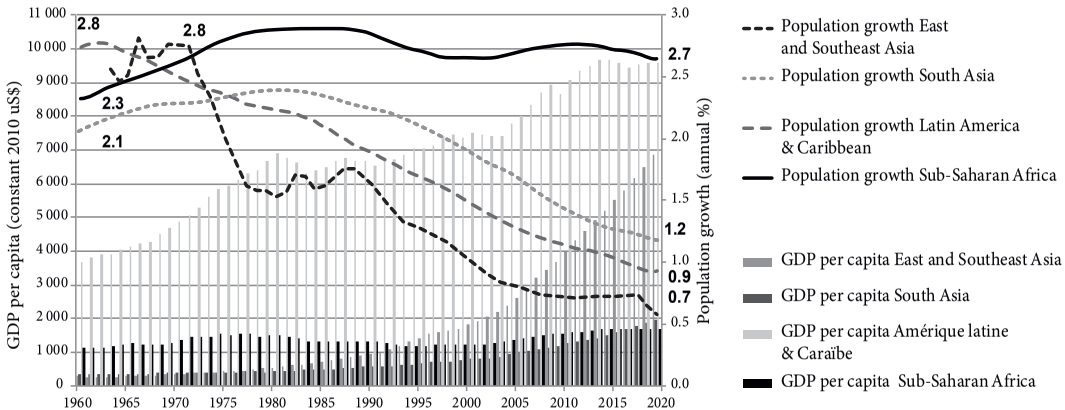
When comparing the school enrolment rates for the four groups, the rates of the "pre-demographic-dividend" countries clearly highlight the negative impact of their slow fertility transition. By not prioritizing the acceleration of their fertility transition, these countries were unable to reach higher levels of secondary and tertiary school enrolment rates, and therefore did not obtain a satisfactory quality of their human capital.

As almost all the *pre-demographic-dividend* countries are located in SSA, it is interesting to compare the economic performance of SSA with the trajectory of the three other major developing regions of the world, i.e., South Asia, East and Southeast Asia, and Latin America[6] where the

[6] The data from the World Bank used here encompass the following countries: 1) for South Asia, Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka; 2) for East and South Asia (named East Asia and Pacific in the data bank), all countries from East and Southeast Asia and some Pacific Islands, except the high per capita income countries, i.e., Japan, Hong Kong, Singapore, South Korea, Taiwan, Brunei Darussalam, and a few high income per capita islands; 3) for Latin America and the Caribbean, all the sovereign countries of the region; and 4) for sub-Saharan Africa, all sovereign countries of the region plus Sudan, but less Djibouti.

fertility transition is completed or near completion, and the population growth is around 1% per year against 2.7% for SSA (see Figure 3). In the 1960s, SSA had a GDP per capita of about 1,100 USD (in constant 2010 USD), compared with about 300 USD in South Asia and East and Southeast Asia and 3,700 USD in Latin America. In 2019, the average GDP per capita of East and Southeast Asia countries (except the high income per capita countries) was close to 7,000 USD, nearly 24 times higher than in 1960, thanks largely to the rapid fertility decline that started in the 1960s. The fertility decline in South Asia and Latin America also started in the 1960s but was less rapid. Nevertheless, the GDPs per capita of these regions in 2019 were about six and three times higher than in 1960 (i.e., close to 2,000 USD and 10,000 USD, respectively). By contrast, the slow and late fertility transitions and high population growth rates of SSA were associated with only a 48% increase of the GDP per capita, which was estimated in 2019 at about 1,670 USD — the lowest of the four regions considered here.

FIGURE 3:
GDP Per Capita and Population Growth in Four Major Developing Regions, 1960 to 2019



Source: WORLD BANK, *World Development Indicators Database*, Washington, DC, World Bank, 2020 (last updated on July 1, 2020).

ECONOMIC EMERGENCE

Over the past three decades, a significant number of less developed countries around the world have reached the status of "emerging market economies" or "emerging countries". These two somewhat different terms are associated with rapid economic growth and significant increases in the GDP per capita, making it a sought-after status in sub-Saharan Africa. In fact, emergence is defined as a step toward converging to the socioeconomic characteristics of the more advanced economies[7]. Thus, it is used to describe what would be the new economic and social trajectory of various countries of the continent in the 21st century. Of the 54 African countries, 37 have launched medium-term plans or "Vision" documents aimed at achieving economic emergence.

The relationship between the economic and social development, the demographic transition, and the economic emergence is a complex issue. A demo-economic study of 103 less developed countries between 1950 and 2010 indicates that the development process of many developing and emerging countries has been accompanied by rapid declines in fertility, while countries with high fertility today are those with the

7 Lo M., *L'émergence économique des nations : Définition et mesure*, Dakar, L'Harmattan-Sénégal, 2017.

lowest levels of socioeconomic development[8]. The main conclusion of this study is that, with a few rare exceptions, there is a rather strong correlation between the degree of socioeconomic development of the countries studied and their fertility levels, even if it is not possible to know which of these two elements precedes the other. In the case of East and Southeast Asian countries (the "Asian Tigers"), socioeconomic development and fertility decline have been mutually reinforcing. Overall, one feature appears to be certain: no country has been able to develop and emerge economically without a parallel decline in fertility. This means that high fertility levels sustained over a long period of time preclude socioeconomic development, or at least postpone it. Despite this evidence, the political discourse and the literature on economic emergence pay scant attention to demographic factors. Therefore, economic emergence is seen primarily as an economic process disconnected from population dynamics.

The concept of emergence appeared in the 1980s with economic liberalization, the opening of new trade routes, the development of stock markets in the less developed countries, and

8 Sippel L., Kiziak T., Woellert F. *et al., Africa's Demographic Challenges*: *How a Young Population can Make Development Possible*, Berlin, The Berlin Institute for Population and Development, 2011.

the overall drive for deregulation. Antoine van Agtmael, a Dutch economist at the International Finance Corporation (IFC), is credited to be the first person to have used the term "emergence" in 1981, when he mentioned the opportunities for foreign investors offered by the less developed countries. Although the definition of emerging market economies or economic emergence varies significantly by authors, institutions, periods, and countries, there is a general agreement that emerging market economies are middle-income countries. Also, most authors agree that emerging countries are experiencing, or have experienced rapid economic growth due to the economic reforms and programs they have launched, including opening their markets to attract foreign investments. The indicators most often mentioned are: high sustained economic growth (5% to 8% per year); diversification of production; disciplined macroeconomic framework; openness to the outside world (importance of exports and imports and integration into the international financial system); technological and human capital improvements; and development of more productive economic sectors. All this occurred in a context where the state played a strategic role for development and guaranteed a pro-business institutional environment.

Emerging economies can account for a significant part of the world GDP, such as the

BRICS countries: Brazil, Russia, India, China, and South Africa (combined, they account for 24% of the world GDP in 2019, compared with 8% in 2000). However, market share is not always used as a condition to describe emerging economies because some might be smaller, with fewer resources. The World Bank and the International Monetary Fund[9] have ranked 94 countries as emerging market economies, including ten SSA countries: Angola, Botswana, Cabo Verde, Equatorial Guinea, Gabon, Mauritius, Namibia, the Seychelles, South Africa, and Eswatini. These countries are very diverse: three are island-states, three are oil-exporting countries, four are located in Southern Africa, and eight have small populations (less than 2.5 million people in 2015). The Seychelles and Mauritius belong to the group of the late-demographic-dividend countries, with 2.5 and 1.4 children per woman, respectively. Among the eight remaining countries, six of them are early-demographic-dividend countries with four children or less, and only Equatorial Guinea and Angola – two of the oil-exporting countries – are pre-demographic-dividend countries, with more than four children per woman.

In addition to the World Bank and IMF classification, other financial institutions, such as the Morgan Stanley Capital International (MSCI),

9 World Bank and International Monetary Fund, *op. cit.*

Standard & Poor's (S&P), Russell, and Dow Jones also publish annual lists of emerging market economies. Each list mentions around 20 countries, but these are not always the same countries. According to the MSCI Emerging Markets Index, 24 countries were considered emerging markets in 2019: Brazil, Chile, China, Colombia, Czechia (Czech Republic), Egypt, Greece, Hungary, India, Indonesia, South Korea, Malaysia, Mexico, Pakistan, Peru, the Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey, and United Arab Emirates. Of these countries, 19 are considered less developed countries according to the UN definition. Four countries are in the World Bank high-income per capita category, ten in the upper middle-income per capita group, and five in the lower middle-income per capita category (the Philippines, Indonesia, Egypt, India, and Pakistan). Fertility is less than three children per woman in all countries, except in Egypt and Pakistan (about 3.5 children), and even below replacement level in several countries. However, the criteria of wealth and sustained growth must be used with caution. For example, the economies of many middle-income countries, such as Nigeria, Angola, and Qatar are based on oil revenues. Also, frequent political or economic instability, social unrest, rebellion, and regime changes often reverse previously high economic growth. For these

reasons, MSCI also defines "frontier markets"[10]. This list includes countries such as Argentina, Bangladesh, Kenya, Kuwait, Mauritius, Morocco, Nigeria, and Viet Nam, which are often included on other lists of emerging market economies.

The concept of economic emergence encompasses both a process and a result. Therefore, one must distinguish between countries that have already emerged, those which are emerging, those which could potentially emerge, and finally those aspiring to emerge[11]. The composite index of emergence classifies countries in this way by looking at the socioeconomic drivers of emergence: GDP per capita, economic activity, transformation, and insertion into the world economy. Of the 39 SSA countries out of 104 countries included in the MSCI 2019 analysis, only South Africa is in the "emerging" countries group. Several SSA countries are listed as "pre-emerging" countries: Mauritius, Botswana, Namibia, Gabon, and Congo, all in the middle-income category. The "potentially emerging" group includes countries like Angola, Cameroon, Côte d'Ivoire, Ghana, Kenya, Nigeria, Tanzania, Senegal, and Zambia. The group "desiring to become emergent" includes countries such as Burkina Faso, Cabo Verde, Mali,

[10] The expression "frontier market" refers to a category of less developed countries that are more developed than the least developed countries, but that are too small, risky, or illiquid to be generally considered emerging countries.

[11] Lo M., *op. cit.*

Mauritania, Niger, Rwanda, Uganda, Malawi, and Zimbabwe, which often belong to the low-income category, but with very different (high and low) fertility levels. The Democratic Republic of the Congo, which is not included in the analysis, might also be put in this group. Finally, there is a group called "underdeveloped", which includes Burundi, Central African Republic, Chad, Guinea-Bissau, and Liberia. One might also add South Sudan, Somalia, and Eritrea, which were not included in the analysis.

With similar objectives, the Observatory for Emergence in Africa[12], an African think-tank developed and released an "Emergence Index for Africa" in 2018. This Index ranks all African countries according to a new approach adapted to the African context. Considering emergence as a multidimensional phenomenon, the index retains 23 indicators to account for the dynamics of emergence. These indicators are grouped into four dimensions: political, economic, human developmental, and societal. Countries are scored from 0 to 100 on each indicator and categorized into: 1) "emerging countries"; 2) "at the threshold of emergence"; 3) "potentially emerging"; and 4) "other" countries.

[12] Obema, *Les pays africains classés selon le nouvel Indice de l'Émergence en Afrique 2017,* N. l.: Observatoire pour l'émergence en Afrique (OBEMA), 2018; see https://www.agenceecofin.com/gouvernance-economique/2802-54801-les-pays-africains-classes-selon-le-nouvel-indice-de-l-emergence-en-Afrique-2017-obema, accessed on March 11, 2020.

The so-called "emerging countries" are those engaged in a process of sustained economic transformation in a stable and inclusive socio-political context, likely to ensure sustainability. This group lists nine SSA countries (in descending order of the index value): Mauritius, South Africa, the Seychelles, Botswana, Cabo Verde, Rwanda, Ghana, Namibia, and São Tomé and Príncipe. The "at the threshold of emergence" group refers to countries that are on the verge of emergence. Nine SSA countries are in this group: Uganda, Senegal, Zambia, Tanzania, Kenya, Gabon, Benin, Malawi, and Lesotho. The "potentially emerging" group includes countries that have significant resources and capabilities but are not yet able to mobilize them for emergence. This is the largest group with 20 countries: Djibouti, Comoros, Liberia, Burkina Faso, Togo, Sierra Leone, Ethiopia, Mali, Madagascar, Gambia, Burundi, Zimbabwe, Mozambique, Congo, Côte d'Ivoire, Cameroon, Eswatini, Niger, Nigeria, and the Democratic Republic of the Congo. Finally, the "other" category corresponds to countries whose performance does not position them on the path of emergence at this point in time. Ten countries are in this group (by decreasing order of the index value): Equatorial Guinea, Angola, Mauritania, Guinea, Eritrea, Guinea-Bissau, Chad, Central African Republic, Somalia, and South Sudan.

The holistic approach adopted by OBEMA offers better prospects of emergence for the SSA countries. However, among the 23 indicators included in the OBEMA Emergence Index, there are no population variables (except the life expectancy at birth). Nine of the "emerging countries" include eight that are categorized by the World Bank as late- and early-demographic-dividend countries: the Seychelles, Mauritius, Botswana, South Africa, Namibia, Cabo Verde, Ghana, and Rwanda, plus São Tomé and Príncipe. These countries account for 10% of the SSA population. The nine countries "at the threshold of emergence" account for 20% of the SSA population. In this last group, only Ghana and Lesotho are considered early-demographic-dividend countries. The other early-demographic-dividend countries: Eswatini, Djibouti, Zimbabwe, and Ethiopia are in the "potentially emerging" group.

In conclusion, achieving emergence is a complex and multidimensional process and the importance of the various variables involved (GDP growth, foreign investment, etc.) should not be exaggerated or neglected. However, the analysis in this chapter shows the importance of reaching lower fertility levels to achieve economic emergence. Unfortunately, this crucial demographic dimension is overlooked by most economists and political leaders.

CHAPTER 4

Fertility Decline, Family Planning, and Reproductive Rights

In most SSA countries, fertility began to decline in the 1980s or in the 1990s. That is about 30 to 35 years after the onset of the fertility declines in most other less developed countries. By 2015-2020, the fertility transition had started in all countries of the SSA region, but fertility rates still remain high in many countries.

This chapter first explains the different fertility patterns in SSA. As increased use of contraception is the main proximate (direct) determinant of fertility, the chapter describes the launch of family planning programs in the region and reviews the need to create a demand for a smaller family size. Lastly, it examines the concept of the contraceptive revolution and assesses the prospects for accelerating the fertility decline in the region.

DIVERSITY OF SUB-SAHARAN FERTILITY PATTERNS

In 1980-1985, 40 out of 48 SSA countries, or 90% of the SSA population, had TFRs of six children or more per woman. By 2015-2020, only four countries (Niger, Somalia, the Democratic Republic of the Congo, and Mali) had TFRs of about six children or more per woman. However, changes in TFRs have not been homogeneous because of various speeds in the fertility decline. Using the UN 2019 estimates, it is possible to establish an updated typology of five types of fertility transitions in SSA, according to where each country stands in the fertility transition process.

"Fertility transition that is close to completion or completed". This category encompasses countries where the TFR is less than three children per woman. Six countries belong to this group. From the highest to the lowest TFR, they are: Botswana, Djibouti, the Seychelles, South Africa, Cabo Verde, and Mauritius. These countries represent 6% of the SSA population in 2020 and have more advanced economies, higher GDP per capita, and higher life expectancies than most other countries in the region. Fertility declines in these countries generally started in the 1960s and 1970s, earlier than in the other SSA countries.

"Fertility transition that is underway". This category applies to countries where the TFR is between three and four children per woman.

Six countries, or 9% of the SSA population, fall in this group, i.e., Ghana, Zimbabwe, Kenya, Namibia, Lesotho, and Eswatini. The last three countries followed the fertility transition pattern of nearby South Africa. Fertility declines in these countries generally started in the 1980s.

"Fertility transition that has been initiated". This group includes countries where the TFR is estimated to be between four and five children per woman. A group of 25 countries, or 40% of the population of the region, falls in this category. From the highest to the lowest TFR, they are: Tanzania, Mozambique, Benin, Central African Republic, Guinea, South Sudan, Côte d'Ivoire, Zambia, Senegal, Cameroon, Mauritania, Equatorial Guinea, Guinea-Bissau, Congo, Togo, São Tomé and Príncipe, Liberia, Sierra Leone, Ethiopia, Malawi, Comoros, Madagascar, Eritrea, Rwanda, and Gabon.

"Late and slow fertility transition". This category applies to countries where the TFR is estimated to be between five and six children per woman. Seven countries, or 31% of the SSA population, fall in this group, i.e., Chad, Angola, Burundi, Nigeria, Gambia, Uganda, and Burkina Faso. Fertility declines generally started in the 1990s, but only in the 2000s for Chad.

"Very slow and/or incipient fertility transition". This category encompasses countries where the TFR is still estimated at about six or more

children per woman. Four countries belong to this group: Niger, Mali, the Democratic Republic of the Congo, and Somalia. They represent 14% of the SSA population. Fertility declines started in these countries in the 2000s.

This classification remains approximate because the quality of data varies between countries. It needs also to be revised from time to time when new survey results become available. While most less developed countries started their fertility decline 35 years ago, about 85% of the SSA population live in countries where women still have four or more children on average (especially in the most populated countries of the region, except South Africa).

FAMILY PLANNING PROGRAMS IN SUB-SAHARAN AFRICA

As the fertility decline is largely driven by increased use of family planning, the still high fertility levels in SSA are largely the result of the late and slow adoption of contraceptive use. The global Family Planning Movement began in the 1950s and 1960s in response to rapid population growth, particularly in the less developed countries in Asia. Some people promoted women's rights, believing that voluntary family planning programs aimed at avoiding unwanted pregnan-

cies would be enough to bring about significant declines in fertility and population growth rates. Others, called the "neo-Malthusians", claimed that birth and population control programs were essential to reduce population growth rates and allow development, whatever the limitations brought on individual reproductive freedom.

In 1952, six non-governmental family planning associations created the International Planned Parenthood Federation (IPPF) to promote family planning in the world, through a network of associations. In addition, in the 1950s and 1960s, governments of several less developed countries opened family planning clinics and adopted programs and policies to reduce fertility and population growth, generally with external support[1]. The United Nations Population Fund (UNFPA) was created in 1967 and became the primary organization of the UN system to address population issues, especially in the less developed countries.

However, in SSA most elites and political leaders opposed family planning, because it was seen as an attempt from the more developed countries to control population size and growth in Africa. Because many less developed countries saw population growth as an asset, many SSA elites and political leaders did not welcome these programs.

[1] Robinson W.C. and Ross J.A., *The Global Family Planning Revolution: Three Decades of Population Policies and Programs*, Washington, DC, World Bank, 2007.

At the first World Population Conference in 1974 in Bucharest, Romania, many African delegates supported the view that "Development is the best contraceptive", which opposed the position of the neo-Malthusians, who were proponents of large family planning programs.

Eleven Family Planning associations affiliated with IPPF were created in SSA during the 1950s and 1960s (for instance, in 1958 in Nigeria, 1962 in Kenya, 1965 in Ethiopia, and 1967 in Ghana). South Africa and Zimbabwe also launched modern family planning activities in the 1960s. Three countries adopted "population control" policies: Mauritius in 1958, Kenya in 1967, and Ghana in 1969.

After the 1974 Bucharest Conference, according to the UN 1976 inquiry into governments' views on fertility levels and family planning, only 23 out of 42 SSA countries indicated that they considered their fertility levels to be satisfactory, fifteen countries to be too high, and four countries to be too low. But 29 countries indicated that there were no interventions to lower their fertility levels. Concerning family planning, only 19 countries indicated that their governments supported family planning activities in 1976[2].

However, the global context changed after the Cairo International Conference on Population

[2] United Nations, *World Population Policies Database,* New York, United Nations, Department of Economic and Social Affairs, Population Division, 2019.

and Development (ICPD) in 1994, which moved away from top-down and target-driven population policies to focus on individual reproductive health and human reproductive rights. This new paradigm was accepted by all African delegates, although this did not exclude the persistence of various forms of resistance to family planning programs in their countries.

As a result, family planning programs have grown in popularity and have expanded. Today, 40 SSA countries have family planning associations affiliated with IPPF, nearly all countries get UNFPA support, and 41 countries claimed that they have policies to reduce fertility levels. According to the UN 2015 inquiry into governments' views on fertility levels and family planning, all 48 SSA countries indicated that their governments are supporting family planning activities. Nevertheless, the broad approach adopted in Cairo raised competition between the various service components to be integrated within reproductive health services. In many African countries with high fertility levels, implicit or explicit priority was often given to safe motherhood and child health care (indeed the most urgent need), often at the expense of family planning activities. Several countries recognized that their health systems were not ready to integrate family planning services and that the move toward a broader reproductive

health approach has diluted family planning efforts[3]. The same happened to the older IPPF affiliates, which were at first dedicated primarily to the promotion of family planning services. Later, they progressively expanded their activities to antenatal and post-natal care, as well as the prevention and treatment of sexually transmitted infections (STIs), including HIV/AIDS.

Because of weak political support for family planning in SSA, among other factors, the use of contraception increased slowly. In 2020, the region had an estimated contraceptive prevalence rate among married women ages 15-49 for all methods of 34%, against 75% in Latin America and the Caribbean, 77% in East and Southeast Asia and 56% in South Asia, (with of course large variations between countries). The contraceptive prevalence rates were estimated by the United Nations in 2020 at 25% for Western Africa, 24% for Middle Africa, 44% for Eastern Africa, and 58% for Southern Africa[4].

[3] Guengant J.-P. and Rafalimanana H., "The Cairo Approach: Making Reproductive Health and Family Planning Programmes more Acceptable or Embracing too much?". Presentation at the XXVth IUSSP International Population Conference, Tours, France, 18-23 July, 2005.

[4] United Nations, *Estimates and Projections of Family Planning Indicators 2019,* New York, Department of Economic and Social Affairs, Population Division, 2019.

CREATING A DEMAND FOR A SMALLER FAMILY SIZE

Beyond the late and reluctant acceptance of family planning and the weakness of the health systems in many SSA countries, the low rates of contraceptive use are also the result of a weak demand for family planning compared to the other less developed countries. Demand for family planning is defined as: 1) the proportion of women who are using a contraceptive method; and 2) the proportion of women who said that they would like to use a contraceptive method – for spacing or limiting reasons – but are not using a method because of lack of access, high costs, disapproval of partner and family, and fear of side effects. According to the last Demographic and Health Surveys (DHS) conducted in SSA countries, only 45% or less of interviewed married women expressed a need for family planning in about a third of the countries. This is low, compared to the 70% to 90% of women who express needs in a majority of other less developed countries. This means that in the SSA countries nearly 50%, or even two-thirds of women in some countries, are not aware or interested, or in a position to exert their reproductive rights (i.e., to choose when they want to have their next child and how many children they want to have altogether).

The low family planning use in SSA is also related to persisting pronatalist attitudes and decision-making within households, which are often dominated by men. In 33 of the 41 SSA countries with data, married women indicate an ideal number of children between four and 9.5. Only in Lesotho, South Africa, and Eswatini, women indicate an ideal number of children below three, which is the case today in many less developed countries where women are fully aware of their reproductive rights. According to older surveys results, these preferences for high numbers of children have not changed much since the 1980s. Also, young women, including those with secondary levels of education, continue to wish to have many children. For example, according to the Niger 2012 DHS survey, women aged 20-24 with tertiary education indicated 5.2 children as their ideal number of children. Although this is less than women with no education (ten children), it remains quite high. In fact, the level of education is not a contraceptive. Higher education for all SSA women is doubtlessly an absolute necessity. But achieving this does not necessarily lead to lower fertility and increased power of women in the household. In many SSA countries, there is an absolute opposition of the husband and his family to have fewer children and let their wife use contraception. In addition, shortages of

contraceptives are frequent, and health workers themselves may be opposed to family planning. Moreover, these workers are rarely properly trained to promote family planning and they are often absent.

The apparent paradox attached to the low demand for family planning in SSA is that it is associated with important levels of unmet need. Indeed, in the majority of the SSA countries, family planning unmet need concerns more than 20% of married women. Thus, satisfying the unmet need first and assuming it would lead to fertility declines seems logical. However, this is not exactly the case, because in most SSA countries the demand for family planning (for both users and non-users) is a demand for spacing. This means that family planning is now seen by most African women primarily as a mean to achieve, under better health conditions, their still high ideal number of children. This occurs especially in rural communities, where maternity and large families are highly valued. This explains why, in many SSA countries with relatively low contraceptive prevalence rates, the percentage of the demand for family planning satisfied is high (between 50% and 80%), while women still have more than four children.

Therefore, in addition to the supply of quality family planning services, another key challenge for family planning programs in SSA

is to create a demand for a smaller family size[5]. So far, programmatic efforts to increase the age at first marriage and first birth have somewhat postponed pregnancies. However, without changes in ideal numbers of children, this delay often causes what is called a "compressed" fertility schedule (meaning that pregnancies are spread over a fewer number of years), without a significant fertility decline[6]. In addition, in the pronatalist context of the SSA societies, women have frequently one or two additional children after age 35. This prevents the women with already three, four, or more children to engage in gainful occupation and impedes their potential empowerment. In most other less developed countries, fertility rates after 35 years of age are generally insignificant.

ACHIEVING THE CONTRACEPTIVE REVOLUTION

To complete the fertility transition, it is necessary that all SSA women be fully aware of their reproductive rights and able to exert them. This

5 CASTERLINE J.B., "Prospects for Fertility Decline in Africa", in John B. Casterline and John Bongaarts (eds), *Fertility Transition in sub-Saharan Africa. Population and Development Review* 43 (Suppl.), New York, The Population Council, 2017, p. 3-18.

6 SPOORENBERG T., "Forty years of fertility changes in the Sahel", *Demographic Research*, vol. 41, Article 46, 2019, p. 1289-1314.

requires the achievement of what has been called the contraceptive revolution, which describes situations in which women are able to fully exert their reproductive rights[7].

Indeed, avoiding fertility stalls in the SSA region at around four children per woman and reaching lower levels of fertility does require that countries achieve their contraceptive revolution. This generally corresponds to contraceptive prevalence rate (for all methods or only modern methods) of at least 60% of married women in reproductive ages. At that stage, the level of unmet need for family planning becomes substantially lower, and the fertility transition is closed to completion or is completed (i.e., when the TFR is less than three children per woman).

Today, virtually all emerging countries have achieved their contraceptive revolution and have TFRs between 1.5 and three children per woman. This means that their family planning programs are mature, which implies adequate logistics and supply chains, a large choice of contraceptive methods, and secure and sustainable funding for the program. In these countries, the total

7 The concept of the "contraceptive revolution" captures the dramatic changes in fertility control that had occurred in the USA thanks to the wide availability to American women of modern and efficient contraceptive methods; see Westoff C. F. and Ryder N.B., *The Contraceptive Revolution*, Princeton, NJ, Princeton University Press, 1977. The concept was later extended to describe similar situations elsewhere in the world.

demand for contraception is high, around 70% to 80%. Such a high contraceptive demand did not happen in a vacuum, but was facilitated by major socioeconomic advances such as female education, women's empowerment, and access to paid employment. Nonetheless, the most important driver of the fertility decline is the desire of the women to have fewer children.

The low demand for, and use of, contraceptive methods in SSA means that in most countries focused efforts are still needed to achieve the contraceptive revolution[8]. In fact, in 2020, the median contraceptive prevalence rates for married women estimated by the United Nations were above 60% for married women in only nine countries, i.e., Zimbabwe, Eswatini, Cabo Verde, Lesotho, Malawi, Kenya, Mauritius, Botswana, and Namibia, and likely in the Seychelles[9]. In 30 countries, contraceptive prevalence rates were estimated to be between less than 10% (in South Sudan, Tchad, and Guinea) to 39%, and between 43% and 57% in eight countries. Therefore, the achievement of the contraceptive revolution and the full recognition of SSA women's reproductive rights are still distant goals for the majority of SSA countries. This objective may still take

8 Cleland J. and Shah I.H., "The contraceptive revolution: focused efforts are still needed", *The Lancet* 381 (9878), 2013, p. 1604-1606.

9 United Nations, *op. cit.*

several decades but can be accelerated with appropriate policies and programs.

ACCELERATING THE FERTILITY TRANSITION IN SUB-SAHARAN AFRICA

To accelerate the fertility transition in the SSA region, countries must first address and change prevailing pronatalist norms and promote a smaller family size, as it was done in other developing and emerging countries. This will require information, education, and communication (IEC) and behavioral communication change (BCC) campaigns, in order to change present norms and help increase contraceptive use. These IEC and BCC campaigns will need to be multi-media, culturally acceptable, repetitive, and more visible than previous similar efforts.

In terms of content, these campaigns must move away from the family planning programs' current emphasis on birth spacing. Actually, the emphasis on spacing does not modify the existing high ideal number of children and probably explain that in about half of the SSA countries, more than 65% of the demand for family planning is for birth spacing. Conversely, in most of the other less developed countries, less than 35% of the demand for family planning is for spacing reasons, and about 65% is for limiting. In

these countries, women are in a better position to decide the number of children they want to have during their entire reproductive life span.

The interpretation in SSA that "Family Planning Equals Spacing of Births" was deemed by family planning advocates in the 1980s and 1990s to be the most culturally acceptable slogan, especially in French-speaking Africa, with the view of counteracting those opposed to all forms of family planning. However, this approach must change because the socioeconomic and political context of population and gender issues has changed in SSA. Yet, this "spacing" interpretation is still dominant in the SSA media and among the health workers. The three dimensions of family planning – delaying the first birth, spacing between children, and stopping after the desired number of children for which couples can care – must be delivered in a culturally acceptable way. The implementation of such a renewed approach should engage SSA women in income generating activities, and along with expanded training and educational opportunities. In short, this renewed approach will contribute to the empowerment of SSA women.

To accelerate the fertility transition in SSA, policymakers and leaders will need to reassess public policies to reduce high fertility levels and ensure their implementation. To achieve this large-scale policy reform, policymakers will

need also to focus on harnessing the synergies between the key policy levers when designing broad population policies. These policy levers are: female education, women's access to labor markets and productive assets (land and finances), quality family planning and reproductive health services, nutrition programs, and legal reforms (age of marriage, property rights, etc.). All these policy levers should be understood as critical to women's empowerment and implemented concomitantly. In addition, policymakers will need to be unwavering in their support of proactive fertility reduction interventions and strengthen family planning and population institutions to implement this better integrated population policy agenda[10].

[10] May J.F. and Rotenberg S., "A Call for Better Integrated Policies to Accelerate the Fertility Decline in Sub-Saharan Africa", *Studies in Family Planning* 51 (2), 2020, p. 193-204.

CHAPTER 5

Capturing a First Demographic Dividend

Over the past three or four decades, most SSA countries have designed national population policies to reduce their demographic growth. However, after the Cairo Conference of 1994, the adoption of National Reproductive Health Programs was deemed more important than the design of population policies. Most SSA countries also prepared long-term socioeconomic development strategies and, in recent years, designed medium-term plans or "Vision" documents aimed at achieving emergence. In addition, the African Union published in 2017 the *AU Roadmap on Harnessing the Demographic Dividend through Investments in Youth*, inviting countries of the

region to adopt policies to benefit from a first demographic dividend[1].

This chapter examines the policies needed to capture a first demographic dividend and the interventions that are necessary to create an enabling environment to do so. The chapter also stresses the importance of population institutions and political commitment.

POLICIES NEEDED

As mentioned, the demographic dividend can be defined as an economic surplus triggered by an increase of the employed working population relative to the dependent population, especially the young dependents (see Chapter 3). This economic surplus is generated by two elements: the freeing up of resources due to a decreased demographic dependency ratio and an increase in the gross domestic product (GDP) due to the arrival of the "boom generation" in the labor market[2].

The policies aimed at capturing a first demographic dividend should prioritize the

1 African Union, *AU Roadmap on Harnessing the Demographic Dividend through Investments in Youth. In Response to AU Assembly Decision* (Assembly/AU/Dec.601 (XXVI) *on the 2017 theme of the year*, Addis Ababa, African Union, 2017.

2 Turbat V., "The Demographic Dividend: A Potential Surplus Generated by a Demographic Transition", in Hans Groth and John F. May (eds), *Africa's Population: In Search of a Demographic Dividend*, Cham, Springer, 2017, p. 181-195.

acceleration of the demographic transition, particularly the fertility transition. This is the primary necessary condition needed to lower the demographic dependency ratio. Therefore, these policies must lead to a fast and sharp decline of fertility, like the one that occurred in East and Southeast Asia in the 1960s and 1970s. Assuming that productivity is constant (and not necessarily increasing), the fertility decline will immediately increase the GDP and GDP per capita. This is because there will be relatively fewer younger dependents (in the numerator of the dependency ratio) and more people in the active age group (in the denominator), assuming a constant rate of activity.

Next, when the demographic window of opportunity opens, the second set of policies that must be adopted and implemented are those that increase the productivity of assets in a context of rapid changes in the age composition. These policies are fundamental for achieving economic emergence. These are obtained when living longer facilitates savings and capital accumulation, and when savings obtained through the reduction of health and educational expenses are redirected toward the creation of gainful activities and productive investment, including in the human capital formation and preservation. Under such a context, the benefits of the first demographic

dividend, which become sustainable, will pave the way to reach economic emergence[3].

CREATING AN ENABLING ENVIRONMENT

For a country to fully benefit from a first demographic dividend, the policies aimed at accelerating the fertility transition and those needed to facilitate economic emergence require the creation of an enabling environment. Demographic policies should be accompanied by policies designed to improve education, health, and gender equity outcomes. Adequate measures to improve governance are also necessary to attract investments and foster job creation. These are the components needed to create an enabling economic, legal, and political environment in order to capture a first demographic dividend.

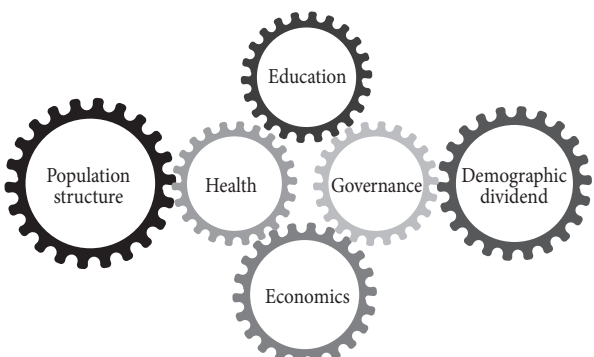
The Population Reference Bureau has summarized all these policies in a figure showing the relationship between the change in the age structure of the population and the demographic dividend (see Figure 4). This relationship is mediated through four gears, representing health and gender, education, economic policies, and governance.

Such an approach should harness the synergies between a set of key policy levers, including

[3] Groth H., May J.F., and Turbat V., "Policies Needed to Capture a Demographic Dividend in sub-Saharan Africa", *Canadian Studies in Population* 46 (1), 2019, p. 61-72.

expanding contraceptive coverage along with Universal Health Coverage (UHC), improving female education, and empowering women. The interventions to accelerate the fertility transition must be coupled with investments in family planning and population institutions as well as strong support from political leaders[4].

FIGURE 4:
The Enabling Environment Needed to Capture a First Demographic Dividend



Source: J. N. GRIBBLE and J. BREMNER, "Achieving a Demographic Dividend", *Population Bulletin* 67 (2), 2012.

ROLE OF POPULATION INSTITUTIONS

In order to tackle their demographic challenges, SSA governments have pursued various institutional approaches. First, they geared their efforts

4 MAY J.F. and ROTENBERG S., *op. cit.*

toward socioeconomic development planning. They also designed and implemented family planning interventions and adopted formal national population policies, while establishing specific population institutions to implement and monitor these programs. More recently, especially in Western Africa, governments have also established institutions to manage and monitor the first demographic dividend, which they have named "demographic dividend observatories"[5].

The African population institutions created within the public administration were designed to deal with population issues through the broader context of socioeconomic development. Population Commissions or Population Secretariats were generally anchored in the Ministry of Planning. Occasionally, however, such bodies were anchored in the Ministry of Finance, the Ministry in charge of the Economy, or even the Prime Minister's Office. The role of these institutions was to oversee and coordinate all population-related activities from a developmental viewpoint[6].

However, such population institutions were heavily dependent on external funding. Some population institutions are well-established,

5 May J.F., "The Role of Public Population Institutions on Fertility Outcomes in Sub-Saharan Africa", *Population Horizons* 14 (1), 2017, p. 1-8.

6 May J.F., *World Population Policies: Their Origin, Evolution, and Impact*, Dordrecht, Springer, 2012.

like the National Council for Population and Development (NCPD) in Kenya. Nonetheless, many "population planning units" have disappeared, became lethargic, or were merged with other units. Overall, it appears that for a variety of reasons these population institutions have not been very effective in promoting the formulation and implementation of population policies. First, government population institutions have seldom been staffed with "policy champions". Although external donors have been instrumental in expanding family planning interventions, they have not always been able to overcome the bureaucratic inertia in order to implement successful national population policies. Second, these institutions have usually not received strong support from the highest level of government's leadership.

Strengthening population institutions is crucial for the successful implementation of family planning programs and national population policies, as well as the capturing of a first demographic dividend. Such large-scale efforts require adequate staffing, management skills, proper logistics, continuous funding, extensive coordination between public and private actors, strong mechanisms of monitoring and evaluation, and the unwavering support from the country leaders.

Two recommendations might help strengthen population institutions in the region. First, governments will need to hire and retain competent staff for their population institutions, which must be anchored in high level, powerful, and visible ministries. This effort will need to be funded and maintained over a long period of time, probably several decades, and coupled with a clear policy vision and steadfast political commitment. Second, policies will need to be much more focused on the goal of accelerating the fertility transition, combined with women's empowerment. Too many political leaders and economists believe that fertility will decrease by itself through economic development and improved education, particularly for young women. In fact, the relationship runs the other way around: a sharp and fast fertility decline is a necessary condition, and even a prerequisite, to empowering women and capturing a first demographic dividend.

COMMITMENT FROM POLITICAL LEADERS

Many SSA leaders and policymakers have not been proactively engaged in policies and programs aimed at reducing fertility. Often African leaders perceive large populations to be socially and economically advantageous, and probably to be a factor of political strength as well. In recent

years, China's economic successes are used as proof that a large population is conducive to rapid economic growth. However, proponents of this thesis probably ignore or worse do not mention that China experienced a rapid fertility decline since the early 1970s, accelerated by the strict enforcement of the One Child Policy adopted in 1979. To a large extent, these conditions enabled the economic prowess of China. It is useful to mention also that the best economic performing countries in SSA are those with smaller populations and lower fertility levels.

When prodded on the demographic dimensions of the population and development debate, one of the first arguments African leaders often oppose to family planning advocates is the geographical vastness of the continent. Many African leaders routinely stress that Africa's population density is low. Moreover, some African policymakers question the motivations of Western officials advising them to mitigate rapid population growth, and point to the other urgent development priorities of their countries. Their position is often akin to the motto, already mentioned: "Development is the best contraceptive", which was voiced at the World Population Conference in Bucharest in 1974. Even African leaders who are aware of the need to curb the prevailing high levels of fertility might refrain to intervene because they do not want to antag-

onize their constituencies and create unwanted political problems[7].

Notwithstanding the reluctance of several African leaders, the policy climate related to population and family planning issues has started to shift positively in the 1980s and 1990s. This was triggered by major economic and political crises. Progressively, African leaders have come to appreciate the potential health benefits of family planning interventions. More recently, they have seen the negative linkages between rapid population growth and socioeconomic development. In the past fifteen years, the opportunity to reap the benefits of a first demographic dividend has dominated the policy debate on population and development in SSA. In Ethiopia, for instance, the government has been keen to put into place the necessary human capital development policies to facilitate the capturing of a first demographic dividend. In Uganda, President Yoweri Museveni, who had long opposed fertility reduction programs, was swayed by arguments about the potential for his country to capture a first demographic dividend.

7 May J.F., "The Politics of Family Planning Policies and Programs in sub-Saharan Africa", in John B. Casterline and John Bongaarts (eds), *Fertility Transition in sub-Saharan Africa. Population and Development Review 43*(Suppl.), New York, The Population Council, 2017, p. 308-329.

There is also an emerging consensus among African policymakers and development practitioners working in SSA, which might be called the "integrated view". It claims that a sustained fertility decline will depend on much lower infant and child mortality levels, substantial improvements in female literacy and education (including at the secondary level), and improved access to family planning[8]. This was well summarized in the 2017 *AU Roadmap on Harnessing the Demographic Dividend*. This document stated:

> *"The importance of ensuring good health is key to reducing youth vulnerability and to maximizing human capital investment. It is also critical in speeding up the demographic transition and improving the productivity of the workforce. As such, to harness the demographic dividend, it is critical to make strategic investments that would improve health outcomes especially as relates to access to sexual and reproductive health including family planning to ensure that women can decide on the number and spacing of their children"*[9].

8 May J.F., *op. cit.*

9 African Union, *op. cit.*, p. 19.

CHAPTER 6

Can Sub-Saharan Countries Capture a First Demographic Dividend and Reach Economic Emergence?

The key question addressed in this book is whether SSA countries can capture a first demographic dividend and become emerging economies. This chapter first reviews the experience from East and Southeast Asia and assesses how SSA could possibly replicate the lessons offered by this region. Thereafter, the chapter examines the prospects of capturing a first demographic dividend in SSA countries and reviews the models to analyze the demographic dividend. The chapter also addresses the issue of the formation and preservation of human capital, which is a key element needed to capture a first demographic dividend and reach economic emergence. Finally, the chapter briefly comes back to the central question of this volume:

Can SSA countries capture a first demographic dividend and reach economic emergence?

REPLICATING THE LESSONS FROM EAST AND SOUTHEAST ASIA?

As mentioned, the concept of the demographic dividend was formulated after an *ex post* analysis of the determinants of the Asian "economic miracle", between 1970 and 2000. To a large extent, this rapid economic growth was explained by the important shifts in age structures resulting from the rapid and significant fertility declines in the region during these 30 years.

With the onset of fertility decline in SSA countries, there is an ongoing discussion about the possibility of SSA benefitting also from a first demographic dividend. This question has become a paramount theme in international debates about the socioeconomic development of the region. Putting forward a proactive demographic intervention is seen by some as a way to reduce the time required to reach the desired economic emergence.

As the economic situation of SSA has become more encouraging, it is legitimate to examine whether the region could capture a first demographic dividend. Indeed, the region experienced a relatively robust economic growth

and GDP per capita growth between 2000 and 2014 (5.1% and 2.3% per year, respectively), resulting in an increase of the regional GDP per capita. Despite poor economic performances between 2015 and 2018, a recovery was expected before the Covid-19 crisis, with a medium-term stabilization of the economic growth at around 4% per year. However, this was expected to take place in a climate of greater uncertainty and with very marked differences between countries. The IMF projections published in October 2019[1], covering the years 2020-2024 for 45 SSA countries, projected that a dozen countries whose economic performances are not too dependent on exports of oil and raw materials, could record growth rates of 6% to more than 8% per year.

In addition to the uncertainties about future economic growth, the current interest in harnessing a demographic dividend in the SSA countries must be tempered by the uncertainties associated with the evolution of the demo-economic relations in the region[2] (and the post-Covid-19 crisis). SSA and East and Southeast Asia diverge in their respective demographic

1 International Monetary Fund, *Regional Economic Outlook: Sub-Saharan Africa. Navigating Uncertainty,* Washington, DC, International Monetary Fund, 2019.

2 Delaunay D. and Guengant J.-P. (eds), *Le dividende démographique en Afrique subsaharienne,* Institut d'étude du développement économique et social, Monographies Sud-Nord, No 9, Paris, Université Paris-I (Panthéon-Sorbonne), 2019.

profiles and African and Asian societies are even more different culturally and politically. What led to the rapid fertility transitions in East and Southeast Asia cannot be simply replicated in the African context. As said before, the SSA fertility transition is very slow. Moreover, several SSA countries have experienced fertility stalls. The extension of the contraceptive coverage is slow as well, and most SSA countries are decades away from achieving their contraceptive revolution.

SSA countries are experiencing a great amount of economic and social stress as a result of their past and present high fertility levels. For several more decades, rapid population growth will continue to put strong pressures on the SSA economies, education, health systems, and infrastructure. Countries in the region will need to accommodate large youth bulges and, in doing so, address two major challenges. First, they will need to build and preserve high quality human capital for larger young populations. Second, and more critically, governments will need to provide decent jobs for ever larger cohorts arriving on the labor market.

Achieving a first demographic dividend in SSA is neither granted nor automatic. It might remain only a temporary opportunity due to the modification of the age structure if it is not accompanied by gains in productivity of the working population. It is necessary to anchor this

debate to the body of development studies that address the demographic determinants of savings and investments, the increase of the formal labor market, and the productivity of workers.

BENEFITTING FROM A FIRST DEMOGRAPHIC DIVIDEND

Overall, the prospects of replicating the experience of East and Southeast Asia and capturing a first demographic dividend in SSA are mixed. Numerous policy conditions need to be fulfilled before the region can fully reap the benefits of a first demographic dividend. Instead of projecting a first demographic dividend to occur in the region, it is more sensible to say that the SSA countries are *in search* of a demographic dividend, as many of them are aspiring to become emergent but only a few are actually emerging (see Chapter 3).

First, a simple arithmetic calculation points to the difficulties lying ahead. Because of rapid population growth, which is currently comprised between 2.5% and nearly 4% per year in two-thirds of the SSA countries, it will be hard to increase rapidly and significantly the GDP per capita. As mentioned earlier, only five out of 48 SSA countries had a sustained economic growth of at least 6% per year between 2000 and

2019. These countries might anticipate having an average growth of their GDP per capita of about 4% per year up to 2063, thus potentially almost doubling their economic output every 15 years or so, and enabling them to reach at least the category of upper middle-income per capita countries. Such an assumption of a long sustained economic growth for these countries and for some others is not implausible. However, it remains at present purely speculative, and even more so with the Covid-19 crisis not to mention climate change and water scarcity.

Second, some authors have highlighted the rather smaller gains that a first demographic dividend would bring to the SSA countries as compared to what occurred in the East and Southeast Asian countries. Eastwood and Lipton reached the conclusion that for SSA: *"Arithmetical and econometric evidence suggests an annual, if not total, dividend well below Asia's"*[3]. In their view, the African demographic dividend arises more from falling dependency ratios than a reduced rate of natural increase. However, a demographic dividend could be amplified by a faster and sharper fertility decline and by employing a larger workforce more productively.

A similar conclusion has been reached by Lee and Mason who compared the first and second

3 Eastwood R. and Lipton M., *op. cit.*, p. 9.

demographic dividend in the different regions of the world between 1970 and 2000 (see Table 3). For SSA, the first dividend, as measured by the contribution to growth in GDP per effective consumer (GDP/N) appears to be *negative* during that period, whilst the second demographic dividend in the region is very small. On the contrary, East and Southeast Asia reaped big gains in both demographic dividends.

Some authors have also pointed out that a first demographic dividend occurring in a typical SSA country might benefit essentially the two highest quintiles of the population, namely the 40% richest people. Raising the education levels of the population appears to be a key variable, enabling countries to capture a first demographic dividend. Recent research indicates that lower fertility enabled specific groups to capture a first demographic dividend[4]. Conversely, other authors have argued that the first demographic dividend is ushered by improvements in educational outcomes and not by changes in the age structures[5]. However, it appears that very large

4 Eloundou-Enyegue P.M. and Hirschl N., "Fertility Transitions and Schooling Dividends in Sub-Saharan Africa: The Experience of Vanguard Countries", in Hans Groth and John F. May (eds), *Africa's Population: In Search of a Demographic Dividend*, Cham, Springer, 2017, p. 101-111.

5 Lutz W., Cuaresma J.C., Kebede E. *et al.,* "Education rather than age structure brings demographic dividend", *PNAS* June 25, 116 (26), 2019, p. 12798-12803.

TABLE 3:
Demographic Dividends: Contribution to growth in GDP/N[1] between 1970–2000

	First	Second	Total	Actual growth in GDP/N[1]
Industrial economies	0.34	0.69	1.03	2.25
East and Southeast Asia	0.59	1.31	1.90	4.32
South Asia	0.10	0.69	0.79	1.88
Latin America	0.62	1.08	1.70	0.94
Sub-Saharan Africa	-0.09	0.17	0.08	0.06
Middle East and North Africa	0.51	0.70	1.21	1.10
Transition economies[2]	0.24	0.57	0.81	0.61
Pacific Islands	0.58	1.15	1.73	0.93

Sources: LEE R. and MASON A., "What is the Demographic Dividend?", *Finance and Development* 43 (3), 2006, p. 16-17.
[1]Actual growth in GDP per effective consumer (GDP/N), 1970–2000, in % per year. The effective number of consumers is the number of consumers weighted for age variation in consumption needs.
[2]Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, FYR Macedonia, Moldova, Mongolia, Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

cohorts of young Africans will preclude the easy formation of human capital and access to gainful employment for all of them. Moreover, the quality of education is still relatively mediocre in SSA, which also jeopardizes the formation and preservation of human capital.

MODELING THE DEMOGRAPHIC DIVIDEND

Recently, several models have been developed to look at the potential demographic dividend for countries where the necessary demographic conditions have not yet been met. These models are not meant to be predictive. Their goal is to suggest how countries' economies might evolve under alternative demographic and socioeconomic scenarios[6].

The best model of the demographic dividend is the *DemDiv*, which was developed with funding from the U.S. Agency for International Development (USAID) under the Health Policy Project. The *DemDiv* differs from the other models in two important respects. First, it covers a period of 50 years (and not about 100 years as in other models). Second, fertility is projected as a variable dependent on its proximate (direct)

6 Moreland S. and Leahy Madsen E., "Demographic Dividends Models", in Hans Groth and John F. May (eds), *Africa's Population: In Search of a Demographic Dividend*, Cham, Springer, 2017, p. 453-467.

determinants and on some of its socioeconomic determinants.

DemDiv is composed of a demographic sub-model and an economic sub-model. Data from the demographic sub-model includes different variables such as initial levels of fertility and mortality, girls' education levels, and contraceptive prevalence, which allows users to build population projections under different scenarios. The economic sub-model data includes variables such as education, the quality of public institutions, trade openness, and communication technologies. The two components of the model then interact to estimate the GDP and the GDP per capita. Like any model, *DemDiv* has its limits: it is based on behavioral equations that are not necessarily applicable to all countries; it projects the evolution of the model's variables linearly between the starting and the final year; and, of course, the results depend on the assumptions.

Among the *DemDiv* applications that are available, those from Burkina Faso and Ethiopia illustrate fairly well the range of results for the three scenarios of the model: 1) the "economic" scenario, which prioritizes only the economic competitiveness of the country; 2) the "economic and education" scenario, which prioritizes both economic competitiveness and the increase of the levels of education; and 3) the "economic,

education, and family planning" scenario, in which these three areas are prioritized[7].

For Burkina Faso, the comparison of the GDP per capita in 2050 between the "economic" scenario and the "economic, education, and family planning" scenario (1,770 USD and 3,076 USD, respectively, that is six times more than in 2015) leads to a demographic dividend of 74% (3,076 - 1,770 = 1,306, divided by 1,770). The "economic, education, and family planning" scenario yields quite a high average increase of the GDP between 2015 and 2050 of 7.8% per year, and an increase of the GDP per capita of 5.3% per year. It corresponds to a decline of the TFR from 5.9 children in 2015 to 2.3 children in 2050, associated with a contraceptive prevalence for modern methods of about 60% (compared with 18% in 2015).

For Ethiopia, the comparison of the GDP per capita in 2050 between the "economic" scenario and the "economic, education, and family planning" scenario (7,013 USD and 10,189 USD, respectively, that is fifteen times more than in 2015), leads to a demographic dividend of 45% (10,189 - 7,013 = 3,175, divided by 7,013). The "economic, education, and family planning"

7 Guengant J.-P., "Afrique subsaharienne : faut-il accélérer la baisse de la fécondité pour atteindre le dividende démographique et l'émergence économique ?" in Daniel Delaunay and Jean-Pierre Guengant (eds), *op. cit.*, p. 90-103.

scenario also yields a high average increase of the GDP between 2015 and 2050 of 9.9% per year, and an increase of the GDP per capita of 8.2% per year. It corresponds to a TFR's decline from 3.7 children in 2015 to 2.1 children in 2050, associated with a contraceptive prevalence for modern methods of 68% (compared with 44% in 2015).

The difference between the demographic dividends of Burkina Faso and Ethiopia is due to the assumptions used as well as to the different situations of the countries in 2015. The higher demographic dividend for Burkina Faso is the result, for the period considered, of a larger fertility decline than in Ethiopia. In fact, in 2015, Ethiopia was already in the middle of its fertility transition, which started to decline from 7.4 children per woman in the 1980s. Conversely, the fertility decline in Burkina Faso (from 7.2 children) was much slower than in Ethiopia. Therefore, the demographic dividend projected for Burkina Faso is higher than the one projected for Ethiopia. However, the Burkina Faso's GDP per capita in 2050 is only one-third of the GDP per capita projected for Ethiopia. In addition, the increase of Ethiopia's GDP per capita means that the country will join the group of upper middle-income per capita countries in the late 2030s, which is not the case for Burkina Faso.

From these results, it is possible to draw three conclusions. First, a fertility decline associated

with an increase of the use of contraception is definitely the first condition to be fulfilled in order to fully benefit from a first demographic dividend. Second, the earlier the fertility decline, the faster the growth of the GDP and the GDP per capita. Third, the more rapid and significant the fertility decline, the higher and the sooner the country can capture a demographic dividend.

HUMAN CAPITAL FORMATION AND PRESERVATION

As mentioned earlier, high quality human capital is the key link between capturing a first demographic dividend and the ability to become an emerging country. Human capital can be defined as the knowledge, skills, and health that people accumulate throughout their lives, enabling them to realize their potential as economically productive members of society. In other words, human capital is the stock of health, knowledge, habits, and social and personality attributes embodied in the ability to perform labor and produce economic value.

Human capital is unique and differs from any other capital. Human capital is necessary for countries to develop, to achieve socioeconomic goals, and to remain innovative. It is possible to eradicate extreme poverty and create more inclusive societies by developing human capital. This

requires investing in people through nutrition, health care, quality education, jobs and skills, and women's empowerment.

Despite substantial progress, significant gaps in human capital investments are leaving the world poorly prepared for what lies ahead. Without human capital, countries cannot sustain economic growth, will not have a workforce that is prepared for the more high-skilled jobs of the future, and will not be able to compete effectively in the global economy.

In order to mobilize efforts to address these gaps, the World Bank, in consultation with its client countries, launched in 2017 a Human Capital Project (HCP)[8]. The main purpose of the HCP is to convince countries to: (a) invest more in human capital, under the assumption that early health care and education prepare children to succeed and prosper as adults in a rapidly changing world; and (b) overcome the barriers to nurturing human capital. And the ultimate goal of the HCP is a world in which all children arrive at school ready to learn, the time spent in school translates into better learning, and the children can grow up to live and work as healthy, skilled, and productive adults.

Launched in 2018, the Human Capital Index (HCI) is built with five key indicators, i.e., child

[8] World Bank, *The Human Capital Project, Washington, DC*, World Bank, 2018.

survival to age five, expected years of schooling, harmonized learning outcomes, adult survival rate from age 15 to 60, and percentage of children under five not stunted[9]. The HCI value ranks between zero and one. For example, a value of 0.5 means that productivity in that country is only 50% of what it could be. Countries can use the HCI to assess how much income they are missing because of human capital gaps, and how much faster they can turn these losses into gains, should they act right away.

The HCIs published for 2018 indicate that out of 40 SSA countries with data, only three had an HCI above 0.5 (the Seychelles at 0.68, Mauritius at 0.63, and Kenya at 0.52). For the remaining 37 countries, the HCIs vary from 0.29 to 0.45. Among the 71 other less developed countries with data, two-thirds have HCIs above 0.50. The poor performance of the SSA countries is doubtlessly linked to their high fertility levels. Enormous advances have been made since the 1960s to reduce child mortality and increase school enrollment in SSA. However, as seen in Chapter 1, mortality levels remain high for both children and adults and major improvements are still needed to reduce mortality levels. Concerning education, virtually all the SSA countries have succeeded in achieving high rates

9 The World Bank is currently considering to include additional indicators to the HCI.

of primary school enrollment, and they have also been able to increase significantly their school enrollment rates at the secondary and tertiary levels. However, many observers have noted that the SSA's school systems are no longer able to manage the massive inflows of students at all levels. Also, the success in recent years of the strong mobilization in favor of "education for all" had been achieved at the expense of the quality of education, which has deteriorated sharply in many SSA countries.

Therefore, SSA countries will face daunting challenges to raise the quality of their human capital in the next decades. Not only do SSA countries start from low development levels, compared to most less developed countries, but they will need to tackle the double challenge of meeting the needs of growing numbers of children and young adults, and improving the quality of the health and education systems. This will be easier under the UN Low variant projection, with a possible stabilization of births and numbers of youth, than under the UN High variant projection, with a continued increase of the numbers of births and youth.

REACHING ECONOMIC EMERGENCE

The capturing of a first demographic dividend will be crucial to reach economic emergence. To a large extent, a first demographic dividend would help SSA countries to build and preserve their human capital, thereby improving the educational outcomes and employability of their future workers. Thereafter, the synergies between the improved quality of human capital and socioeconomic developments will open the path to emergence for SSA countries.

A good roadmap to build and preserve better quality human capital is outlined in the Human Capital Index (HCI). All SSA countries will need to improve substantially the HCI five indicators that had been listed already, namely child and adult survival, years of schooling, improved learning outcomes, and percentage of children not stunted.

First, SSA countries will need to improve the health outcomes of their populations by expanding Universal Health Coverage (UHC), accelerating the decline of infant and child mortality levels, improving adult survival rates, tackling communicable and non-communicable diseases, increasing life expectancy at birth, and providing quality sexual and reproductive health services.

Second, SSA countries will also need to considerably expand education services and improve their educational achievements. More

efforts will be needed to improve secondary and tertiary education enrolment rates and outcomes, which are more difficult and expensive to provide. In addition, Technical and Vocational Education and Training (TVET) should be given higher priority, along with appropriate new technologies of the so-called Fourth Industrial Revolution (4IR). In this respect, the technologies that are shaping the 4IR (artificial intelligence, robotics, the Internet of Things, 3D printing, genetic engineering, quantum computing, big data, and other technologies) should be tapped to provide additional skills to the future SSA workers. Finally, improving the quality of education should be a top priority in the region. Currently quality education is unsatisfactory in most SSA countries, even at the primary education level.

To sum up, SSA countries should invest in building and preserving human capital while concomitantly decreasing fertility, improving socioeconomic outcomes, and expanding job opportunities. It is the synergies between rapid demographic change, socioeconomic development, human capital formation, job creation, and women's empowerment that will put the SSA countries on the path to economic emergence.

Conclusion

Available data clearly indicates that since the 1960s the rapid population growth in SSA has had negative effects on the growth of its GDP per capita. Data also indicates that, contrary to common wisdom, the more economically successful countries in SSA have been those with smaller populations and lower fertility levels.

Although the demographic transition has started in SSA, mortality levels remain high in 2020, with more than half of deaths attributable to communicable diseases in most countries. With respect to fertility, about 85% of the SSA population live in countries where women still have between four and seven children. The late onset of the mortality and fertility declines in SSA, their slow pace, and the sustained population growth rate over 2.5% per year for more than 50 years, make the SSA demographic transition radically different from the transitions experienced elsewhere in the world.

With the onset of the fertility decline and better economic performance in the region since 2000, most countries thought that they would be able to capture a first demographic dividend and become emerging economies. However, so far there are only fourteen SSA countries representing 20% of the population of the region with low or rapidly declining total fertility rates below four children per woman (along with reduced proportions of young dependents), thus meeting the initial necessary conditions to benefit from a first demographic dividend. In addition, there are only nine countries which could be considered in 2018 as "emerging", engaged in a process of economic transformation in a stable and inclusive socio-political context, likely to ensure its sustainability. These countries represent only 10% of the population of the region, and all of them could benefit from a first demographic dividend thanks to their low levels of fertility. Most of the other countries, which still have (with few exceptions) TFRs above four children per woman, are considered either at "the threshold of emergence" or "potentially emerging". Last, some countries are not able at present to position themselves on the path to economic emergence.

Unfortunately, the economic impact of the Covid-19 pandemic is likely to severely hamper the future economic prospects of the

region. According to the IMF update of June 2020, economic growth in sub-Saharan Africa is expected to turn negative in 2020 (reaching minus 3.2%), which corresponds to a decline in the region's GDP per capita of 5.4%. And at present, no one dares to predict when will occur a major rebound in the global and African economies. In such a context, there is a real risk that SSA governments and their development partners will focus all their efforts on the immediate economic recovery, to the detriment of longer-term goals.

Yet, policies and programs for economic recovery and to capture a first demographic dividend and reach economic emergence must reinforce each other. In that respect, it should be recalled again that there is an obvious connection between the conditions needed to benefit from a first demographic dividend and those needed to reach emergence. But many economists and politicians still consider future population dynamics and size of the various SSA countries as a variable which cannot be changed, or which is not necessary to change. However, several studies indicate that no country has been able to develop and to emerge without a parallel decline in fertility. In the case of the East and Southeast Asian countries, state policies and family planning programs helped trigger socioeconomic development and fertility

decline, and these processes have been mutually reinforcing.

It is possible to accelerate the fertility transition in most SSA countries through adapted and culturally acceptable policies and programs. This will allow more SSA countries to emerge and ultimately converge toward the socioeconomic characteristics of the more advanced countries of the world. This can be done without denying the cultural heritage and values of each country, as this has been the case in Asia and Latin America and the Caribbean, as well as in Northern and Southern Africa. Better coherence and greater synergies between the various policies influencing reproductive behavior (especially health, education, gender, and women's empowerment) will help achieve this goal.

It is also imperative to adopt a new approach to family planning. However, it is out of question today in SSA, as anywhere in the world, to impose or even suggest to women and couples a given number of children to have. Nonetheless, time has come to get away from promoting family planning only as a way to better space numerous, ideal numbers of children. In the present SSA context, continuing to promote family planning primarily as a mean to space children guarantees future fertility stalls around four children per woman in many SSA countries.

Indeed, countries must promote the three dimensions of family planning: 1) to postpone the first birth; 2) to space pregnancies between subsequent births; and 3) to stop after the desired number of children for which a couple can care. This will help extended families shift their priorities from maximizing the number of children in the families toward investing more in fewer children in order to boost their human capital and earning power.

The promotion of this three-dimensional freedom of choice must go in parallel with the implementation of policies and programs to increase the education levels of girls and empower women. But these programs should also focus on the benefits of delaying the first birth as well as birth spacing and birth limiting. Again, ensuring better coherence and synergies between the various policies influencing reproductive behavior will be necessary for countries to accelerate their fertility transition and reach economic emergence. But neither economic development nor education are contraceptives. While they are essential ingredients, they cannot be the only levers to trigger a fertility decline.

Finally, accelerating the demographic transition will help most SSA countries to confront the multiple challenges associated with the expected doubling of their populations in the next 30 years. In particular, accelerating the

demographic transition will help countries to increase the quality of their human capital. This will also give women better chances to get decent and well remunerated jobs. In addition, this will allow countries to increase their GDP growth through women's extended participation in economic activities. Failing to adopt now policies and programs to accelerate the fertility decline will lead to another doubling of the SSA population between 2050 and 2100. This will postpone the benefits of a first demographic dividend and further delay the possibility to reach economic emergence in many SSA countries.

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